



JOURNAL *of*
MANAGEMENT, SOCIAL SCIENCES
AND HUMANITIES

JOURNAL OF MANAGEMENT, SOCIAL SCIENCES AND HUMANITIES

VOLUME 03 ISSUE 01

NOVEMBER 2022

FACULTY OF MANAGEMENT, SOCIAL SCIENCES AND HUMANITIES

GENERAL SIR JOHN KOTELAWALA DEFENCE UNIVERSITY

Printed by: KDU Press, Ratmalana, Sri Lanka

Copyright © General Sir John Kotelawala Defence University

GENERAL SIR JOHN KOTELAWALA DEFENCE UNIVERSITY

November 2022

All rights reserved. No part of this publication may be reproduced, stored in a retrieved system, or transmitted by any means, electronic, mechanical, photocopying, recording or otherwise, without written consent of the publisher.

National Library of Sri Lanka – Cataloging - In Publication Data

JOURNAL OF MANAGEMENT, SOCIAL SCIENCES AND HUMANITIES
Volume 3 Issue 1 (2022)

ISSN 2579-1966

Published by General Sir John Kotelawala Defence University, Sri Lanka

Disclaimer

Responsibilities of the content of papers included in this publication remain with the respective authors. Editorial board and the Faculty of Management, Social Sciences and Humanities have no responsibility over the content or errors in the individual articles.

Printed by: KDU Press, Ratmalana, Sri Lanka

JMSH

Journal of Management, Social Sciences and Humanities (JMSH) is a double blind reviewed, bi-annual journal with an aim of becoming a leading Journal in the disciplines of Management, Social Sciences and Humanities. The scope of the journal covers theoretical and empirical research in the above three domains. The journal welcomes the submission of manuscripts of original, innovative, and high-quality papers that advance conceptual and empirical knowledge in the relevant fields.

EDITOR IN CHIEF

Dr. Tamara Jayasundera

General Sir John Kotelawala Defence University, Sri Lanka

EDITORIAL BOARD

Mr. Kithsiri Amaratunga

General Sir John Kotelawala Defence University, Sri Lanka

Prof. WPR Wickramaratne

General Sir John Kotelawala Defence University, Sri Lanka

Dr. RMNT Sirisoma

General Sir John Kotelawala Defence University, Sri Lanka

Dr. Wasantha Premarathne

General Sir John Kotelawala Defence University, Sri Lanka

Dr. KR Ambepititya

General Sir John Kotelawala Defence University, Sri Lanka

Mr. Nuwan Herath

General Sir John Kotelawala Defence University, Sri Lanka

Maj. JPWK Abeyawickrama

General Sir John Kotelawala Defence University, Sri Lanka

Ms. ID Wattuhewa

General Sir John Kotelawala Defence University, Sri Lanka

Dr. MTN Wijetunge

General Sir John Kotelawala Defence University, Sri Lanka

Ms. DDL Willarachchi

General Sir John Kotelawala Defence University, Sri Lanka

ADVISORY EDITORS

Emeritus Prof. Kalinga Tudor Silva

Professor Emeritus, University of Peradeniya

Emeritus Prof. P. Hewage

Senior Professor, General Sir John Kotelawala Defence University

Snr. Prof. A.S.P. Abhayaratne

Senior Professor, University of Peradeniya

Prof. ASPG Manawaduge

Professor, University of Sri Jayewardenepura

Prof. Aruna Gamage

Professor, University of Sri Jayewardenepura

Prof. NWK Galahitiyawe

Senior Lecturer (Grade I), University of Sri Jayewardenepura

Prof. M. Saman Dassanayake

Professor, Meiji University

Prof. Dinesh Samarasinghe

Professor, University of Moratuwa

Prof. Ravi Dissanayaka

Professor, University of Kelaniya

Prof. Renuka Herath

Senior Lecturer, University of Kelaniya

Prof. Asantha Attanayake Barborich

Senior Lecturer, University of Colombo

Dr. Bhagyavi Sandareka Habaragoda

Senior Lecturer (Grade I), Wayamba University of Sri Lanka

Dr. Chaminda Wijethilaka

Senior Lecturer in Accounting, University of Essex (UK)

EDITORIAL ASSISTANT

Ms. Navya Wijewickrema

General Sir John Kotelawala Defence University, Sri Lanka

CONTENT

- 1 Factors Determining Outsourcing Effectiveness: with Reference to the Sri Lankan Apparel Sector**
W.W.M. Wewala, S.K.N.H. Dayawansa, M.D.S.A. Mahapatuna, R.P.P.S. Raajapaksha and W.D.H. De Mel
- 19 Optimal Selection of Cities of Energy Outlets in Developing Countries: An Application of Fuzzy Set Theory to Sri Lankan Solar Industry**
D.R. Perera, U.A. Kumara and S.T.W.S. Yapa
- 55 The Impact of Expectations on Turnover Intention Among Generation Z Employees in the Financial Sector in Sri Lanka**
L.N. De Silva and K.A.S. Dhammika
- 83 Peer-assessment: Sri Lankan English as a Second Language Teachers' Perception**
P.B.S.L. Pushpakumara
- 93 Experiential Marketing, Destination Image, Tourists Satisfaction, and Tourists' Destination Loyalty for Sustainable Tourism (Evidence from Tourists' Cultural Destinations in Sri Lanka)**
Y.M.W.G.P.K. Udurawana
- 109 Informal Care for Disabled and Elderly Population in Contemporary Sri Lankan Society**
I. Gunarathna
- 123 Book Review: Crafting Your Research: A Guide to Management Student Book Four Writing and Presenting by Arosha Adikaram, Tharusha Gooneratne and Maduka Uduuwara**
A. Iddagoda and H. Dissanayake

Factors Determining Outsourcing Effectiveness: with Reference to the Sri Lankan Apparel Sector

By W.W.M. WEWALA¹, S.K.N.H. DAYAWANSHA², M.D.S.A. MAHAPATUNA³, R.P.P.S.
RAAJAPAKSHA⁴ AND W.D.H. DE MEL⁵

Over the last two decades, organisations have given tremendous attention to outsourcing to improve operational efficiencies. Necessity has risen for organisations to continuously focus on core activities to remain competitive in the marketplace. Outsourcing has become a common business strategy in many industries, including Textile and Apparel. The extant literature has predominantly focused on how outsourcing influences the overall production process and the outsourcing of production activities to developing countries by well-known apparel brands. The present study aims to identify factors determining the outsourcing effectiveness in the Sri Lankan Apparel sector. The data collection for this study was carried out using qualitative methodology and in-depth interviews. Seven employees in senior executive and managerial levels were interviewed using a semi-structured interview guide. The data were analysed using thematic analysis. The findings revealed four main themes: the quality of the product, labour cost, lead time and responsibility. The findings of this study provide practitioners with information on the essential components to consider when selecting outsourced parties and managing outsource agreements.

Keywords: *Labour cost, Lead time, Outsourcing, Quality*

INTRODUCTION

In the past decade, organisations have shown drastic improvement in terms of creativity and rivalry. This is primarily because extremely competitive business environments compelled organisations to pursue various methods in order to achieve competitive advantages. Traditionally, manufacturers used

^{1,2,3,4,5} Department of Management and Finance, Faculty of Management, Social Sciences and Humanities, General Sir John Kotelawala Defence University. Corresponding author: danishademel@kdu.ac.lk

to undertake the process of converting raw materials into finished products within the premises (Epitawela, 2014). In most organisations, the business model was such that they could own, maintain, and directly regulate all the activities. Eventually, along with globalisation, companies have begun to outsource some of their services instead of keeping them in-house. Among the many definitions for outsourcing, McDonagh and Haywards (2000) defined outsourcing as the total or partial contracting out of an organisation's activity, function, or process to a third-party service provider. According to Momme (2002), outsourcing is defined as vertical integration to a low level in the supply chain. Outsourcing is also defined as the process of shifting some of the company's responsibilities and activities to an outside organisation (Chase, 2004).

For the leading apparel brands in the world, outsourcing has become a lucrative trend, which is primarily backed by the cost aspect (Teng & Jaramillo, 2005). In the global apparel industry, outsourcing production to low-cost regions has become the standard practice (Kumar & Arbi, 2008). Accordingly, many Asian countries, including China, India, Pakistan, Sri Lanka, Bangladesh and Vietnam have gained the opportunity to cater to the high-end brands, thereby marking a global presence. Outsourcing activities related to textile and apparel brands by the developed countries to developing countries have been studied in academic literature in various contexts (Epitawela, 2014; Handfield et al., 2020; Kumar & Arbi, 2008). The focus of this study is set in the Sri Lankan Apparel sector.

Textiles and apparels being the major commodity export in Sri Lanka, the industry is one of the most significant contributors to the economy. The industry's export revenue earnings were reported as \$5 billion in 2018, thereby contributing 44% to the country's national exports (BOI Sri Lanka, 2019). However, the industry was severely affected by the COVID-19 pandemic with a global reduction in the demand.

Sri Lanka is well-known for world-class apparel manufacturers such as Brandix, MAS Holdings and Hidaramani, catering to various top-notch brands which include Adidas, Nike and Victoria's Secret (Bolonne, 2020). Backward integration of the apparel sector is another concern that has tapped the attention of previous researchers in the Sri Lankan context (Gunathilake & De Mel, 2016; Rathnayake et al., 2020). Even though the Sri Lankan Apparel Industry consists of many Small and Medium Scale Enterprises (SMEs), the country's apparel exports mainly lie in the hands of giant players. Most of the

SMEs, therefore, are involved in undertaking subcontract orders on behalf of the larger firms. The apparel sector faces immense challenges, such as unpredictable product demand during seasonal time, increasingly diversified inventory, and stringent product pricing etc. Hence, to overcome these issues, apparel organisations use outsourcing strategies which significantly affects the organisational performance (Mirza & Ensign, 2021).

Researchers observed that there is a dearth of studies examining the effectiveness of outsourcing by giant apparel organisations to small and medium scale apparel manufacturers in the Sri Lankan context. Therefore, against this backdrop, the main objective of the present study is to investigate the effectiveness of outsourcing by the large-scale apparel manufacturers to SMEs in Sri Lanka.

LITERATURE REVIEW

Important strategic decisions in terms of whether to buy or make, and whether to in-source or outsource are often centred on whether the organisation could improve its performance based on suppliers' specific capabilities (Kam et al., 2011). Having outsourced all or a portion of activities outside of the organisation's key capabilities, through an arrangement with a third party, will enable the organisation to focus more on their core competencies (McCarthy & Anagnostou, 2003). Outsourcing may provide significant advantages to organisations. Nevertheless, if an outsourcing choice is not precise and elements impacting the outsourcing decision are not considered, it can cause irreparable harm to organization's image (Nikabadi & Zamani, 2016). Outsourcing is said to be effective since utilising it the organisation experiences improvements in operations such as cost savings, reduction in capital investment, adaptability to changing business environment, enhance competitive abilities, high quality goods and services and reduced risk of changing technology (Agburu et al., 2017). This has led many companies to rethink their strategic decisions with regard to outsourcing. Although many apparel businesses find it challenging to find the right outsourcing strategy for their business, Agburu et al. (2017) stated that organisations, irrespective of the scale, organisations have embarked on outsourcing over the years. This includes, back-office operations, primary activities, accounting activities and other support activities. Such outsourcing has also led to enhanced organisational performance ensuring the effectiveness of outsourcing. These organisations all look for better markets to leverage their products or services, which enhances profitability.

Product Quality

Garvin (1984) posits that product quality can be used as a weapon for product positioning and selling. Product quality is one of the key components that gains customer satisfaction to the brand or the organisation. Product outsourcing is a concept that a company's product processing is fully handed over or shared with another organisation. Outsourcing has become a managerial decision process involving both internal and external parties relevant to the organisation (Jin, 2013). Outsourcing is based on a contract between the two parties who supply the delivery and who receive it in "pre-specified" quality (Lu et al., 2012). Moreover, Berdine et al. (2008) stated that companies use mix outsourcing strategies to minimise the risk and maximise the product quality. Hence, the quality of the product is an important term in outsourcing criteria (Xiao et al., 2014).

Supplier companies maintain their product quality to avoid the risk of business collapsing. If the business is known for bad quality management, it would have adverse impact when forming a contract with another firm. Kaya and Özer's (2009) findings have identified how "quality risk" can reduce the adverse effect on both revenue and product quality for both parties. Moreover, product quality in outsourcing always depends on the implementation of agreements between both suppliers and buyers (Xiao et al., 2014). Furthermore, findings of Kay and Özer (2009) depict how outsourcing can increase the risk in the supply chain because the firm has little interaction with the supplier's quality management process. Accordingly, outsourcing can have both positive and negative effects on product quality.

Labour cost

As determined by Adeleye (2011) outsourcing changes the single employer to multiple employers bringing about complex "inter-organizational" employment within an organisation. Outsourcing also opens the option to hire or form a contract with another firm to perform the required work within a period of time and pre-settled exchange value without having to employ permanent staff. Reduction of the production cost by cutting off variable costs attached to operations is one of the main reasons behind outsourcing. Considering production cost and the product price, global firms look for countries with low labour costs to outsource their production process. According to Kumar and Arbi (2008), during the past two decades, countries such as the USA and the UK have shifted their operations to cities in the Asian continent, due to cheap labour cost and appealing tax incentives. However,

in Sri Lanka, attracting and retaining, for example the youth, in the apparel sector seem to be challenging along with the evolving career aspirations of the younger generation. Thus, many large apparel firms focus on outsourcing to small-scale firms that are coming up in areas with a close proximity to villages, thus attracting human resources at relatively low cost.

Lead time

Lead time includes the time between the receipt of raw materials and delivery date of the finished goods to the customer or the buyer, including job time in the workshop (Tatsiopoulos & Kingsman, 1983). Furthermore, lead time refers to “the time between ordering the merchandise and having it arrived in the store” (Dickerson, 1998). In their findings Kumar and Arbi (2008) point out that outsourcing is a viable option for long seasonal orders more than the short-term market. This is because it usually takes more time to produce and deliver the product to the buyer when it is outsourced rather than an in-house production. Apparel industry is one of the largest industries in the world (Sardar & Lee, 2013), and so, apparel firms choose outsourcing. They usually have sub firms all over the country to distribute their products. Lead time has become one of the key features to demonstrate the capability of the firm’s production and quality control. However, one of the most prominent characteristics of the apparel industry is that it is unpredictable. Hence, the suppliers should be highly responsive. Quick response has evolved to shorten delivery time, and thus provide other efficiencies in the production and marketing chain (Hathcote & Nam, 2010).

Company Responsibility

In the past two decades organisations in the apparel industry have progressively turned to outsourcing or the externalisation of activities that are usually performed in house, this has respectively enhanced the competitiveness, firm performance, effectiveness of the business operations and reduce the level of responsibility towards the company (Adeleye, 2011). Outsourcing began with low end activities such as security, catering services, cleaning, mailing, which have now moved into customer service operations, design, manufacturing, marketing, clerical positions, fleet management, administrative activities and secretarial activities, distribution, human resources, and sales (Adeleye, 2011). The company is responsible for procurement or possession of materials that may include designers, outsourcing specialists, buyers, merchandisers and/or purchasing agents. For increasing the efficiency and effectiveness of the manufacturing process,

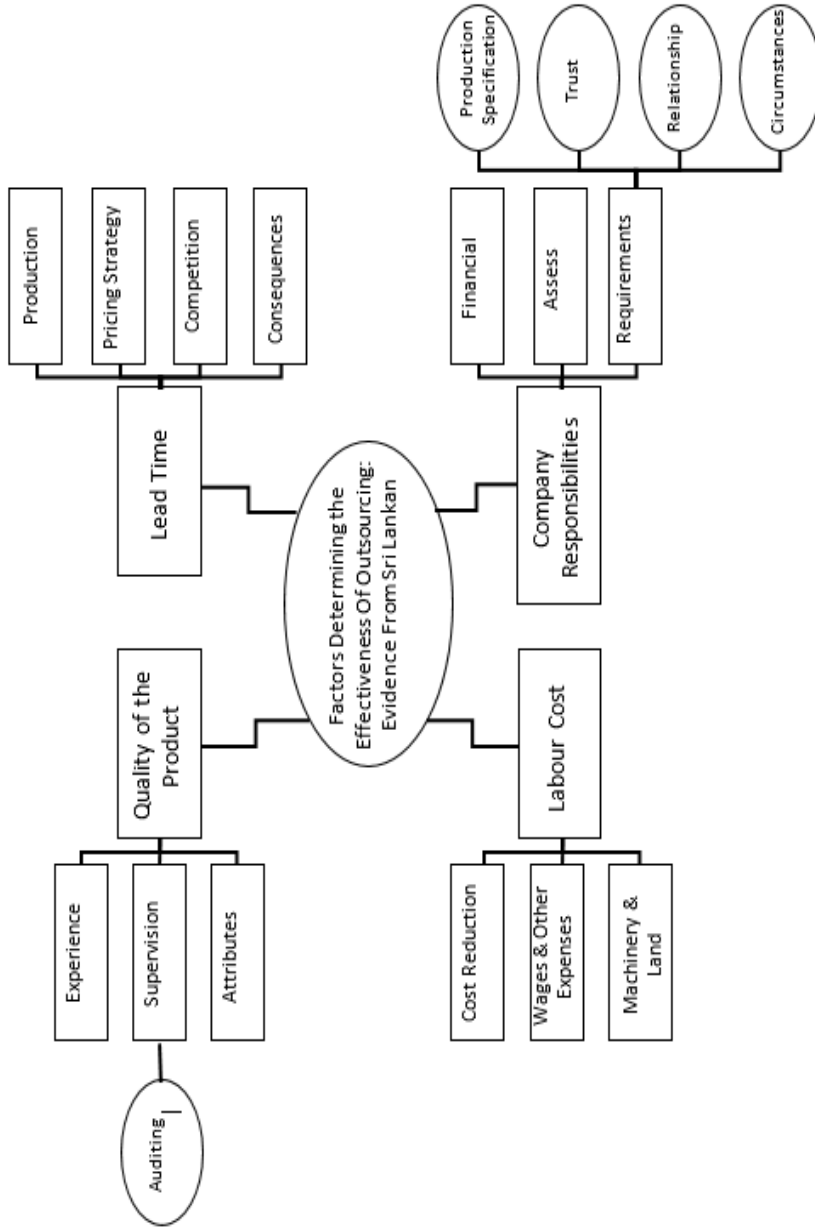
the company should issue a continuous flow of necessary materials and services (Kathirvel, 2020).

Outsourcing involves hiring of services that covers the entire process, from an external organisation, not just to add to the company's strength, but as an enduring replacement of the in-house function where this arrangement is ruled by an acquiescence or an agreement between two companies in a buyer-supplier relationship (Rochester & Rochester, 1995). To preserve the advantage of outsourcing, companies should strengthen long-term relationships on trust, managing broad exclusive partnerships, initiating a standardised, disciplined surrounding for outsourcing, exercising required attentiveness, before choosing a vendor (Kam et al., 2011). Invading into a long-term agreement with an external company could reduce the original company's flexibility. This could happen due to differences in business needs, requirements or technologies which may provide contractual terms that are outdated, could reduce responsiveness, and could increase the risk of estranging customers (Kam et al., 2011).

Theoretical Framework

Resource Based View (RBV) evaluates and interprets organisational resources to understand how firms gain long-term competitive advantage. Accordingly, RBV focuses on the notion of the firm's difficulty-to-copy characteristics as sources of superior performance and competitive advantage. In order to give a competitive advantage, a resource must have four attributes, which RBV identifies as heterogeneous resources and are classified as Valuable, Rare, In-imitable and Non-substitutable. This is commonly referred to as the VRIN framework (Barney, 1986; Hamel & Prahalad, 1994).

Figure 1: Thematic Map



Source: Developed by the author

RBV is crucial in the study of outsourcing since superior performance in organisational activities compared to rivals explains why such activities are absorbed into the company (McIvor, 2009). The concept of core competence developed by Hamel and Prahalad (1994), which emerged from RBV, has had a remarkable impact on outsourcing practice, with the distinction between core and non-core activities firmly entrenched in the lens of many practitioners. RBV of an organisation is based on the assumption termed as inside-out perspective, which is described by Hamel and Prahalad (1994) as a perspective where organisations should be aware of the availability of internal resources before they seek it outside of the organisation. Moreover, outsourcing decision is also based on the client company's ability to invest in internal capabilities and thereby sustain the competitive advantage.

METHODOLOGY

The study adopted a qualitative approach to gain deeper understanding and to bring in new insights concerning the study context. The present research was carried out as a cross-sectional study and manager/executive level employees in leading apparel companies were the unit of analysis. Large scale apparel organisations in Sri Lanka undertake international orders, thereby experiencing the need for outsourcing to small scale apparel manufacturers. Respondents were selected based on convenient sampling technique and taking the experience and the position of the respondents into consideration. Sample size was determined by the researchers when the data collected were at saturation, where the respondents had given similar responses. Accordingly, the study gathered primary data from seven in-depth interviews (with two managerial level employees and five senior executives) using a semi-structured interview guide.

Moreover, these interviews were recorded with the prior consent of the interviewees to enhance the quality and accuracy of data analysis. Following the code of conduct, the researchers ensured the confidentiality of the respondents, and the interview data were used within the research maintaining interviewees' anonymity.

ANALYSIS

According to Guest et al. (2012), responses gathered should be rearranged, categorised and simplified enabling the researchers to draw precise conclusions. Hence, the interviews conducted for the present study were transcribed and the transcripts were coded gradually. Thematic analysis was

employed as the main analysis technique. Through coding, main themes and sub themes were identified, and the thematic map is presented in Figure 1. The themes will be presented in detail in the proceeding section along with its analysis.

Quality of the Product

Experience within the industry is a crucial factor when it comes to outsourcing, thus ensuring the quality of the products. Especially in the apparel industry, expertise to maintain good quality is an asset from the Resource Based View. In line with this, Senior Executive 1 mentioned that they select their outsourcing companies depending on the experience in the industry and technical knowledge, a fact that was further confirmed by Manager 2.

“We use maturity and the experience in the industry, technical knowledge and expertise, financial stability of the company, capability and credit term as our indicators; when we are selecting an outsourcing partner.”

Senior Executive 4 further highlighted the importance of experience stating that they hire third party companies for production only on special occasions such as meeting urgent orders after ensuring that the outsourced parties have sound knowledge and the capability needed to carry out the production.

“We consider their knowledge about the field and capability of their manpower to finish our task in time.”

In increasing the quality of the product, supervision is an important factor. Senior Executive 1 stated that his company hires external authorities to audit the manufacturing process of the outsourcing company.

“We hire external authorities in auditing quality control. Our company arranges internal managers to make visits twice a week to evaluate the manufacturing process and to supervise the quality of the products”.

Other respondents also confirmed that they use internal audit departments and in-house quality control managers to monitor the quality of the production process and the final product being outsourced. To ensure that their third-party outsourcing companies are following agreed manufacturing processes and procedures, companies have to conduct audits which are regularly arranged on annual basis (Holbrook, 2016).

Attribute is a quality or feature regarded as a characteristic, and all respondents stated that responsibility for the quality of the final product lies completely with their company. Manager 2, for instance, stated that:

“Before we release a product to the market, we check the production samples, and our company takes full responsibility for the quality of the final outcome.”

It demonstrates the fact that the employees are aware of their responsibility towards the customers in terms of the quality of their products, even though they may be produced outside the company.

Labour Cost

When certain operations are outsourced, a company does not need to hire additional skilled employees especially when handling seasonal demand patterns. Senior Executive 2 declared that his company does not keep additional operators to do the basic activities in the manufacturing process, which will be costly.

“If we keep employees in-house for every task, we have to spend more money even without a project. But when we outsource certain tasks to a third-party company, we can reduce our labour cost and get improved performance because of their specialty in the field”.

Outsourcing can also reduce certain other expenses that are incurred in the manufacturing process, together with the labour cost (Giertl et al., 2015). According to Senior Executive 2, outsourcing can reduce unnecessary expenses for stationary, cleaning services, and wastage. Senior Executive 4 said that:

“(...) most of the time we can reduce our cost by outsourcing and there are instances we face performance problems with the company because of technical equipment failures.”

Hence, outsourcing enables the company to avoid additional investment in machinery and more land to establish manufacturing plants, which might even be underutilised due to demand fluctuations (Giertl et al., 2015).

Lead Time

In outsourcing, delivery of the products within the right time is very important. All the respondents agreed that working within the given time period can reduce pressure on transportation and other costs such as penalty fees. Hence, organisations have to ensure the ability of the outsourcing company to fulfil the order requirements in a timely manner. Accordingly, Senior Executive 5 mentioned that the capacity of the outsourcing company is a factor they consider.

“(...) capacity per day should be higher in the outsourcing company, so that they should be able to cater to our requirements.”

Palaka et al. (1998) point out that firms must pay lateness penalties corresponding to the exceeded lead time. Senior Executive 3 said that from the beginning of the order they agree upon a timeline with the customer but if they are unable to finish the order on time, the company must pay for the delays.

“In that case we discuss with the customer to extend the delivery time, if we're unable to do that we have to pay a penalty for that order.”

Senior Executive 1, 2 and Manager 1 highlighted that there is always a probability that competitors would snatch their business partners from them. Even in the apparel industry, it is very important to keep the customers satisfied. In their findings Kumar and Arbi (2008), found that outsourcing is not a viable option to fulfil orders in a short lead time.

Responsibilities

Financial stability seems to be a key feature when selecting an outsourcing partner of an organisation. All of the respondents were either looking for financial stability or they intended to give financial support that the partner needed. Manager 2 mentioned that:

“We provide partner companies with necessary requirements like financial support for the time being.”

Pomykalski (2013), stated that, in the apparel sector both external and internal factors affect financial standing of the company. Outsourcing certain

activities would free up resources which can be devoted into better projects or orders (Lair, 2012).

All respondents agreed that their respective companies take complete responsibility for the outcome, and that they consider their customers' requirement about the product a priority. In the selection of outsourcing, respondents claimed that they have looked for companies which can handle both the production aspect properly as well as undertake responsibilities. Every respondent thought that it is important to treat the outsource company as a partner. Senior Executive 3 claimed that:

“In order to deal with an outsource company we have to consider them as partners because two of us are forming a contract and agree upon some conditions to deliver the end product.”

DISCUSSION

Findings of the study revealed that an outsourcing company's experience in the industry is an influential factor in the quality of the final product. Since quality is a relevant factor in the manufacturing process of a product, not only inspection and auditing, but also quality conditions apply in every feature of the outsourcing process (Ramu, 2008). Accordingly, the findings highlighted that supervision is a vital factor to maintain the required product quality. Conducting regular audits in companies is also important to ensure that outsourcing companies are following the agreed manufacturing processes and procedures (Global, 2017; Holbrook, 2016).

Sardar and Lee (2013) stated that firms utilise outsourcing to reduce costs. Inside-out perspective with respect to the Resource Based View indicated by Prahalad and Hamel (1992) highlights the importance of organisations clarifying the availability of resources within the organisations before outsourcing. Findings of the current study further revealed that firms are willing to outsource production to avoid extra investment in new machinery and labour cost. Researchers had discovered that delivering products on time is an essential component of outsourcing, which helps to reduce the damage to the organisation in both finance and reputation status. This can be enhanced by better understanding between manufacturers and distributors. According to researchers, outsourcing is not a smart alternative for most short-term orders with shorter lead times because it is both expensive and has a high delivery cost. Organisations develop good outsourcing

relationships through strengthening trust between the two parties to gain strategic and technological benefits. When there is trust in a business relationship, it has an impact on the overall performance, and higher satisfaction that drives the manufacturing process to produce a high-quality product.

CONCLUSION

The current study explored the factors determining the effectiveness of outsourcing within the Sri Lankan apparel industry by investigating the quality of the product, lead time, labour cost and responsibility. As per the findings, it is essential to have strong supervision to evaluate the manufacturing process of the outsourcing company to ensure the quality of the product in required standards which ultimately impacts on the effectiveness of outsourcing. The main purpose of outsourcing is to increase organisational performance and to successfully address seasonal demand patterns. It is clear that outsourcing production related activities are considerably cheaper than investing on land and machineries to produce them in-house. The study also highlighted that lead time plays a crucial role in maintaining the effectiveness of outsourcing since the products should be delivered on time which is essential for achieving competitive advantage in the industry. Though it is the company's responsibility to manufacture quality products, outsourcing strategy helps to distribute the responsibility between both the client organisation and that of the outsourced company. It is a responsibility of the company to develop trust among the company and the outsourcing party to increase benefits.

RECOMMENDATIONS

As evidenced by the study, outsourcing is an advisable strategy to practice. However, it is crucial to find a suitable third-party outsourcing company, which has to be kept under supervision throughout the manufacturing process. It is prudent to select certified outsourcing companies as it will reduce the risk of quality compromise of the product and other factors as well.

This study provides many insights for further studies. As the study area only focussed on outsourcing strategy of several leading apparel companies in Sri Lanka, there is room for investigating outsourcing vis-à-vis other medium scale companies which practice outsourcing strategy for their operational processes. Future studies can empirically analyse the association between the outsourcing of non-production-related activities and organisational performance. The present study was limited to the qualitative approach,

whereas future research may employ both qualitative and quantitative approaches for more in-depth analyses. Moreover, further research may be carried out from the viewpoint of outsourcing companies which are mainly in the SME category (Mirza & Ensign, 2021).

REFERENCES

Adeleye, I. (2011): The Impact of Outsourcing on Business Performance: Insights for Employers. *Human Resource Management Journal* 3(1) pp 26–44.

Agburu, J I; Anza, N C; Iyortsuun, A S (2017): Effect of outsourcing strategies on the performance of small and medium scale enterprises (SMEs). *Journal of Global Entrepreneurship Research* 7 pp 1-34.

DOI 10.1186/s40497-017-0084-0

Barney, J B (1986): Strategic Factor Markets: Expectations, Luck and Business Strategy. *Management Science* 32(9) pp 32-46.

Berdine, M; Parrish, E; Cassill, N and Oxenham, W (2008): Measuring the Competitive Advantage of the US Textile and Apparel Industry. *Proceedings of the Industry Studies, Annual Conference*.

<https://doi.org/10.2139/SSRN.1134985>

BOI Sri Lanka. (2019): Apparel – Investment Opportunities – Board of Investment of Sri Lanka. Available from <https://investsrilanka.com/apparel>. [Accessed: 03.03.2022]

Bolonne, H (2020): The Effect of Covid-19 to Apparel Sector, Sri Lanka. *Proceedings of the International Conference on Business Research* pp 219–232.

Chase, R B (2004): *Operation Management for Competitive Advantage*. Tenth Edition, Irwin/McGraw Hill, Boston, MA.

Dickerson, K G (1998): *Textiles and apparel in the global economy*. Third edition, Prentice Hall.

Epitawela, D D (2014): The Impact of Outsourcing on the Performance of Organizations in the Sri Lanka Apparel Industry. *Proceedings of the Peradeniya University. International Research Sessions, Sri Lanka*.

<https://doi.org/10.31357/fmscmst.2011.00288>

Garvin, D A (1984). Product quality: An important strategic weapon. *Business Horizons* 27(3) pp 40–43. [https://doi.org/10.1016/0007-6813\(84\)90024-7](https://doi.org/10.1016/0007-6813(84)90024-7)

Giertl, G; Potkany, M and Gejdos, M (2015): Evaluation of Outsourcing Efficiency through Costs for its Use. *Procedia Economics and Finance* 26 pp 1080–1085. [https://doi.org/10.1016/S2212-5671\(15\)00933-8](https://doi.org/10.1016/S2212-5671(15)00933-8)

Guest, G; MacQueen, K and Namey, E (2012): *Applied Thematic Analysis*. SAGE Publications, Thousand Oaks, CA.

Gunathilake, M M L C and De Mel, W D H (2016): Cost Benefit Perspectives of Backward Vertical Integration: An Empirical Study on the Textile and Apparel Industry in Sri Lanka. *Proceedings of the 9th International Research Conference – KDU*. pp 265–271.

Hamel, G and Prahalad, C K (1994): *Competing for the Future*. Harvard Business Press, Boston.

Handfield, R; Sun, H and Rothenberg, L (2020): Assessing supply chain risk for apparel production in low cost countries using newsfeed analysis. *Supply Chain Management: An International Journal* 25(6) pp 803–821. <https://doi.org/10.1108/SCM-11-2019-0423>

Hathcote, J and Nam, I (2010): Advantages of sourcing apparel from China, Taiwan, South Korea, and Mexico. *The International Trade Journal* 13(2) pp 157–185. <https://doi.org/10.1080/088539099272008>

Jin, S (2013): Strategic sourcing in the textile and apparel industry. *Industrial Management & Data Systems* 113(1) pp 23–38. <https://doi.org/10.1108/02635571311289647>

Kam, B H; Chen, L and Wilding, R (2011): Managing production outsourcing risks in China's apparel industry: a case study of two apparel retailers. *Supply Chain Management: An International Journal* 16(6) pp 428–445. <https://doi.org/10.1108/13598541111171147>

Kaya, M and Özer, Ö (2009): Quality risk in outsourcing: Noncontractible product quality and private quality cost information. *Naval Research Logistics (NRL)* 56(7) pp 669–685. <https://doi.org/10.1002/NAV.20372>

Kumar, S and Arbi, A S (2008): Outsourcing strategies for apparel manufacture: a case study. *Journal of Manufacturing Technology Management*, 19(1), 73–91. <https://doi.org/10.1108/17410380810843462>

Lair, C D (2012): Outsourcing and the Contracting of Responsibility. *Sociological Inquiry* 82(4) pp 557–577. <https://doi.org/10.1111/J.1475-682X.2012.00419.X>

Lu, Y; Ng, T and Tao, Z (2012): Outsourcing, Product Quality, and Contract Enforcement. *Journal of Economics & Management Strategy* 21(1) pp 1–30. <https://doi.org/10.1111/J.1530-9134.2011.00321.X>

McCarthy, I and Anagnostou, A (2003): 'The impact of outsourcing on the transaction costs and boundaries of manufacturing. *International Journal of Production Economics* 88 (1) pp 61-71. [https://doi.org/10.1016/S0925-5273\(03\)00183-X](https://doi.org/10.1016/S0925-5273(03)00183-X)

McDonagh, J and Hayward, T J (2000): The outsourcing of corporate real estate asset management in New Zealand. *Proceedings from the 6th Annual Conference of the Pacific Rim Real Estate Society, Sydney, Australia.*

McIvor, R (2009): How the transaction cost and resource-based theories of the firm inform outsourcing evaluation. *Journal of Operations Management* 27 pp 45-63. <https://doi.org/10.1016/j.jom.2008.03.004>

Mirza, J and Ensign, P C (2021): New direction for a Sri Lankan apparel venture: chasing a capitalist or cooperative dream. *Small Enterprise Research* 28(1) pp 83–94. <https://doi.org/10.1080/13215906.2021.1872687>

Momme, J (2002): Framework for outsourcing manufacturing: strategic and operational implication. *Computers in Industry* 49 pp 59-75. [https://doi.org/10.1016/S0166-3615\(02\)00059-3](https://doi.org/10.1016/S0166-3615(02)00059-3)

Nikabadi, M S and Zamani, L (2016): A combination mathematical model (FA, AHP, FARAS) for ranking the effective factors on strategic outsourcing in supply chain of small and medium manufacturing enterprises. *International Journal for Globalization and Small Business* 8(2) pp 131-155.

Palaka, K; Erlebacher, S and Kropp, D H (1998): Lead-time setting, capacity utilization, and pricing decisions under lead-time dependent demand. *IIE Transactions* 30(2) pp 151–163. <https://doi.org/10.1023/A:1007414117045>

Pomykalski, P (2013): Assessing the Impact of the Current Financial and Economic Downturn on the Textile and Apparel Industry in Poland. *Fibres & Textiles in Eastern Europe* 101(5) pp 13–18.

Prahalad, C K and Hamel, G (1997). *The Core Competence of the Corporation.* Springer.

Ramu, G (2008): Quality in outsourcing—essentials for today's global marketplace. *Qual. Progress Journal* 22 pp 37–43.

Rathnayake, D; Malsha, H; Dissanayake, C and Gunathilaka, L. (2020): Factor behind the Success of International Competitiveness of Apparel Industry in Sri Lanka with Special Reference to Vertical Integration Strategy. *Proceedings of the 13th International Research Conference - KDU.*

Rochester, J H and Rochester, H (1995) Advantages and disadvantages of outsourcing. *IEEE International Professional Communication Conference* pp 77–82. <https://doi.org/10.1109/IPCC.1995.554865>

Sardar, S and Lee Y H (2013): Analysis of outsourcing strategies for cost and capacity flexibility in textile supply chain management. Conference: 17th International Conference on Industrial Engineering Theory, Applications and Practice (IJIE 2013), South Korea.

Tatsiopoulos, I P and Kingsman, B G (1983): Lead time management. *European Journal of Operational Research* 14(4) pp 351–358. [https://doi.org/10.1016/0377-2217\(83\)90235-7](https://doi.org/10.1016/0377-2217(83)90235-7).

Teng, S G and Jaramillo, H (2005): A model for evaluation and selection of suppliers in global textile and apparel supply chains. *International Journal of Physical Distribution & Logistics Management* 35(7) pp 503–523. <https://doi.org/10.1108/09600030510615824>

Vaxevanou, A and Konstantopoulos, N (2015): Models Referring to Outsourcing Theory. *Procedia - Social and Behavioral Sciences* 175 pp 572–578. <https://doi.org/10.1016/J.SBSPRO.2015.01.1239>

Willcocks, L., and Choi, C. J. (1995): Co-operative partnership and 'total' IT outsourcing: From contractual obligation to strategic alliance? *European Management Journal* 13(1) pp 67–78. [https://doi.org/10.1016/0263-2373\(94\)00059-G](https://doi.org/10.1016/0263-2373(94)00059-G).

Xiao, T; Xia, Y and Zhang, G. P. (2014): Strategic outsourcing decisions for manufacturers competing on product quality. *Operations Engineering and Analytics* 46(4) pp 313–329. <https://doi.org/10.1080/0740817X.2012.761368>

Yanhong, W (2011): A framework of business process outsourcing relationship evolution model. 2011 International Conference on Management Science and Industrial Engineering (MSIE), pp 995–999. <https://doi.org/10.1109/MSIE.2011.5707581>



Optimal Selection of Cities of Energy Outlets in Developing Countries: An Application of Fuzzy Set Theory to Sri Lankan Solar Industry

By D.R. PERERA¹ , U.A. KUMARA² AND S.T.W.S. YAPA³

The concept of benefit gains is inherently fuzzy in nature. Hence, this study seeks to propose a logic-based innovative formalism that helps in effective decision-making in dynamic, imprecise, inconclusive, and volatile business environments underpinned by technology. Such an attempt, deriving from Fuzzy Set Theory, is needed as we apply this model to the financial gain-based optimal selection of cities to establish business outlets with reference to the solar power generation industry. Modelling the perceptions of domain experts is an integral part of the fuzzy approach. However, these linguistic inputs of experts become intelligible only when quantified through similarity methods and fuzzy tolerance relations comparing the yielded values against proximity ratios. The acquisition of expert knowledge was made by interviewing five economic and finance-proficient individuals in Sri Lanka with tacit know-how. The fuzzy inference was used to transform qualitative words and quantitative data into objective crisp values. The study was operationalized through computing with words, cosine amplitude transformation, and Bellman Zadeh approach. Both the Fuzzy Inference System and Bellman Zadeh's approach were amalgamated for data analysis. In deriving the membership values, two business goals of monetary nature were formulated. The findings reveal that the country's politics, business owners' financial solvency, operational maintenance, and business foresight are the constraints that impact financial gains and accomplishing defined goals at variance. Among these, politics and business foresight are external factors, while solvency and operational maintenance are internalised.

KEYWORDS: Fuzzy Set Theory (Fst), Bellman Zadeh Approach (Bz), Financial Gain, Computing with Words, Constraints

¹ Senior Lecturer in Management, Department of Management and Finance, KDU. Email: dhinesha_drp@kdu.ac.lk

² Professor in Business Economics, Department of Business Economics, USJ. Email: uthumange@sjp.ac.lk

³ Professor in Decision Sciences, Department of Decision Sciences, USJ. Email: samanyapa@sjp.ac.lk

INTRODUCTION

Decision-making is a systematic approach adopted by managers, and it plays a supportive role in multiple disciplines. In real-life circumstances, there are hindrances to the processual nature to differing degrees due to incomplete, fuzzy, uncertain, and imprecise information, biasness of data, or linguistic barriers (Zadeh et al., 2017; Zwikael et al., 2018; Shelly et al., 2015). It is evident that decision-making often occurs in ambiguous, uncertain, and fuzzy environments.

Financial gains are the flow of value emerging from monetary projects-that are quantifiable, and measurable (Zadeh et al., 2017). Moreover, financial gains are tangible in nature, and the financial benefit of a project is calculable, and accountable, and it is possible to evaluate it on a short-term basis (Christian et al., 2008). Thus, the financial value of sustainable projects is a crucial discourse at present. Furthermore, power, and energy, too, have become key industrial domains in the same context.

Due to frequent power crises, the world has observed an electricity crunch, and therefore requires more coordinated efforts in renewable energy-related research (Ekel et al., 2013; Popov, 1987). Solar energy is a source of clean energy that is expected to reduce health hazards due to air pollution in cities and towns (Lu & Fang, 2001). In this context, solar power companies display potential by gearing themselves to export-related technologies to developing countries and by initiating new business outlets, enterprises, and business ventures in cities and towns to increase financial outlay and return on investment. Hence, decision-making is a crucial aspect of such business ventures. However, there are quantifiable and unquantifiable constraints or factors that affect the decision-making process (Sowell, 2005). The present study, therefore, intends to present a formalism on financial gain-based optimal selection of cities for establishing business outlets. Post-2021 was an unfavourable time for developing countries, and Sri Lanka is still suffering as a result of a scarcity of petroleum products.

The objectives of the present study are two-fold: firstly, to understand the goals and constraints that affect the initiation of business outlets in cities and apply the formulated model to a testing environment relating to the energy industry; and secondly, the application of fuzzy methods to determine energy-related business decisions from the perspective of financial goals. The study focuses on Sri Lanka's business setting.

The significance of the study, on the other hand, is three-fold. Firstly, the study gives a new understanding of the fuzzy decision-making model. As a pioneering study, it attempts to determine financial decisions through the lens of the Fuzzy Inference System. Secondly, the study expands the applicability of the model. Therefore, the mathematical fuzzy inference will be performed concurrently through computing with words (text-based), and auxiliary methods and processes (numeric-based). Thirdly, the study posits the need for managers to formulate business strategies and decisions based on the opinions of field experts attuned to defined goals.

The paper is organised as follows: in the proceeding section, the research problem will be elaborated, and the next section will discuss the relevant literature reviewed, with particular emphasis on the theoretical background. The third section presents the mathematical preliminaries, related methods, and processes. This is followed by a description of an explanatory business case study and data, along with the analysis and presentation of results. The discussion of findings is followed by a discussion of theoretical and managerial implications beneficial for scholars and contemporary managers of businesses. The last section envisages the limitations and future research areas recommended by the present study.

The Issue of Fuzziness of Benefits

The increasing demand for enterprise project consultation for project management has resulted in the emergence of new academic disciplines in business projects in many organisations since project stakeholders are often unaware of the benefits that are identified in a project contract (Christian et al., 2008; Enoch & Labuschagne, 2012). Due to this lack of quantifiability, only 3% of novel projects succeed in achieving the end goals (Verdegay, 1984). It is generally viewed that the performance of projects is based on the yielding of benefits, and the benefits yield in turn, depends on the identification, planning, and evaluation of the said benefits. Therefore, in terms of benefits identification, the benefits are transferable among project parties and must align strategically with organisational goals (Mendel, 1995; Enoch & Labuschagne, 2012).

The Research Gap

Financial gains are associated with the monetary returns of a project. Recent studies show that financial gains, cost savings, performance, financial equity, return on investment, and return on equity are tangible project gains that can

be identified and measured (Zadeh, 2016). However, there is a problem related to the long-term outcomes of the identified monetary returns. There is a lacuna in the literature about the measurement approach of long-term outcomes, which lacks scientific application (Waghlikar & Deshpande, 2008; Chen & Cheng, 2009). While the issue of evaluation exists for the long-term value of tangible benefits, there is an observation that approximately 81% of benefits that are identified in projects are intangible benefits such as efficiency, capability, etc. (Mendel, 1995). In the benefit approach, there is no significant measuring tool to deal with these intangible outcomes (Ross, 2009).

Research Problem

The project players can mislead stakeholders on whether 'what gets measured gets delivered,' and that can be grounds for termination of project contracts (Dwivedi et al., 2013). Both tangible and intangible benefits are united in the context of social economics, stakeholder value, customer satisfaction and futuristic monetary gains alongside the long term effect of monetary gains such as long-term financial profit, project solvency and project asset value (Ghildyal et al., 2020; Martinsuo & Killen, 2014). Yet, due to vagueness of the concept of benefit and its imprecision, complicated by the fact that no solid measurement technique or tool exists, the stakeholders are prejudiced as benefit measurement, monitoring and evaluation are largely hampered resulting in repeated high costs in project procurement, contracts, technology and investment (Lad et al., 2008; Christian et al., 2008).

The energy sector is considered to be a technology- oriented business venture (Bellman & Zadeh, 1970; Ghildyal et al., 2018). Moreover, business projects are considered to be a growing and evolving structure. Still, there is a scarcity of research on benefits management in the energy sector where the benefits and deliverables are considered emerging rather than existing because the energy field impacts the deliverables that are more qualitative than quantitative (Zadeh et al., 2017). Hence, this study aims to cover that gap in the existing literature concerning the energy sector.

LITERATURE REVIEW

The relevant literature is posited here in the form of a systematic review that comprises a chronological systematic approach based on the year of publication, author findings, and technical aspects pertaining to the study, such as energy sector-based benefits, financial gains of enterprise projects,

the uncertainty of project benefits, technical terminological concepts, and the industrial applicability contextualised to volatile enterprises like energy.

Energy sector-oriented project benefits

Energy sector-related benefits are rather fuzzy, uncertain, and ambiguous (Zwikael et al. 2017). Fuzzy means that the benefits are imprecise, qualitative in measurement, and uncertain. It is therefore difficult to identify, measure and realise the emerging benefits (Ekel et al., 2013; Lad et al., 2008). This also implies that the concept of a benefit is fuzzy in the enterprise sector (Sowell, 2005). The imprecision of the concept of benefit has impacted the tangible and intangible deliverables and its management. Hence, it is important to the project since project benefit management is an essential aspect. The benefit identification, realisation planning, measurement, and realisation are the four major phases influenced by the fuzzy concept of benefits (Verdegay, 1987). Against this backdrop, the project benefits, deliverables, and outcomes are mostly measurable and quantifiable. However, certain benefits are sometimes difficult to measure, evaluate and monitor. In this light, it can be concluded that there are intangible benefits which still do not have a defined scientific measure for benefit identification, planning, measurement, and realisation.

Gains of enterprise projects

The benefit is the flow of value from the project relating to cost, value for money, profit, and financial goals emerging from the project (Christian et al., 2008; Enoch, 2012). According to the extant literature, scientific measures related to the measurement of project success are emerging. This also extends to the need for developing intangible benefit measurement since the need for qualitative deliverables into quantifiable measures, in light of the project's success, is a growing need (Ghildyal et al., 2020).

Research problem in literature

Financial goals are easily identifiable, but the issue is that the benefit does not have a base scientific method for effective measurement (Ghildyal et al. 2020; Verdegay, 1984). Therefore, the measuring, monitoring, and evaluating aspects of the benefit are undetermined and need to be reinforced. On the other hand, the intangible benefits that emerge from the projects need to be effectively measured. Moreover, there is a need for the project benefits to be effectively managed (Bellman & Zadeh, 1970).

Social impacts, efficiency, human factors are intangible in nature rather than tangible. These qualitative project benefits need to be effectively measured to curtail issues concerning evaluation of benefits and realisation of benefits (Ross, 2009).

Financial gains as a tangible benefit

Financial gains are the emerging benefits and outcomes of a business project underpinned by technological systems (Dwivedi et al., 2013). Financial gains of a business initiative are looked at from two aspects, namely, tangible gains and intangible outcomes (Ghildyal et al., 2020). At present, financial gains are rarely relevant to business although it is in the balance sheet of the company (Martinsuo & Killen, 2014; Dwivedi et al., 2013). In this light, financial gains can be classified as direct tangible and direct intangible benefits offered by the business or the project (Zwikael et al., 2018).

However, the former classification includes short term profit (Dwivedi et al., 2013), pecuniary goals (Ekel et al., 2013), Return on Investment (Lad et al., 2008) while the latter explains the long-term aspects of the financial gains. The essence of the time between short and long-term benefits reveals intangibility. That is because long-term profit, Return on Investment (RoI), and Return on Equity, among other indicators can impact the success of the business outlet in a longitudinal way rather than a cross-section of time in the business. In fuzzy business environments with uncertainty and risk, the money factor also has an intangible effect despite it being traditionally perceived as a quantified, measurable factor expressed in LKR, Indian Rupee or USD (Ghildyal et al., 2018). Hence, this paper recognizes the long-term intangibility effect of financial gains for the purpose of selecting cities to establish business outlets.

Organisational Goals and Project Gains

The goals of a company can be tangible primarily because the managers have a tangible target reachability that is intended to be realised. Moreover, the target is specific, measurable, achievable, realistic, and timely. The timeliness element is the turning point as the scope of time is short-term, medium-term, and long-term. From an intangible benefit point of view, if we say that the company intends to exceed a goal of more than 50 USD in the next 10 years and the scale of the project is large, it implies a time horizon with long-term effects and project value for the owners, sponsors, clients, suppliers, and assessors. Another perspective of cost/time ratio is the legal

consequences of the project. In the case of project liabilities, they are in the vulnerability stage of imminent danger, harm, or damage caused by the solar energy project to the stakeholders. The profit earned can be eroded from the money reserves of the company to compensate for the loss or harm upon direct or indirect stakeholders. Long-term large -scale projects have a larger propensity to cause financial and sentimental loss for business owners or business users.

Uncertainty of Data

Real world is intricate and difficult to understand. Hence, complexity in measurability arises from uncertainty due to two reasons. Firstly, it is the randomness in parametric data, and secondly the fuzziness in perception of domain experts (Lad et al., 2008). Complexity and imprecision infuse into most social, technical, and economic issues faced by mankind results in ambiguity and change.

Amidst the paradigmatic changes in science and technology, the diversity takes into consideration the concept of uncertainty. Uncertainty is bifurcated where Newtonian Mechanics based on calculus methods involve no uncertainty and statistical mechanics based on probability theory captures uncertainty of random variables. Despite the divergence, both methods only cover issues and business dilemmas that are encapsulated in the diverse dual paradigms of complexity and randomness and refer to these problems as organised simplicity and disorganised complexity (Östermark, 1987).

Business and technology related issues exist between the two extremes of Business and IT and thereby involve non-linear systems consisting of larger arrays of facets that are non-deterministic. In this backdrop, uncertainty is predominant in diploid forms of vagueness or fuzziness and imprecision as it sets the platform for the study. While imprecision proceeds from the linguistic word precision, probability concept cradles precision as the standard deviation in numerical data (Klir & Yuan, 1996).

Fuzziness of Data and FIS

The Fuzzy set theory is regarded as a transformational approach used to convert qualitative data into crisp, meaningful, tangible and quantifiable values by means of a technological algorithmic intervention (Christian et al., 2008; Wagholikar & Deshpande, 2008). FST comprises primarily important phases of fuzzification, transformation and defuzzification, where the input, process and output are the crucial aspects of fuzzy logic. Fuzzy logic is the

underpinning cementing stage of FST which emphasises the technical conversion of language-based quantifier values into crisp-oriented measurable values. Fuzzy logic is described by the scientific domains as the logical transition of the qualitative data and non-crisp, expressly non-measurable values into crisp, measurable quantifiers with the ability to quantify (Zadeh, 2016; Zadeh et al., 2017).

Bellman-Zadeh Covenant

An analogous methodology is the Bellman-Zadeh approach which is a cornerstone of the fuzzy principles and mathematical principles (Bellman & Zadeh, 1970). The objective of BZ approach is prescribe a quantitative value for qualitative benefits. The approach explains that there are goals and constraints within the project or business or organisations. Organisational goals are logically related to the dominant project objectives that the organisation implements. In this context, there are constraints related to the project, i.e., the logical business barriers that restrain or prevent the project from achieving the objectives of the organisation relating to the project (Ross, 2009; Fang et al., 1999). Therefore, the constraints are restraining in nature rather than driving organisational-project goal achievement. Socio economic, technological, industrial, managerial, and contractual aspects are generally applicable constraints in novel, inventive and industrially applicable enterprise projects (Dwivedi et al., 2013; Enoch & Labuschagne, 2012).

Computing with Words and Reciprocity with Computing with Numbers

Technology-based projects are a developing concept in enterprise domains and there are allied areas of support such as computing with words. Words are linguistic expressions of the extent to which project related gains or benefits are realised. In this case, for illustration purposes, the realisation of financial gain is 'high', 'medium' or 'low' (Zadeh, 2016) At different granulations, English words can be used to express the entailed benefits (Zadeh et al., 2017). However, the English interpretation needs to be transformed into the paradigm of computer intelligible language since fuzzy logic is applied, which is achieved through a computerised process. Apart from words, numbers are another aspect of this methodology. Computing with numbers is a mathematical interpretation of processing numerical language in order to obtain a human intelligible linguistic expression (Zadeh, 2016). The gain measurement or project benefit measurement is a debacle between the human intelligibility vs. computer intelligibility which practically reciprocate

and are meaningfully applied to the organisation in unison (Zadeh, 2017; Fang & Li, 1999).

Applicability of the concepts of Fuzzy Set Theory, Bellman-Zadeh approach and Goal-constraint Theory

The antecedent decision model in fuzzy environments prepared the ground for the theory and methodology on fuzzy optimization (Bellman & Zadeh, 1970). While primordial studies yielded findings of energy research, Peter et al. (2000) used frameworks based on fuzzy sets and approaches of multi-criteria decision making to overcome the present day power and energy engineering crises through a consensual methodology. Against this backdrop, a dual approach with general classes of models relating to multi-objective ($\langle X, R \rangle$ models) and multi attribute ($\langle X, R \rangle$ models) was popularised.

The vital use of the traditional BZ approach in fuzzy decision-making is the basis for the analysis of $\langle X, M \rangle$ models. The application of the model is precipitated on the principle of guaranteed result. This approach provides a constructive framework to achieve a unified mechanism on the rationale of the analysis of max-min problems. On the other hand, analysis of $\langle X, R \rangle$ models are posited on scientific grounds premised on the fuzzy preference modelling approach. While models and methods are rooted in the conceptual base, scholarly work has diligently reviewed its frequent practical applications in novel industries like power, IT and technology initiatives.

The use of fuzzy theory is compelling in handling and overcoming ambiguity in the benefit planning and monitoring process of power systems and subsystems. It also extends to resolving various issues in planning and operations of power systems, subsystems and micro-environments anchored on energy sources (Cox, 1995). The generalizability of erudite findings assists to settle fundamental problems of constructing fuzzy estimates of fuzzy ambiguous parameters, comparison of alternatives (Klir & Yuan, 1996) or substitutes and promulgating fundamental scientific norms (Ekel et al., 2013), conventions and models of mono-criteria and multi-criteria making in fuzzy environment.

The universal character of the power industry-specific seminal studies has triple importance paving way to application, model approaches and theoretical development (Kacprzyk & Esogbue, 1996). Therefore, the fuzzy approach has major residual effects in design and optimization of reliability in state estimation, fast analysis, distribution systems and operation of

distribution systems. The practical utility value of fuzzy logics is evidenced in load measuring of power systems (Östermark, 1987). Thereby the deliverables, such as levels of territorial sustenance and temporal yielding of project benefits, situational leadership of project benefit managers, can be ascertained. Industrial power calibrations like red time control, depicting active power load, idle time and recouping time cycle (Popov & Ekel, 1987) demonstrate the industrial applicability of fuzzy methodologies even in a perennial point of view.

Aligning with application, theoretical dogma, and managerial practices to fuzzy linear programming (Fang et al., 1999; Fang & Li, 1999), fuzzy multi-objective programming (Sakawa & Yano, 1989), fuzzy integer programming (Chanas & Kuchta, 1998), fuzzy dynamic programming (Kacprzyk & Esogbue, 1996), and fuzzy nonlinear programming (Lu & Fang, 2001) have matured since time immemorial and nurtured domain know-how. A trade-off between fuzzy theory and practice has been exhibited in fuzzy ranking (Bortolan & Degani, 1993), fuzzy set operation, sensitivity analysis and fuzzy dual theory (Verdegay, 1984) which service timely and important propositions in fuzzy logic applications in inventive business sectors. Table 1 displays the summary of systematic literature in the field of project gain/benefit management.

Table 1: Systematic literature review of project benefit management

	1990-2000	2000-2010	2010-2014	Emerging (2015)
Professional and normative literature				
Main Focus	Emerging concepts of benefit management and long-term financial gain identification	Case studies mostly focused on IT project and funded initiatives	Lessons learnt	Agile approach of Fuzzy logic, Bellman Zadeh and mathematical formalisms
Academic literature				
Main Focus	Scarcity of studies pertaining to describing a process in the IT field	Mainly in IT settings gradually opening up to other empirical observatory settings of the enterprise. Dearth of studies in the energy sector which is enabled by technological initiatives	Searching and reviewing of practices and methods to improve gain-based project enterprise evaluations on benefit approach	Integration of the project sector benefits measurement and management into the larger organisational structures of the enterprises in post- modern times.

MATHEMATICAL FUNDAMENTALS

The fuzzy logic formalism, which is the centrality of the paper, is grounded on FST. In this context, the numerical preliminaries are dichotomous in nature. Therefore, a discourse of Cosine Amplitude Method and Bellman-Zadeh approach constitute the mathematical basics.

Table 2: The four processual themes in financial gain based optimal decision-making

Major Themes	Perspectives on the main purpose of research	Contribution/limitation	Key authors of seminal and novel studies
Financial gains	Monetary gains are measurable, but the long-term gains in this classification are difficult and can inhibit the benefit measurement process.	Enterprise project success is based on the ability to identify, plan, monitor, measure and realise benefits as they emerge. Limitation posits that the nature of the project benefits can prevent the accountability of project benefit measurement. There is a lack of a robust scientific framework to measure long-term intangible project benefits.	Dwivedi et al., 2013; Aubry et al., 2017; Breese, 2015; Zadeh, 2016
Fuzzy logic formalism	The measurability and evaluation of project benefits are fitted and premised upon the process of logically transforming the qualitative values into the tangible values.	The qualitative benefits can be given a numerical interpretation and the granulation of benefit realisation can be ascertained in quantified terms. The accountability of project benefits is much more explicit and evidenced. Limitation posits that since crisp values are achieved for benefit measurement, the divisible values are not captured by the logic.	Ghildyal et al., 2021; Deshpande et al., 2016; Zadeh & Deshpande, 2015; Lad et al., 2008; Christian et al., 2008; Zadeh et al., 2021
Bellman-Zadeh approach	The mathematic fundamentals are applied because expert opinions are captured, extracted and analysed.	Expert opinions are the basis of findings and results of the study. They must be scientifically processed for the observers to understand and interpret the mathematical simulations. Limitations posit that the experts are limited in number in most studies, and it may not represent the populated, majority based responses. Social consensus and collective agreement are rarely achieved.	Bellman & Zadeh, 1970; Zadeh et al., 2021; Kacprzyk & Esogbue, 1996

Energy sector project gains	Energy industry is an emerging field of study and the gains emerging from projects are both long-term and fuzzy in nature.	Technology is the centric enabler of the energy sector after the priori efforts in 2020. Today, the energy sector is facilitated by energy technical processes and they are united on the benefits, process, mathematical formulae and approaches. Limitations posit that the change in organisations is likely to occur in this sector and industry with novel, inventive and industrially applicable enterprise initiatives. The issue is whether the system will adopt change in order to realise, capture and formally evaluate the emerging benefits and gains in the light of routine-based benefit evaluation processes.	Ekel et al., 2013; Enoch, 2012; Ross, 2009; Lad et al., 2008; Cox, 1995
------------------------------------	--	---	---

Cosine Amplitude Method in expert classification

This method uses thoughts, ideas and views that are obtained from experts in the field of technology in order to bring a theoretical perspective and obtain and produce a fuzzy membership value for constraints. The authentication is carried out by Cosine Amplitude transformation, which is an explicit aspect of verification of experts, ensuring that the expertise combines with the energy conservation process (Bortolan & Degani, 1993). The probability values of data are a fundamental characteristic and a prerequisite in applying the Cosine Amplitude approach in the prescribed context. However, here the raw information is possibility values, and it is imperative to normalise data, column wise, to originate probabilities. It can override bivalent logic-based probabilistic approaches in the nature of data behaviour.

Similarity method

Probability data values must be converted into possibilities to ascertain a similarity relation between data. It is scientifically ascertained by similarity methods in data manipulation from which we derive the Cosine Amplitude Method.

$$r_{ij} = \frac{\sum_{k=1}^n x_{ik} x_{jk}}{\sqrt{(\sum_{k=1}^n x_{ik}^2)(\sum_{k=1}^n x_{jk}^2)}} \quad (1)$$

Equation 1: Similarity method formulae

The method expressed in equation (1) discerns that the cosine method relates to the dot product for the cosine function (Christian et al., 2008). There are two theoretical considerations, meaning that the dot product is unity when two vectors are collinear, and on the other hand, when two vectors are at right angles to each other, their dot product becomes zero.

The cosine amplitude method generates a similarity matrix and becomes the calculated fuzzy tolerance relation. In pursuance of similarities, we attempt to convert fuzzy tolerance relations into meaningful fuzzy equivalence by way of resemblance fuzzy operation expressed in equation (2).

$$R^{n-1}_1 = R_1 \circ R_1 \circ \dots \dots \circ R_1 = R \quad (2)$$

Equation 2: resemblance fuzzy equation

Fuzzy inference system (FIS)

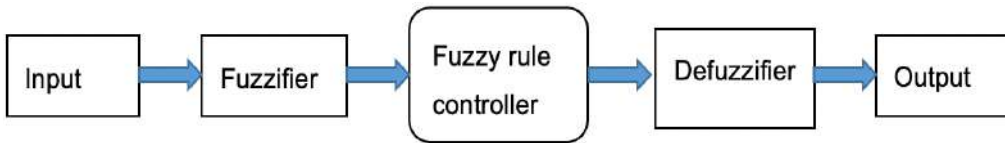
Fuzzy Inference System (FIS) is a quasi-novel approach containing pentaphases in sequencing the input variables, fuzzification, inference rules, defuzzification and outputting the mandatory elements (Enoch & Labuschagne, 2012). The semi-sequential approach has a process and a substance. In this process, firstly the model accepts input variables, and then, the rules of inference are applied, and finally a qualitative output is derived. The substantive approach explains that a dual system of fuzzification and subsequent application of fuzzy inference rules for each constraint takes its course (Lad et al., 2008; Sowell, 2005).

As a secondary substantive stage, the qualitative outputs are amalgamated systematically and defuzzification technique is applied to produce a crisp value, yielding a deterministic contribution. Crisp value means a specific, quantifiable representation with meaningful, unambiguous values that are quantity-oriented constraint values corresponding to the defined goals (Zadeh, 2016). The scientific approach entails a subjective qualitative-

quantitative information planning and is operationalized by FIS in an understandable manner (Ghildyal et al., 2018; Shelly et al., 2015).

The essential part of computing with words in FIS is a text-based transition of fuzzy output into crisp values by means of defuzzification. Since FIS is founded on fuzzy mapping rules, the fuzzy output is transformed into crisp output. Among different methods the centroid method for defuzzification by Mamdani toolbox is utilised in the present research (Zadeh, 2016).

Figure 1: Fuzzy Inference System



Source: Developed by the Author

Bellman – Zadeh Approach

In fuzzy industrial scenarios the goals and constraints are subjected to uncertainty, imprecision, and ambiguity, which consequently lead to decision-making approaches that are also shaped by fuzziness and uncertainty. Therefore, goals and constraints constitute a class of alternatives whose scope and borders are not explicitly expressed (Bellman & Zadeh, 1970). “The cost of a project should not be substantially greater than α ,” where α is a specified constant in an illustration of a typical fuzzy constraint. Moreover, fuzzy goal is represented as “x should be in the vicinity of x_0 ,” where x_0 is an express constant (p,13).

Fuzzy decisions

In the space of mathematical alternatives, fuzzy goals (G) and constraints (C) can be specifically developed as fuzzy sets to devise fuzzy targets, ideas and decisions (Ross, 2009). While G and C intervene at a point, this intersection of goals and constraints is theoretically positioned as reaching a fuzzy decision and managerially considered as perceiving a fuzzy endpoint. In the context of industrial settings, fuzzy decisions are mainly two classes, namely, maximising decisions and minimising decisions. Maximising decision, a sub class of fuzzy-based decisions, is a point among the alternatives at which maximum value of the membership function is obtained in an imprecise decision. Similarly, as a posterior-effect of the maximising decision, an aggregate operation on goals and constraints expressed as fuzzy sets make

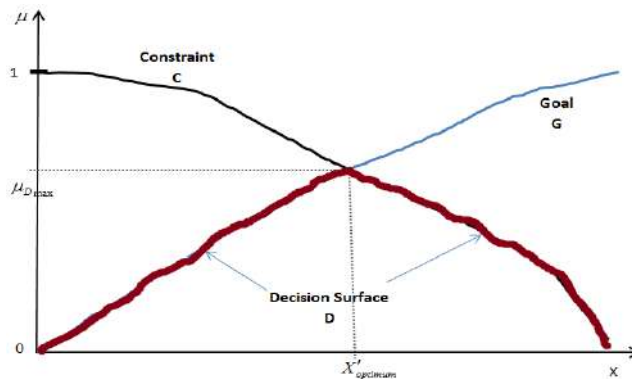
the framework of the model pertaining to fuzzy decision-making (Wagholikar & Deshpande, 2008).

Principal components

- a set A of possible actions.
- a set of goals $G_i (i \in N_n)$, each of which is expressed concerning a fuzzy set defined on A ;
- a set of constraints $C_j (j \in N_n)$, each of which is also represented by a fuzzy set defined on A .

The study will expound a primitive, elementary decision-making framework consisting of a goal that is illustrated by a fuzzy set G with membership function $\mu_G(x)$ and a constraint illustrated by a fuzzy set C with membership function $\mu_C(x)$, which is industrially applicable. In this scientific approach, x is an element of the crisp set of alternatives A_{alt} . While it is the antecedent of the theoretical model, it can be used to devise a definition-based consideration of a fuzzy decision. The fuzzy set D with a membership function can be explicitly expressed as $\mu_D(x)$. Consequently, the intersection of G and C can be expounded as a relation between G , C and D can be diagrammatically shown as in Figure 2.

Figure 2: Fuzzy goal G , constraint C , decision D , max decision x_{max}



Source: Developed by the Author

In project environments, benefits are a multi-dimensional decision as the project deliverables are a collective outcome of the investment. There is a multiple decision-making process consisting of selecting possibilities from a

set of alternatives. The selection of crisp data set $[d_1; d_2]$ from an appropriate set of alternatives A_{alt} ; in which $\mu_D(x)$ indicates the degree to which any $x \in [d_1; d_2]$ belongs to the decision D . In project environments a schematic presentation explains that when $x \in A_{alt} \subset R$ and G and C have monotone continuous membership functions.

$$\mu_D(x) = \min (\mu_G(x); \mu_C(x)); x \in A_{alt} \quad (3)$$

Equation 3: Continuous membership function equation

In this mathematical algorithm, the operation intersections are commutative G . Hence, the goal and constraint in the expression can be formally interchanged in the expression, i.e., $D = G \cap C = C \cap D$.

Utilitarianism or public good value of business initiatives expresses that, in fact, there is business realism and strategy based on the perspectives of industries and behaviour of project goals, organisational objectives and vision that goal could be considered as constraint and vice versa. In this context, the requirement to expressly define goal and constraint is submerged. In alignment the G and C can thereby have objectives or phases of the business problem.

In industrial settings the decision makers aim to gain a crisp result [24], a value among the elements of the set $[d_1; d_2] A_{alt}$ which represents best or adequately the fuzzy set D . This needs to apply defuzzification of D which is a natural approach adopted in scientific equations. The value x from the selected set $[d_1; d_2]$ with the highest degree of membership in the set D is a timely consideration. In the equation, a value x maximises is represented as $\mu_D(x)$ and is called maximising decision, where an optimum benefit or deliverable among possible alternatives is selected. Therewith, the membership functions are to derive an operation intersection which is expressed by:

$$x_{max} = \{x | \max \mu_D(x) = \max \min (\mu_G(x); \mu_C(x))\} \quad (4)$$

Equation 4: Optimum benefit equation

METHODOLOGY

Population

The study seeks to understand the perception of finance-economic related expert stakeholders associated with the energy industry in Sri Lanka. The target population would be the experts related to that industry throughout the country. Thus, the population relevant to the study also consists of the holistic collaboration of experts in different organisations of the energy industry.

Sampling frame

The register maintained by the Ministry of Power and Energy, which contains a database of all listed experts relating to economic/financials of the energy industry and multidisciplinary experts in the different energy sectors during a particular project assessment period serves as the sampling framework for a study of the expert population in the energy sector.

Sampling design

The study seeks to obtain the knowledge-specific and cognitional information from energy related experts with tacit know-how of economics and financials related to this field. In this light, the information and rich data can be extracted from the experts with meaning and essential facts and information for the study. Energy experts possess enlightened opinions, views and practitioner perceptions about the financial gains in the energy industry. They are advantageously placed to provide necessary information. Therefore, judgement sampling is used to investigate the research questions. Accordingly, five financial proficient energy experts are selected for the study based on their expertise in the subject of renewable energy, solar power energy and other sectors, and they represent the correlated aspects of energy which are economics, social-impact, technology, ecology, and ethics/legal aspects. However, the generalizability of findings is constrained due to the fact that the study uses experts who are conveniently available and therefore the findings may not be applicable to the entire population.

Unit of analysis

Individual expert in the energy sector that was interviewed is the unit of analysis. Then, the organisational project that expert contributed to as a stakeholder is the embedded unit of analysis.

Data collection methods

The study uses face-to-face, semi-structured interviews and structured observation studies for data collection. Face-to-face interviews are used to clarify certain aspects relating to financial gains in the energy sector. The structured observational studies, on the other hand, are used to understand four predetermined phenomena, namely; benefit identification, benefit planning, benefit measurement and benefit realization, of the benefit gain evaluation process.

Data collection tools

A brief guide of the interview will be administered to the experts. Moreover, a structured observation guide will be followed to enable the data collection.

Data analysis

A case study approach will be used to extract the expert opinions, which will be analysed *vis a vis* the findings of the literature review.

EXPLANATORY BUSINESS CASE STUDY IN THE CONTEXT OF THE FUZZY LOGIC APPROACH

Suppose a leading renewable energy company decided to expand their business to a developing country with business outlets in six cities with one outlet per city. Five domain experts competent in economic and financial analysis were sought for advice on financial gain if the company decides to go ahead with the project. While it is necessary to consider the governing factors/ constraints, which could be quantifiable or perception based, the objective is to arrive at a financial gain-based optimal ranking of cities which will satisfy all the constraints. In this illustration, financial gain is expressed as a numeric value or goal.

Case study methodological approach

The identification of key respondents in organisations was based on Eisenhardt's (1989) approach to case studies, in which similarities and differences between cases are managed in a way to establish more solidarity in qualitative research (Singh, 2015). Organisations were selected for their diversity in energy specific industrial enterprises. The target interviewees were approached by direct emails to schedule interviews. Five interviews were conducted on a semi-structured basis to capture the respondents' opinions and tacit knowledge. The study also utilised secondary data relating

to energy companies which explains the project benefit evaluation approaches explained in reports, graphical diagrams and project portfolio evaluation reports. The table below (Table 3) explains the interviewee profile.

Table 3: Organisations and Interviewees Profile

Organisation/sector in energy	Experience in benefit management	Number of interviews	Interviewee profile
Hydro power (HP)	low	1	Finance Manager
Solar power (SP)	Medium	1	Sustainability manager/project manager
Fossil fuel (FF)	High	1	Plant manager/project manager
Wind (W)	low	1	Financial compliance/eco manager
Sea water (SW)	medium	1	Compliance manager
Total No of interviews	05		

Source: Based on field data analysis

The data

All five experts (n=5), after diligent analysis of the financial position of the 12 business outlet owners in six cities of Sri Lanka (Colombo, Gampaha, Chilaw, Batticaloa, Nuweraeliya and Jaffna), categorised three financial gain states (m=3) as (1) no risk or more gain, (2) medium risk or medium gain, and (3) less financial gain.

Table 4: Expert's rating based on domain knowledge

Variable	x1	x2	x3	x4	x5
xi1 – Ratio with more financial gain	0.6	0.6	0.3	0.5	0.2
xi2 – Ratio with medium financial gain	0.3	0.1	0.2	0.2	0.6
xi3 –Ratio with financial less gain	0.1	0.3	0.5	0.3	0.2

Source: Based on field data analysis

Description of the cases

As seen in the literature, the financial gains process is one important theme in the extant literature. Table 4 provides an overall view of the implementation of project gains in the 12 outlets along with other managerial processes. The expert opinions are relevant to project benefits, but the experiences are at variance for the five organisations that cumulate the expert opinions.

The observations of the experts are thus: FF has high focus on financial gain process while SP & SW have a moderate focus, and HP and W have a low focus on the same.

Table 5: Components of Benefit Management Process in Cases

Organization of the expert	Evaluation of financial project gains			
	Identification of benefits	Benefit realization planning process	Gain/loss monitoring/measuring	Benefit realization
	Fuzziness of projects and data	Application of Bellman-Zadeh formalism	Implementation of Computing with words	Achieving the relation between project goals and organizational objective(s)
HP	low	Adhoc	In implementation	In implementation
SP	Medium	Partially formal	√	few
FF	High	Formal approach	√	√
W	low	Adhoc	In implementation	In implementation
SW	Medium	Partially formal	√	few

Source: Based on field data analysis

The ranking of decision-making is based on five granulations as illustrated below (see Table 6). The experts' knowledge is used to construct the application of financial goal-based decisions as follows: in full agreement, partially, to a certain extent, sufficiently or not at all.

Table 6: The Fuzzy Decision Linguistic Rep

Linguistic quantification	Fuzzy value crisp approach	Application to ranking process
Highly Satisfies	5	The enterprise will accept the financial goal-base decision in full agreement
Satisfies	4	The enterprise will accept the financial goal base decision partially
Moderately Satisfies	3	The enterprise will accept the financial goal-base decision to a certain extent
Somewhat Satisfies	2	The enterprise will accept the financial goal base decision partially
Rarely Satisfies	1	The enterprise will not accept the financial goal base decision
Linguistic Quantification	Fuzzy value crisp approach	Application to ranking process
Highly Satisfies	5	The enterprise will accept the financial goal-base decision in full agreement
Satisfies	4	The enterprise will accept the financial goal base decision partially
Moderately Satisfies	3	The enterprise will accept the financial goal-base decision to a certain extent
Somewhat Satisfies	2	The enterprise will accept the financial goal base decision partially
Rarely satisfies	1	The enterprise will not accept the financial goal base decision

RESULTS

Similarity among experts was obtained using FST. The experts whose perceptions on the basis of data are similar, in this case, with 0.93 possibility; will be considered in decision analysis for assigning membership values to all the constraints, C. A useful method to estimate similarity among experts is the Cosine Amplitude Method. In this post-modern method, the similarity metric uses a collective of data samples, and a group ‘n’ specialised experts in energy and technology. Once these data samples are collected, they form a data array, X,

$$X = \{x_1, x_2, \dots, x_n\} \tag{5}$$

Each of the elements, x_i , in the data array X is by itself a vector of length m , that is,

$$X_i = \{x_{i1}, x_{i2}, \dots, x_{in}\} \quad (6)$$

In the present case, each expert will describe the six business outlets pertaining to its individual financial risk levels.

The model requires a pairwise comparison of two data samples, illustrated as x_i and y_j , that yield each element of a relation r_{ij} . The strength of the relationship between data sample x_i and y_j is expressed by the membership value. The expressive strength is facilitated through the Cosine Amplitude Method:

$$r_{ij} = \mu_R(x_i, y_j) \quad (7)$$

In a scientific mathematical approach, the size of the relation matrix is $(n \times n)$ and is a common consideration among all similarity relations. Moreover, this antecedence is the basis for a matrix of systematic symmetry and reflexive nature. The symmetric means the equal, proportionate values of data while reflexive is the inherent ability of the data to accustomed to the fuzzy business system. In the illustration, financial goals and employee satisfaction are the data variables. By symmetric it means the ability to combine pairwise and by adaptability it means the value to resolve the fuzzy issue of reflexivity. Therefore, the consequential effect is a tolerance relation that aids in the fuzzy tolerance and effect.

Application of Fuzzy Rules

A fuzzy tolerance relation, $R \sim 1$, has inherent properties of reflexivity and symmetry and it can be reformed into a fuzzy equivalence relation by the process of $(n - 1)$ compositions. In the pursuit of crisp data values, a crisp tolerance relation through a similar approach can be obtained by the transition of crisp tolerance relation into crisp equivalence relation. This is a decomposition process that will alter the texture, character, nature and identity of the relation from tolerance to equivalence. Unless fuzzy tolerance relation is not transformed to fuzzy similarity relation, that fuzzy value could be defuzzified at different levels of alpha cut or possibility levels.

Computing the other elements of the relation results in the following tolerance relation:

$$R = \begin{vmatrix} 1 & 0.91 & 0.69 & 0.93 & 0.71 \\ 0.91 & 1 & 0.54 & 0.97 & 0.53 \\ 0.69 & 0.54 & 1 & 0.88 & 0.68 \\ 0.93 & 0.97 & 0.88 & 1 & 0.68 \\ 0.71 & 0.53 & 0.68 & 0.68 & 1 \end{vmatrix}$$

Is reflexive and symmetric. However, it is not transitive because

$$\mu_R(x_2, x_4) = 0.91 \quad \mu_R(x_4, x_5) = 0.68$$

but,

$$\mu_R(x_2, x_4) = 0.53 \leq \min(0.91, 0.68)$$

So, it is not fuzzy equivalence relation. It is fuzzy tolerance relation

To convert fuzzy tolerance relation to fuzzy equivalence we have to use resemblance Max-min composition of R with R

$$R^2 = R \cdot R = \begin{vmatrix} 1 & 0.93 & 0.88 & 0.93 & 0.71 \\ 0.93 & 1 & 0.88 & 0.97 & 0.71 \\ 0.88 & 0.88 & 1 & 0.88 & 0.69 \\ 0.93 & 0.97 & 0.88 & 1 & 0.71 \\ 0.71 & 0.71 & 0.69 & 0.71 & 1 \end{vmatrix}$$

$$\mu_{R^2}(x_3, x_2) = 0.88 \quad \mu_{R^2}(x_2, x_5) = 0.71$$

but,

$$\mu_{R^2}(x_3, x_5) = 0.69 \leq \min(0.88, 0.71)$$

So, it is not fuzzy equivalence relation. It is fuzzy tolerance relation

To achieve a fuzzy equivalence relation

$$R^3 = R^2 \cdot R = \begin{pmatrix} 1 & 0.93 & 0.88 & 0.93 & 0.71 \\ 0.93 & 1 & 0.88 & 0.97 & 0.71 \\ 0.88 & 0.88 & 1 & 0.88 & 0.71 \\ 0.93 & 0.97 & 0.88 & 1 & 0.71 \\ 0.71 & 0.71 & 0.71 & 0.71 & 1 \end{pmatrix}$$

$$\mu_R^3(x_3, x_2) = 0.88 \quad \mu_R^3(x_2, x_5) = 0.71$$

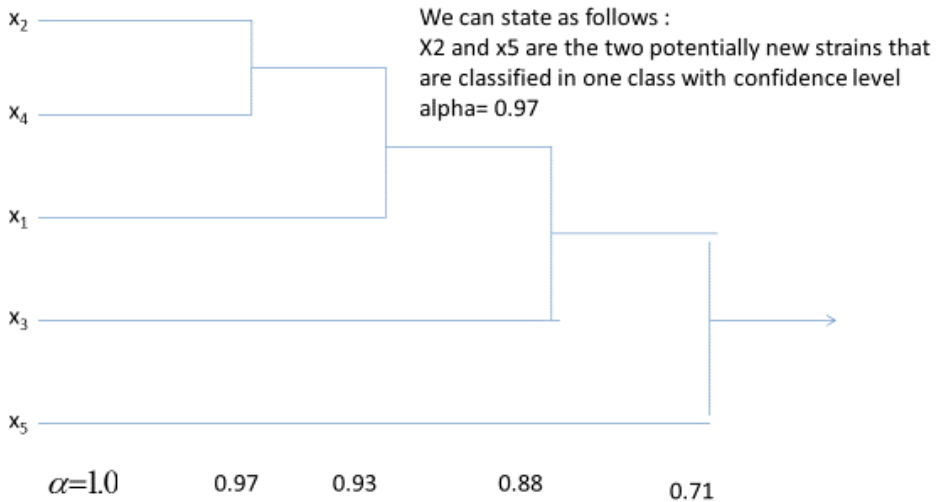
but,

$$\mu_R^3(x_3, x_5) = 0.71 = \min(0.88, 0.71)$$

Now it become a fuzzy equivalence relation

Figure 3: Transformed fuzzy equivalence relations between the five experts

Cluster of Classification Diagram



The study considers 0.93 as a possibility level. Therefore, experts X_1 , X_2 and X_4 are selected for further analysis on financial gain-based optimal ranking of cities for establishing business outlets. As profit driven entities, companies are interested in financial gain, but optimal ranking of cities should satisfy the constraint. Therefore, two goals (G_1 , G_2) as fuzzy sets are useful.

G_1 : Financial gain, x , should be substantially greater than 10 million US dollars (m USD)/year. The fuzzy set can be expressed as:

$$\begin{aligned} \mu_{G_1} &= 0 & x < 10 \\ &= [(1 + (x-10)^{-2})^{-1}] & x \geq 10 \end{aligned} \quad (8)$$

G_2 can be linguistically expressed as a fuzzy set since the financial gain could be in the proximity of 20 million US dollar/year.

Expert classification using Cosine Amplitude Method inferred that only three experts are classified at 0.93 possibility. Therefore, average membership values of these three experts are considered for two defined goals and four constraints in the final analysis.

Two goals and four constraints with membership values results as follows:

G_1 : Financial gain, x , should be substantially larger than 10 million US dollars (m USD)/year.

$$\{ (1, 0.10); (2, 0.20); (3, 0.80); (4, 0.70); (5, 0.30); (6, 0.20) \}$$

G_2 : Financial gain could be in the proximity of 20 million dollar/year.

$$\{ (1, 0.10); (2, 0.40); (3, 0.55); (4, 0.65); (5, 0.40); (6, 0.20) \}$$

In formulating decisions, the three selected domain experts in the field of energy and power representing the Government, ministries, public authorities and utilities commission based on mutual discussion identified a total of four constraints. The four constraints can be expressed as membership values:

C_1 : Political stability of the country $\{ (1, 0.30); (2, 0.40); (3, 0.70); (4, 0.60); (5, 0.50); (6, 0.15) \}$

C_2 : Financial solvency of outlet owner $\{ (1, 0.50); (2, 0.60); (3, 0.75); (4, 0.80); (5, 0.55); (6, 0.30) \}$

C₃: Sufficiency of operations maintenance facilities (1, 0.40); (2, 0.50); (3, 0.60); (4, 0.55); (5,0.45); (6, 0.40)}

C₄: Overcoming unforeseeable situations { (1, 0.20); (2, 0.40); (3, 0.65); (4, 0.40); (5,0.30); (6, 0.20)}

Table 7: Membership values: Two Goal and Four Constraint for Six Cities

Membership value Goal/ Constraint	City 1 Colombo	City 2 Gampaha	City 3 Chilaw	City 4 Batticaloa	City 5 Nuwara Eliya	City 6 Jaffna
m_{G1}	0.10	0.20	0.80	0.70	0.30	0.20
m_{G2}	0.10	0.40	0.55	0.65	0.40	0.20
m_{C1}	0.30	0.40	0.70	0.60	0.50	0.15
m_{C2}	0.50	0.60	0.75	0.80	0.55	0.30
m_{C3}	0.40	0.50	0.60	0.55	0.40	0.45
m_{C4}	0.20	0.40	0.65	0.40	0.30	0.20

Source: Based on field data analysis

The final decision on financial gain-based ranking of six cities alternatives is the logical intersection of G & C.

$$D = G \cap C \quad (9)$$

$$G \cap C = [0.10, 0.20, 0.55, 0.40, 0.30, 0.15]$$

Financial gain-based optimal ranking of cities for establishing business outlets are as follows:

Rank	City
1	3
2	4
3	5
4	2
5	6
6	1

DISCUSSION

The Cosine Amplitude method relates to the attribution of expert opinions and the similarities between them. Therefore, the economic fundamentals, as expressed in extant literature, posit that the project gains have a proportionate logical relationship with financial outcomes which influence decision making (Waghlikar & Deshpande, 2008; Chen & Cheng, 2009). In the process of decision making, city 3 ranks 1st as it highly satisfies all the 4 constraints for the defined Goals 1 and 2. Moreover, the procedure detailed in the current paper infers that cities 5 and 2 ranked in 3rd and 4th positions respectively as they moderately satisfy the constraints and goals. On the contrary, city 1 ranks 6th as it rarely satisfied the constraints and defined goals, highlighting that when project gains are low and short termed, the financial goals are curtailed (Enoch & Labuschagne, 2012; Zadeh et al., 2017). In this process, while city 4 ranks 2nd place it can be posited that city 4 satisfies the constraints and defined goals. Moreover, city 6 ranks in the 5th place which indicates that the constraints and defined goals are somewhat satisfied. The decision-making process of duly establishing business outlets in the cities is based on the rankings in five variations, namely, highly satisfies, satisfies, moderately satisfies, somewhat satisfies, and rarely satisfies the defined goals and constraints.

City 3 has the highest potential to achieve financial gain (G_1), whereas city 1 has the lowest potential. While city 4 has the efficacy to achieve financial gain (G_2), city 1 has the lowest efficacy in financial goal achievement. City 1, as inferred by experts, achieves both the defined goals with lowest potential. Therefore, according to expert inferences in real business situations, goals and constraints are dependent on the perceived knowledge base of the expert as membership grades in fuzzy business environments. Paradoxically, an outlet manager can rank cities in the opposite order or give last preference to the findings of experts as the manager focuses on corporate plans and a city rarely satisfies the constraints for a defined goal.

The financial solvency (C2) and sufficiency of operations maintenance facilities (C3) as envisaged in literature are tangible and system-related aspects that facilitate or hinder the measurement, evaluation and realisation of project gains (Enoch & Labuschagne, 2012; Shelly et al., 2015). Political (C1) and unforeseeable situations (C4) are generally considered as the extrinsic factors that are influencing the project benefits and goals (Klir & Yuan, 1996). City 3 depicts conducive political stability (0.70) that infers that

the government will empower the city to start future-oriented legal energy business and grow profitably. City 3 and 4 display solvency of outlet owners (0.80, 0.75), thereby it can be deduced that the assets are greater than liabilities and stated capital of the business can attain a balanced business outcome (Popov & Ekel, 1987). Furthermore, city 3 (0.60) illustrates the ability to maintain the business facilities as the energy industry demands higher investment in technology and ecological protection. There are sufficient operations maintenance facilities (Chen & Cheng, 2009), and so, city 3 is capable of overcoming unforeseeable demands like energy production and competition for different energy sources with a relatively high value of 0.65.

Solar energy applications are a novel business initiative for developing countries. Energy-specific business venture owners need to understand the gravity of new, inventive and industrially applicable statistical models with practical applicability. In the light of business G & C, the determination of business outlet selection is a new way of thinking because the business is looking at the application of new ideas to resolve a practical issue. The deposition of the approach to rural parts of developing countries are 80% beneficial as the resources, capabilities, culture, governance mechanisms are petty, mushroom, and progressively developing (Bellman & Zadeh, 1970; Fang et al., 1999). There are business owners with low income and greater potential to apply the model appropriately. On the other hand, there are low-income business owners with mediocre business acumen to start-up energy-based business ventures.

PRACTICAL IMPLICATIONS

As power energy is a limited and non-renewable resource, it is a costly asset. Prioritising investments to manage company expenditure is a crucial stage pertaining to the process-based approach of decision making in the energy sector. Identifying and measuring emerging benefits after large monetary, pecuniary investment is a further challenge. The long-term risky decision entails the fact that an imminent demand-supply issue will rise in the future with reference to energy specific industries empowered by fuel, fossil fuels, kerosene and related energy sources (Public Utilities Commission-SL, 2022). Therefore, consequential effects including increased electricity disruption, scheduled power cuts and low-pressure water distribution are inherent crises.

It is a scenario of fuzziness, business, financial and economic turbulence and uncertainty because of the instability and risk faced by business owners.

Thus, their intention to move to alternative energy sources including solar, wind and heat. This calls for a trade-off between investment and realisation of financial gains which are short-term but could be significantly long-term in 2028.

The fuzzy decision-making model plays an influential role as a blueprint to seek expert opinions before initiating the business, and managers of businesses can learn the financial viability and long-term impact of the energy venture.

Energy companies can anticipate the future values of power generation with clean energy sourcing and distribution facilities with the lens of fuzzy decisions to benefit the citizens, the enterprise, and the country. In countries where energy and power sectors are either monopolised or under duopoly, the policy makers can draft proposals to expand energy production and supply chain facilities in government owned or private companies. Specific to Sri Lanka, the Ministry of Power and Energy can initiate optimization of energy consumption by implementing the fuzzy approach in the planning and scheduling of demand-supply. This policy can also facilitate business owners of Sri Lanka to plan, manage, monitor and control the energy needs of their business outlets and realise the desired long-term financial gains.

Three tiers of practical usage can be envisaged in this study. Firstly, at the macro level the country can use the fuzzy innovative approach to design feasible policies to generate and distribute energy to different cities or districts in the country. It is a predecessor to make effective plans to generate and justly distribute essential services and utilities to all parts of the country proportionately and equitably. Secondly, from the business owners' perspective, their financial gains based decisions for the entities will be governed and regulated optimally. Business owners in rural areas can particularly be guided to manage their resources (financial, physical assets and human intellectual capital) effectively. Thirdly, the citizens can be provided with the business needs in a just and equitable manner with merchantability and consumer fairness.

LIMITATIONS

The defined goal expression μ_{G1} presumes the value of exponents as explained by the forefathers of fuzzy algorithms (Bellman & Zadeh, 1970). However, theoretical exponents are onerous to justify as they have subjective values. Hence, the study prefers a distinctive approach of assigning

membership function values on the basis of expert's tacit knowledge in the fields of financial economics and energy. The number of qualified experts for the study in the energy discipline is limited (Christian et al. 2008). \

The fuzzy decision-making model is used to make decisions on financial gains associated with the business owners. It is measuring the realisation of the benefit/dis-benefit from the business outlet viewpoint. However, it lacks a holistic approach as the external stakeholders such as suppliers, consumers and customers are not considered in the application of the model. Thereby the extent of application is narrow and specific to the company perspective though it is a versatile model for any fuzzy-based environment.

Future research

Scarcity of knowledge in the energy sector and fuzzy logic call for prospective novel studies in determining goal constraint relationships for hybrid energy companies sourcing traditional and modern power. In the backdrop of the clean energy concept, there is a need to revamp constraints from ecological perspective and define ecology related goals to test in a fuzzy environment.

Moving from inflationary exclusive political, financial, economic and risk factors to deflationary inclusive factors such as technologies, social trends, ethical and legal approach, will change the decision-making approach in the developing world, both culturally and philosophically.

Moreover, the future researchers can be motivated to study how the fuzzy decision model can be utilised to initiating energy-related sectors' manufacturing and production plants of product lines and energy non-related industries like financial, banking, and legal services that show evidence no relevant studies at present.

CONCLUSION

While the fuzzy decision-making model explicitly regards the defined goals and constraints in an imprecise system, it is an observable phenomenon in business realities, sectors and industries. Research outcomes of the present study contend that financial goals with two monetary parameters are significant in fuzzy decisions followed by four constraints relating to political, financial, operational and unforeseeable demands to realise the final business outcome of energy-oriented companies. Furthermore, based on domain knowledge of expert evidence, there are three identified states of

financial gain associated with risk and gain. After fuzzification, these linguistic inputs are defuzzified to achieve membership function values of objective crisp nature. Cosine Amplitude based expert inferences and Bellman-Zadeh approach imputes check and balance to harmonise tacit opinions of field experts with profit ideologies of business managers, in order to exploit the industrial applicability in the context of FST.

In the framework of disorganised complexity, the fuzzy logic innovative formalism was meaningfully applied. Post Covid-19 the identified study constraints are becoming much enlarged and useful because C1 and C4 are macro level external factors which are similar to the effects of the persistent health crisis. The ravaging political instabilities, economic crises and unforeseeable socio-business environments in developing nations like Bangladesh (2020), Myanmar (2021), Indonesia (2019) and South Sudan (2018) are learning to mitigate its direct and indirect effects on business owners through the fuzzy approach. The findings of this study can be appropriately applied for any pandemic situation even in least developed and developing nations particularly Sri Lanka. Subsequently, the micro factors C2 and C3 are addressed as internal factors which are either mitigated or enhanced by the pandemic, and future effects of its recurrence in converging common issues.

REFERENCES

- Bellman, R E and Zadeh, L A (1970): Decision-making in a fuzzy environment. *Management science* 17(4), pp B-141-B-164.
- Bortolan, G & Degani, R (1993): A review of some methods for ranking fuzzy subsets Readings in Fuzzy Sets for Intelligent Systems. Elsevier pp 149-158.
- Chanas, S and Kuchta, D (1998): Discrete fuzzy optimization Fuzzy sets in decision analysis, operations research and statistics. Springer pp 249-280.
- Chen, C and Cheng, H (2009): A comprehensive model for selecting information system project under a fuzzy environment. *International Journal of Project Management* 27(4), pp 389–399. Available from doi:10.1016/j.ijproman.2008.04.001
- Christian, R A; Lad, R K; Deshpande, AW; and Desai, N G (2008): Fuzzy MCDM approach for addressing composite index of water and air pollution potential of industries, *International Journal of Digital Content Technology and its Applications*, Advanced Institute of Convergence Information Technology (AICIT) 2(1) pp 54-61.

Cox, E (1995): Fuzzy logic for business and industry. Rockland, MA: Charles River Media.

Dwivedi, Y K; Ravichandran, K and Kartik, M (2013): IS/IT Project Failures: A Review of the Extant Literature for Deriving a Taxonomy of Failure Factors, International Federation of Information Processing, 402, pp 73-88.

Ekel, P Y; Kokshenev, I V; Parreiras, R O; Alves, G B and Souza, P M (2013): Fuzzy set based models and methods of decision making and power engineering problems. Engineering, 5(5A), p. 41-51.

Enoch, C N and Labuschagne, L (2012): Project portfolio management: using fuzzy logic to determine the contribution of portfolio components to organizational objectives. Paper presented at PMI® Research and Education Conference, Limerick, Munster, Ireland. Newtown Square, PA: Project Management Institute.

Fang, S C and Li, G (1999): Solving fuzzy relation equations with a linear objective function. Fuzzy Sets and Systems 103(1) pp 107-113.

Fang, S C; Hu, C F; Wang, H F and Wu, S Y (1999): Linear programming with fuzzy coefficients in constraints. Computers & Mathematics with Applications 37(10) pp 63-76.

Ghildyal, A; Perera, D R; Chang, E; and Deshpande, A W (2018): Conceptual framework for measuring project benefits using Belief-Plausibility and Type 1 Fuzzy inference system, Journal of Business Research Elsevier.

Ghildyal, A; Ru, D; Yapa, S; Uthumange, A; Chang, E; Joiner, K and Deshpande, A (2020): Conceptual Framework for Measuring Project Benefits using Belief – Plausibility and Type1 Fuzzy Inference System (Chapter 20) in Studies in Fuzziness, 393, Shahnaz N. Shahbazova et al. (Eds): Recent Developments and the New Direction in Soft-Computing Foundations and Applications, 978-3-030-47123-1. Available from https://link.springer.com/chapter/10.1007/978-3-030-47124-8_20

Kacprzyk, J and Esogbue, A O (1996): Fuzzy dynamic programming: Main developments and applications. Fuzzy Sets and Systems 81(1) pp 31-45.

Klir, G J and Yuan B (1996): Fuzzy sets and fuzzy logic: theory and applications. Possibility Theory versus Probability Theory. Journal of fuzzy logic in interdisciplinary studies, 32(2) pp 124-138.

Lad, R K; Desai, N G; Christian, R A and Deshpande, A W (2008): Fuzzy Modelling for Environmental Pollution Potential Ranking of Industries, International Journal for Environmental Progress. American Institute of Chemical Engineers (AIChE) 27(1) pp 84-90.

Lu, J & Fang, S C (2001): Solving nonlinear optimization problems with fuzzy relation equation constraints. *Fuzzy Sets and Systems* 119(1) pp 1-20.

Martinsuo, M and Poskela, J (2011): Use of evaluation criteria and innovation performance in the front end of innovation. *Journal of Product Innovation Management*, 28(6), pp 896–914.

Mendel, J M (1995): Fuzzy logic systems for engineering: A tutorial. *Proceedings of the IEEE* 83(3) pp 345–377.

Östermark, R (1987): Sensitivity analysis of fuzzy linear programs: An approach to parametric interdependence, *Kybernetes*. 16(2) pp 113-120.

Popov, V and Ekel, P Y (1987): Fuzzy set-theory and problems of controlling the design and operation of electric-power systems. *Soviet journal of computer and systems sciences* 25(1) pp 92-99.

Ross, T J (2009): *Fuzzy logic with engineering applications*: John Wiley & Sons.

Sakawa, M and Yano, H (1989): An interactive fuzzy satisficing method for multiobjective nonlinear programming problems with fuzzy parameters. *Fuzzy Sets and Systems* 30(3) pp 221-238.

Shelly, Ping Ju; Straub, D and Liang, Ting-Peng (2015): Governance mechanisms and strategic alignment influence organizational performance: insights from a matched survey of business and IT managers, *MIS Quarterly* 39 (2) pp 497-518.

Singh, K.D. (2015): *Creating Your Own Qualitative Research Approach: Selecting, Integrating and Operationalizing Philosophy, Methodology and Methods*. Academy of Management Research-SAGE publication, 19(2), 132-146. doi: 10.1177/0972262915575657

Sowell, T (2005): Fuzzy logic for “Just plain folks,” *Fuzzy Logic Tutorial*, available from <http://www.fuzzy-logic.com/Ch1.htm>

Verdegay, J L (1984): A dual approach to solve the fuzzy linear programming problem. *Fuzzy Sets and Systems* 14(2) pp 131-141.

Waghlikar, K and Deshpande, A W (2008): Fuzzy Relation based Modelling for Medical Diagnostic Decision Support: Case Studies. *Knowledge-Based, Intelligent Information and Engineering Systems* 12, pp 319–326.

Zadeh, L A (2016): Stratification, target set reachability, and incremental enlargement principle. *Information Sciences*, p. 354, Available from doi 10.1016/j.ins.2016.02.047

Zadeh, L; Chang, E and Deshpande, A (2017): Fuzzy Inference Approach, Journal of Business Research 23 pp 567-546.

Zwikael, O; Chih, Y and Meredith, J R (2018): Project Management Benefits: setting effective target benefits. International Journal of Project Management, 36, pp 650-658



The Impact of Expectations on Turnover Intention Among Generation Z Employees in the Financial Sector in Sri Lanka

By L.N. DE SILVA¹ AND K.A.S. DHAMMIKA²

With the Generation Z taking over the workforce of Sri Lanka, as more and more of these individuals entering the job market and moving up the corporate ladder, it seems for the workplace to be prepared to not only welcoming but retaining these employees in the long run. The age-old Human Resource conundrum of dysfunctional employee turnover comes to mind in the light of this new generation. This study was carried out to find the factors affecting to the turnover of the Gen Z employees in Sri Lanka. A sample of 76 non-technical employees was drawn from the financial sector by using stratified random sampling method with 72% response rate. Data was collected by administering a questionnaire measuring the variables of the study. The questionnaire was distributed online to the respondents. It was found that life expectations has significant impact on the level of turnover intention of the Gen Z employees. However, the study found no evidence on the possible impact of job expectations on turnover intention. As expected, the Employee Value Proposition (EVP) recorded a significant impact on employee turnover intention. The findings of this study bear some theoretical and practical implications and are bounded with certain limitations. Further studies are recommended with the aim rectifying the limitations.

KEYWORDS: Generation Z, Employee Turnover, Life Expectations, Job Expectations and Employee Value Proposition (EVP)

¹, Department of Human Resource Management, University of Kelaniya, Sri Lanka,

² General Sir John Kotelawala Defence University, Ratmalana, Sri Lanka, Email: kasdhammika@kln.ac.lk

INTRODUCTION

The organizations need a continuous process of the Human Resource Management for ensuring the sustainable workforce for it. As the workforce of organizations continues to age and decline, whether we like it or not, no option other than recruiting new generation to balance the equation of supply and demand of human resource. This generation prefer for flexible hours, remote logins and learning and will always make unprecedented demands on the workplace. The expectations of the Generation Z have expanded with the contextual changes where they live, work and associate. According to Kapit (2017), New Generation, known as Generation Z is very interested in technology and a freedom in their lifestyle. Despite necessary limitations, employers would endeavor to recognize Generation Z employees for organizational productivity. This sudden change in generational attitude has caused an unprecedented challenge for HR professionals to manage mismatch created with other two generations at work i.e. Generation X and Generation Y (Schroth, 2019).

Generation Z is the latest entry to the global labor force. Especially after the year 2020, almost all entry level employees consist with Generation Z employees. Hence, it is utmost important that employers should seriously understand the expectations and behaviors of Gen Z employees in view of maintaining a sustainable workforce (Sidorcuka&Chesnovika, 2017).

According to Merriam-Webster dictionary, Generation Z is “the generation of people born in the late 1990s and early 2000s”. There is no clear cut off year range when separating any of the generations, and various literature define the benchmark ages differently. For this research, the researcher shall use one of the most commonly used ending and starting points for Generation Z, which is between the years 1995 to 2012. Generally, members of Generation Z are tech-savvy, pragmatic, open-minded, individualistic but also socially responsible. For Generation Z, swiping, tapping and scrolling are about as second nature as breathing (Dolot, 2018)

Members of Generation Z are often referred to as “Digital Natives”, since they have been exposed to the internet ever since their childhood, or at the latest their adolescence. Although they are being raised by Generation X, it could also be said that Generation Z was raised by the internet. That is to say that Generation Z grew up learning from the internet as much as they did, if not more than they did from their parents and guardians. They have witnessed

widespread use of electronic gadgets and digital technologies like the Internet and social networking sites. Therefore, they are characterized as tech savvy, globally connected (in the virtual world), flexible and smarter (Rasca, 2017).

At a global scale Generation Z of the world were born into a world facing challenges such as international terrorism and environmental concerns including climate change and global warming. In Sri Lanka, Generation Z were born into the latter part of the then ongoing civil war and witnessed the end of this long raging war. Social and political issues as such have made Generation Z more tolerant of diverse cultures compared to their predecessors (Francis & Hoefel, 2018)

Out of current workforce up to 90% represented by Generation X and Y. The percentage of Generation Z is on the increase with gradual retirement of Generation Z. Employees born after 1996 to early 2010's within the 21st century fall to Generation Z. Even though, Generation Z youth especially school leavers in Sri Lanka are eligible to enter labor force after secondary education an increasing trend is observed for engagement in higher education in full time than opting for employment.

According to Capital GES It is predicted that millennials and generation Z will take the stake of 75% of the workplace population by 2025.it has been noted that the level of turnover among the Gen Z employees is high in Sri Lanka. According to the Labour Demand Survey Report 2017, female resignation is 56.6% and the male resignations 43.4% in Sri Lanka. Young employees mostly change jobs when better opportunities come up; especially, for a better job or to go back to education with seasonal work, shift from temporary to a more stable job or because they were not happy with previous job. The purpose of this study is to examine the factors affecting to the employee turnover among Gen Z employees in the financial sector in Sri Lanka.

Generation Z have a higher rate of turnover when compared to their older counterparts (Griffeth&Hom, 2001). Therefore, it is challenging for organizations to retain this group of employees by applying the same retention techniques that may have worked for older generations in the organizations' workforce (Ongori, 2007). Since the advent of Generation Z employees to the workforce is relatively new, being the youngest generation in the workforce currently, there is a gap in both practical and research aspects when it comes to Generation Z's behaviour within the workforce (Im, Chae, and Yoo, 2021). Accordingly, this research is intended to identify job

expectations of Generation Z employees and analyse how they affect towards their loyalty for the jobs, and eventually their decision to stay or leave. Based on this research gap, the research problem of the study was set as

“How do employee expectations of Generation Z employees have an impact on the level of employee turnover intention in the banking and finance sector in Sri Lanka?”

This study was carried out with the purpose of examining the factors affecting to turnover of the Gen Z employee in the financial sector in Sri Lanka and assess their impact of turnover.

Research Questions

- I. What is the impact of Life Expectations on Employee Turnover intention in Generation Z employees?

This research question is focused to verify whether personal life expectations, aspirations and goals of Gen Z employees have an impact on employee turnover.

- II. What is the impact of Job Expectations on Employee Turnover intention in Generation Z employees?

This is about testing whether the job expectations, demands and stress faced by Gen Z employees have an impact on employee turnover.

- III. What is the impact of Employer Value Proposition on Employee Turnover intention in Generation Z employees?

Third research question is focused to verify whether overall package (monetary and non-monetary compensation and benefits including recognition, status, welfare schemes, insurance, time off and other such benefits available to the employee) offered by an employer have an impact on employee turnover.

Significance of the Study

It is assumed that the current study is very significant in view of lack of literature in subject area especially in Sri Lankan context. Contribution of Generation Z to employers is still at an infancy level and hence research undertaken with extensive data are still limited especially in Sri Lankan

context. Accordingly, the researcher is of the view that current study would be significant to bridge the research gap and contribute towards the budding literature in Sri Lankan context.

In addition to the literature aspect, this research provides practical implications that allow employers and policy makers to understand an emerging group of employees better and consider their expectations when making corporate level decisions.

LITERATURE REVIEW

Employee Turnover is one of the hot topics in the literature published in Human Resource Management or Human Capital Management in modern terms. Employee turnover has been a much-studied aspect of human resource management field (Ongori, 2007). Employee turnover refers to the proportion of employees who leave an organization over a set period (often on a year-on-year basis), expressed as a percentage of total workforce numbers" (CIPD, 2019). Armstrong (2012) defines the employee turnover as "the rate of people leaving an organization he asserts that turnover can be disruptive and costly to the organization" (Griffeth & Hom, 2001). Employee turnover can be looked in to under three dimensions as "Voluntary", "Involuntary" and "Dysfunctional turnover". Among all three dimensions, "Dysfunctional turnover" will be the dangerous as employers might lose best performing employees in the company who have a direct impact on the profit line of the company. Dysfunctional turnover outlines a situation in which employees depart the organization for several reasons, and thus, negatively affect the organization in terms of the overall costs and the abilities to conduct the core business functions of the organization effectively (Yankeelov et. al., 2009). When employees leave the organization, this may not only impact on organization but also on the morale and work ethic of the overall workforce, which can in turn result in furthermore cases of employee turnover. Budiman, and Tan, (2022) found that job stress, job satisfaction, and organizational commitment are significantly associated with turnover intention of employees. Since these behavioral outcomes are positive contributors for the organizations, employee turnover must be promptly attended.

Many researchers have examined the possible causes for employee turnover in organizations. However, Ongori (2007) claimed that there is little consistency in the finding of turnover studies over factors affecting to turnover. Among those factors, job related factors such as insufficient information of

execution of the duties of the job, unclear expectations, ineffective performance evaluation, lack of career development, extensive job pressure, and less job satisfaction are identified (Tor & Owen, 1997). Organizational factors such as leadership, organizational culture, Stability, Communication, technology and poor HRM are dominant (Griffeth, Hom, & Gaertner, 2000).

Mendis (2017) suggest that salary is basic requirements with the employee; they look for the labor pay remuneration. It means the salary is always a decisive role for most employees. 'Pay' means the salary of employees, which is given for their service. Employee turnover is influenced by pay. Also mentioned that high salaries are not important, but "good" and "fair" salaries indicate a strong correlation with the intention to remain, signifying that if the compensation is competitive, financial rewards are not the primary factor in retention. Kim, Chae, and Yoo, (2021) identified turnover intention of nursing students as multi stage process where the factor affecting to turnover intention are central in the process.

It seems that some of the factors which are related to the non-techno-based work context have not been amenable adequately for turnover studies. Non-Technical working environment provides particular context where the factors affecting to employee turnover may differ (Sun, Lee, & Sohn, 2019). On the other hand, the impact of work context on employee turnover is affected by the nature of the employees (Ongori, 2007). This warrants a empirical examination on this nature of work contexts and interactions filling this contextual void for better understanding of turnover behavior. The present study examines the turnover behavior of Gen Z employees taking these contextual factors into consideration.

In the ever-changing world of work the only constant is change (Mossholder, Settoon, Armenakis, & Harris, 2000). In this rapidly changing environment, characterized by intensified competition and escalating demands for flexibility and adjustment, job stress is created and has become one of the most prominent reasons for leaving a job (Hellgren & Sverke, 2003). Stress can evoke the negative emotions like fear, frustration, sadness, and anger (Cavanaugh, 1988). Therefore, freedom from excessive job stress can be characterized as one of the expectations that impact one's personal life and mental and physical well-being.

To survive and dominate in competitive world today, the employees are demanded to balance the juxtaposing roles of their work life and personal life.

With more and more employees expecting to “have it all” that is not having to choose between the two roles. Budhwar (2001) note that employees look for balanced job roles that should be free of job stress, having a favorable work environment, and the roles must be defined clearly to avoid role conflict. Particularly in the countries of Asia such as Sri Lanka where there is a higher priority given to the family unit, there is a higher need for these factors to be paid attention. When such situations involving role conflict occurs, it becomes clear that employees may be compelled to choose between prioritizing one role over the other, whether it be personal or professional. If the choice is personal, employee turnover occurs due to dissatisfaction in personal life as affected by their strenuous job role.

During the past three decades, many studies have shown that job characteristics can have a profound impact on employee well-being (e.g. job strain, burnout, work engagement). For example, research has revealed that job demands such as a high work pressure, emotional demands, and role ambiguity may lead to sleeping problems, exhaustion, and impaired health (eg: Doi, 2005; Halbesleben and Buckley, 2004), whereas job resources such as social support, performance feedback, and autonomy may instigate a motivational process leading to job-related learning, work engagement, and organizational commitment (e.g. Demerouti et al., 2001; Salanova et al., 2005; Taris and Feij, 2004). Although these previous studies have produced a long list of possible antecedents of employee well-being, theoretical progress has been limited. Many studies have either used a laundry-list approach to predict employee well-being, or they have relied on one of two influential job stress models, namely the demand-control model (Karasek, 1979) and the effort-reward imbalance model (Siegrist, 1996).

The job demands-resources (JE-R) model proposes that working conditions can be categorized into 2 broad categories, job demands and job resources that are differentially related to specific outcomes. At the heart of the Job Demands-Resources (JE-R) model (Bakker et al., 2003b; c; Demerouti et al., 2001a, b) lies the assumption that whereas every occupation may have its own specific risk factors associated with job stress, these factors can be classified in two general categories (i.e. job demands and job resources), thus constituting an overarching model that may be applied to various occupational settings, irrespective of the particular demands and resources involved. Job demands refer to those physical, psychological, social, or organizational aspects of the job that require sustained physical and / or psychological (cognitive and emotional) effort or skills and are therefore associated with

certain physiological and/or psychological costs. Examples are a high work pressure, an unfavorable physical environment, and emotionally demanding interactions with clients. Although job demands are not necessarily negative, they may turn into job stressors when meeting those demands requires high effort from which the employee has not adequately recovered (Meijman and Mulder, 1998).

Job demand and job resource model has been examined extensively over the past years (Lesener, Gusy, & Wolter, 2019). However, the fact that demand and resources are different from occupation to occupation poses a challenge in conceptualizing demand and resources objectively (Adil, & Baig, 2018). This has resulted in vague in understanding the demand and resource aspects of jobs in organization. The present study will take this aspect to some extent by examining the life and job expectations of the Gen Z employees which are part of demand and resource model.

Demand and resource model of employment was found to be a part and parcel of employee value proposition (EVP) which has a direct bearing on employee turnover (Kumar, Devadas, & Dhammika, 2021). Minchington (2005) defines an employee value proposition as a set of associations and offerings provided by an organization in return for the skills, capabilities and experiences an employee brings to the organization. The employee value proposition is an employee centered approach that is aligned to existing, integrated workforce planning strategies because it has been informed by existing employees and the external target audience. An employee value proposition must be unique, relevant and compelling to act as a key driver of talent attraction, engagement and retention. DiVanna (2003) later refines the definition of the EVP as a portfolio of skills and experiences which can be considered as Assets and incorporated into a company's balance sheet. Personal job satisfaction is driven by far more than financial factors such as salary and benefits. An organization's employee value proposition has thus been described as "critical to attracting, retaining and engaging quality people". Other key factors influencing how an individual may choose to balance his or her career path in an organization are relocation services, salary, perquisites, career development, location, and so on.

Employee Value Proposition has been found to have a strong association with employee turnover. However, the measuring of EVP has been done based on various underpinnings resulting in mythological irregularity in EVP studies (Martin, Gollan, & Grigg, 2011). This methodological issue of EVP has blared

the understanding of EVP and its relation with turnover of employees (Heger, 2007). This paper addressed this issue to some extent by considering all underpinnings of EVP and formulating an EVP profile related to Gen Z employee in Sri Lanka.

METHODOLOGY

The most suitable research approach in this research is the deductive approach since the research starts with certain assumptions such as the fact that employee expectations have an impact on employee turnover. It further assumes that employee expectations are encapsulated by life expectations, job expectations and employer value propositions. Hypotheses are developed and these hypotheses are tested by using the measurements used to measure the impact between the independent variable and dependent variables chosen for this research.

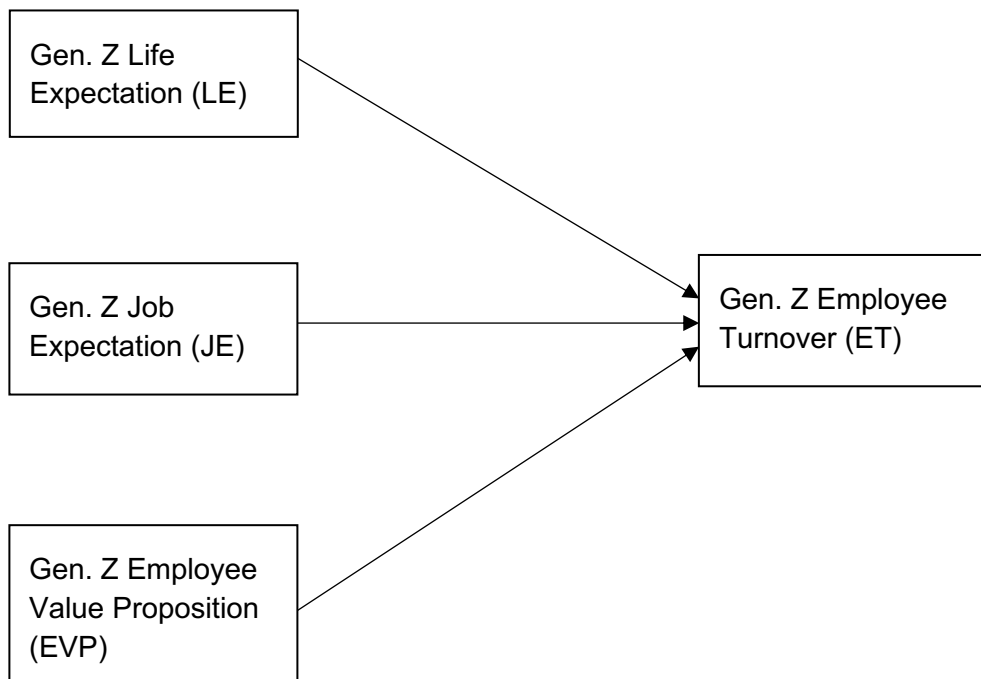
The questionnaire included demographic data of the respondent such as gender, age group, educational level as the personal information apart from that it included working experience and employee turnover rate as per knowledge by the respondent. Data collection was done through the standard questionnaires and online system by using a Google form system. The survey questionnaire that was distributed is presented as the Annexure.

Conceptual Model

Literature review of this topic has suggested that there exist relationships between the following variables shown in the research model. As Justin Field (2008) explained there are several factors including employees' expectations regarding the job role, its impact on their personal life and the perks offered by the package that form an employees' intention to stay or leave a job.

The research model Figure 3 represents the three independent variables accordingly derived namely, Life Expectations (LE), Job Expectations (JE) and Employer Value Proposition (VP) of Generation Z employees, and the research aims to examine the ways in which these independent variables impact the dependent variable, Employee Turnover (ET).

Figure 1: Research Model



Source: Developed by the Researcher

Hypotheses Building

Expectations of one's life play a significant role in career life (Hellgren & Sverke, 2003). Employees expect to meet their life expectations through their career once they become employed in organizations (Ongori, 2007). Employees tend to deviate from the organization psychologically when they find that their life expectations are not served by the organization (Mendis, 2017). This may finally result in creating a turnover intention in employee and in actual turnover in long run (Meijman and Mulder, 1998). This tendency is more apparent among Gen Z employees given that they have more life expectations than their counterparts.

Therefore, it was hypothesized that

- Life Expectations (LE) of Gen Z employees have an impact on Employee Turnover (ET) of Sri Lankan organizations.

Authors such as Halbesleben and Buckley, (2004) have shown that intense job demands such as a high work pressure, emotional demands, and role ambiguity may lead to job dissatisfaction which may in turn lead to employee turnover. These factors may cause employees to experience higher degree of stress in their career. Higher level of stress may increase the turnover intention of employees and the turnover intention is high among Gen Z employees when they experience a high stress working context.

Accordingly, the second hypothesis is as below.

- Job Expectations (JE) of Gen Z employees have an impact on Employee Turnover (ET) of Sri Lankan organizations.

Mendis (2017) suggest that total value remuneration provided by the employer is one of the key factors in making employees retain therefore the lack of these factors affecting employees leaving .Employees tend to assess the employer value proposition periodically and compare it with competitive employers (Heger, 2007).Those who find some deficiencies in EVP, seek alternative job opportunities for more attractive EVP resulting in high turnover among them (Kumar, Devadas, & Dhammika, 2021). Gen z has been found to have this alternative EVP seeking behavior than others (Martin, Gollan. & Grigg, 2011).

Accordingly, the third hypothesis is as below.

- Employer Value (Propositions (VP) have an impact on Employee Turnover (ET) of Sri Lankan organizations.

Measurements

The questionnaire was developed to measure the variables of interest of the study. All questions used a 5-point Likert scale, and the validity and reliability of the questionnaire was tested with a pilot study. The questionnaire was distributed to the respondents online. The operationalization of the variables for measurement development is depicted in the following tables.

Table 1: Operationalization of the Variables

Variable	Dimensions	Measures
Life Expectations (LE)	This independent variable is reflected in the overall satisfaction in employees' personal life about the impact of their job (Hellgren & Sverke, 2003).	1. Overall work - life balance (Q1) 2. Time allowed to engage in personal interests (Q2) 3. Time allowed to spend with family / friends (Q3) 4. Absence of job-related everyday stress (Q4) 5. Absence of job-related stress that hinders physical / mental health (Q5)
Job Expectations (JE)	This independent variable is reflected in the overall satisfaction in the employees' professional life with regard to their job (Bakker et al., 2003).	1. Volume of tasks (Q6) 2. Nature of task (Q7) 3. Manageability of tasks with the knowledge / experience (Q8) 4. Job engagement (Q9) 5. Job satisfaction (Q10)
Employer Value Propositions (VP)	This independent variable is reflected in the employees' overall satisfaction with the package offered by their job (Minchington, 2005)	1. Monetary compensation (Q11) 2. non-monetary compensation (Q12) 3. Career growth (Q13) 4. Work environment(Q14) 5. Company culture (Q15)
Employee Turnover (ET)	This dependant variable is reflected in the employees' decision to leave their job (Ongori, 2007).	1. Turnover affected by LE identifiers(Q16) 2. Turnover affected by JE identifiers(Q17) 3. Turnover affected by VP identifiers(Q18)

Sampling Method

The target population is employees in Sri Lanka who belong to generation Z employed in the banking and finance sector. The researcher selected three companies in this sector namely, Commercial bank of Ceylon Pvt Ltd, Central Finance Company PLC and LB Finance PLC. Central Finance PLC has 1,901 non-technical employees, commercial bank 5,057 and LB Finance 3,536 employees as the target population (as at the time of distributing the surveys, May 2021).

The researcher has chosen Stratified Sampling method, which is a type of probability sampling methods. Probability sampling means that every member of the population has a chance of being selected. Probability sampling is more suitable for this research since it is mainly used in quantitative research. Stratified Sampling involves the division of a population into smaller sub-groups known as strata. In stratified random sampling, or stratification, the strata are formed based on members' shared attributes or characteristics. In this research the shared attributes are that they belong to Generation Z and work in the banking and finance sector in Sri Lanka. The stratification is done based on the proportion of employees in the population from each selected organization.

Sampling Size

A sample of 120 was drawn from the target population of 10,494 non-technical employees. Accordingly, researcher compiled a list of employees in her own company (Central Finance) who belong to the target population and selected at random 22 employees to distribute the survey to out of the target population of 1,901 employees. The researcher also distributed to two other banking / finance companies (Commercial Bank and LB Finance) the survey with instructions to the employees to take part in the survey if they belong to the target population. At Commercial bank and 58 respondents were selected from the target population of 5,057 employees. At LB Finance 40 respondents were selected from target population of 3,536 employees.

The online survey questionnaires were distributed among one hundred Generation Z individuals of the finance sector. Out of the one hundred questionnaires that were distributed the researcher received seventy-six fully completed questionnaires (response rate 63.33%).

Reliability and Validity

The reliability of the measures was assessed and Cronbach's Alpha value of the overall data in the research meets the threshold at 0.85 for 18 items. The Cronbach's Alpha values for life expectations, job expectations, EVP and Turnover intention are 0.82, 0.79, 0.81, and 0.84 respectively. This is an indication that the overall data are sufficiently reliable for the research objectives.

KMO Test value of the overall data in the research rounds up at 0.65. Since the ideal value is considered to be greater than or equal to 0.7, it can be said that that the data does not fully match up to the threshold. However, since the value is above 0.5, the validity of data is not too compromised.

Data Analysis Methods

Since this is a quantitative research quantitative data analysis were used. Parametric statistical methods were applied to the data analysis since the data collected are interval data. First, Descriptive analysis was done in order to identify the characteristics of the sample and to assess the behavior of the variable in the data set. Second, the correlation analysis was applied to measure the relationship between the variables. Finally, Multiple Regression analysis was used to test the hypotheses of the study.

Ethical Consideration

Academics in research including Uma Sekaran (2010), Shamo & Resnik (2009) and Bryman and Bell (2007) and organizations such as APA (American Psychology Association) have emphasized the ethical aspects and guidelines to be followed in research. This research complies with ethical considerations including, consent of respondents, confidentiality, and absence of conflicts of interest, honesty, and integrity of data. Extracts and quotations have been duly mentioned and credited. Attempts were made to avoid the collection of sensitive information as much as possible and respondents were assured that data collected will not be revealed to third party without respondents consent.

FINDINGS OF THE STUDY

Sample Profile

Descriptive statistical analysis was carried out to understand the characteristics of the sample. The Table II contains the result of the descriptive analysis.

		Age Range	Gender	Area of Residence	Marital Status	Education Level	Currently Employed	Current Sector	Number of Jobs
N	Valid	76	76	76	76	76	76	76	76
	Missing	0	0	0	0	0	0	0	0
Mean		2.59	1.5	1.17	1.84	3.55	1.05	1.58	1.87
Std. Error of Mean		0.071	0.058	0.043	0.042	0.113	0.026	0.111	0.101
Median		3	1.5	1	2	4	1	1	2
Mode		3	1 ^a	1	2	4	1	1	2
Std. Deviation		0.615	0.503	0.379	0.367	0.985	0.225	0.97	0.885
Variance		0.378	0.253	0.144	0.135	0.971	0.051	0.94	0.782
Skewness		-1.246	0	1.783	-1.914	-0.451	4.088	1.393	0.857
Std. Error of Skewness		0.276	0.276	0.276	0.276	0.276	0.276	0.276	0.276
Kurtosis		0.523	-2.055	1.208	1.709	-0.53	15.109	0.516	0.101
Std. Error of Kurtosis		0.545	0.545	0.545	0.545	0.545	0.545	0.545	0.545
Range		2	1	1	1	4	1	3	3
Minimum		1	1	1	1	1	1	1	1
Maximum		3	2	2	2	5	2	4	4
Sum		197	114	89	140	270	80	120	142

a. Multiple modes exist. The smallest value is shown

b. Source: Survey Data

The sample consists of ages 18 to 26. With 26 being the cut-off mark for Generation Z and 18 being the legal age of contract. It is found that majority (65.3%) of the sample belong to the age category of 24 to 26. This is because most of the workforce in Sri Lanka belonging to the subject generation who have sufficient experience in the professional arena belong to this age range which are the oldest Gen Zs.

The research sample consists of almost half and half of male and female respondents, with only a 1% difference putting females over males. The area of residence was categorized as within and outside the Western province since all of the corporate offices where the survey was distributed were from the Western province. Therefore, we can see a 64% majority of respondents belonging to the Western province.

The marital status of most respondents is single, at 84%. This information is relevant to be considered when analyzing certain variables, especially the Life Expectation (IV1), since the relationship with family is considered, where married respondents may have more of a responsibility.

The table II shows that the dominating part of the sample possess at least Bachelor's Degree. For 45% the highest qualification is a bachelor's degree while 15% possess a master's degree or higher. It can be said that the sample is well educated with 99% having finished their GCE A/L and 82% having pursued higher education after leaving school. This information shows the current employment status of the sample. However, it should be noted that even those who are not currently working have working experience in at least one previous job. This requirement is mandatory in order to analyze turnover since all respondents must have a minimum of one experience regarding turnover.

The sectors of employment were taken as private, public, and independent. The not working option was included to accommodate respondents who have previous work experience but are not currently employed. 94% of the sample are currently employed and the majority (69%) represent private corporations. This indicates the total number of jobs a respondent had in their professional career. Employees who have worked at least one or two jobs make up the majority with 41% each, while only 5% have worked four or more jobs.

7.2. Descriptive Analysis of Variables

It analyzed the frequency distribution of the responses received for each variable according to the survey questions. each of these questions were used to gain information related to the three independent variables and one dependent variable. To the frequency analysis, the mean values ("LE Average / JE Average / VP Average / ET Average") have been used instead of the total values. The Table III shows the results of the frequency analysis of variables.

Table 3: Frequency analysis on Variables

		LE Average	JE Average	VP Average	ET Average
N	Valid	76	76	76	76
	Missing	0	0	0	0
Mean		3.2421	3.4526	3.4053	3.7807
Median		3.4000	3.4000	3.4000	4.0000
Mode		3.40	3.60	3.40	4.00
Std. Deviation		.50735	.32720	.67565	.72939
Skewness		-.605	-.137	-.343	-.514
Std. Error of Skewness		.276	.276	.276	.276
Kurtosis		.268	.071	.019	.131
Std. Error of Kurtosis		.545	.545	.545	.545
Range		2.40	1.60	3.40	3.00
Minimum		1.80	2.60	1.60	2.00
Maximum		4.20	4.20	5.00	5.00
Sum		246.40	262.40	258.80	287.33

This variable relates to the satisfaction level in respondents' overall work – life balance, time to engage in my personal interests / hobbies / family / friends and stress. The average satisfaction level of 3.2 just above neutral leaning towards a positive work life balance.

Data shows that largest portion (26.3%) of employees agree that their jobs allow for such activities. Combined with the total amount of those who answered above value 3, come up to 78.9% who have answered upwards of neutral to the LE variable questions. Data shows that largest portions (26.3% and 25%) of employees have answered at levels 3.6 and 3.4 respectively thereby agreeing that they have job satisfaction. An overwhelming majority of 94.7% have answered above value 3, to the JE variable questions.

The table III indicates that largest portions (21.1%) of employees have answered at the mean level of 3.4 thereby agreeing that they have are satisfied with VP. The total percentage of employees who have positively answered VP variable is at 76.2% thereby marking the lowest score among the independent variables. On the other hand, largest portions (35.5%) of employees have answered at the level of 4 thereby agreeing that they have are likely to leave their jobs. The total percentage of employees who have positively answered ET variable is at 86.7% while a total of 13.3% disagreed that the independent variables would impact their decision to turnover.

Correlation Analysis

The relationships between the DV and three IVs were tested by using Pearson's correlation with 2 tailed significances as shown in the analyzed

data below. While the Correlations Table shows a summary of the correlation between all variables, it will be followed by correlation analysis of each IV with the DV on a separate basis.

Table 4: Correlations

		ET Average	LE Average	JE Average	VP Average
ET Average	Pearson	1			
	Correlation				
	Sig. (2-tailed)				
LE Average	Pearson	-.244*	1		
	Correlation				
	Sig. (2-tailed)	.034			
	N	76	76		
JE Average	Pearson	-.122	.064	1	
	Correlation				
	Sig. (2-tailed)	.292	.585		
VP Average	Pearson	-.254*	.342**	.226	1
	Correlation				
	Sig. (2-tailed)	.027	.003	.050	

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

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

The Correlation value between the employee turnover (ET) and life expectation (LE) is at -0.24 which is a moderate level of relations. It was found that there is a negative correlation between job expectation and employee turnover which is -0.29 which is not statistically significant. Further, the correlation between EVP and employee turnover was found to be negative and statistically significant (-.254, $p=.027$)

Regression Analysis

Similar to correlation analysis, regression analysis is also concerned with the relation of one variable to another. Simple regression analysis seeks to determine the functional relationship between the research variables. However, regression analysis is unique in the sense that where correlation is for the measurement of degree of relation, regression is a parameter to determine how one variable affects another. It predicts the value of a variable based on the value of another variable. The variable that is being predicted is the dependent variable (ET) and variables that are used to predict the other variable's value are the independent variables (LE, JE, VP).

Linear regression function is used in this instance since it has already been shown in this chapter that this research data has linearity.

Table 5: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.312 ^a	.097	.059	.70736

a. Predictors: (Constant), VP Average, JE Average, LE Average

In the Model Summary table the R Square value is 0.097. This amount taken as a percentage would be 9.7% which means that 9.7% of the variance of the dependent variable can be explained by the independent variables in this research. This means that 90.3% of the dependent variable – ET are impacted by reasons not explained by the three independent variables chosen for this research – LE, JE and VP.

Since the percentage is quite low it can be seen that the three independent variables are not highly successful at predicting the dependent variable - ET. Therefore, there are many other variables that have not been considered in this research that are important in explaining employee turnover.

Table 6: Analysis of Variance (Dependent var. = ET Average)

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	3.875	3	1.292	2.581	.060 ^a
Residual	36.026	72	.500		
Total	39.901	75			

a. Predictors: (Constant), VP Average, JD Average, LE Average

In the ANOVA table the F value is low at 2.58 but however it is significant at 0.05 alpha point.

According to the regression table, LE has a significant positive effect on turnover ($\beta=.179$. $p=.005$) and employee value proposition also records a positive effect ($\beta=.177$. $p=.005$). However, the JE was found not to have a significant impact on turnover ($\beta=.071$. $p>.005$).

Table 5: Results of Regression Analysis (Dependent var. = ET Average)

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations		
	B	Std. Error	Beta			Zero-order	Partial	Part
(Constant)	5.811	.987		5.890	.000			
LE Average	-.257	.171	-.179	1.501	.038	-.244	-.174	-.168
JD Average	-.159	.256	-.071	-.619	.146	-.122	-.073	-.069
VP Average	-.191	.132	-.177	1.447	.012	-.254	-.168	-.162

The null hypothesis of Life Expectations (LE) of Gen Z employees don not have an impact on Employee Turnover (ET) of Sri Lankan organizations was rejected. it seems that there is a significant impact of life-expectation of Gen Z on their level of turnover. the hypothesis that Job Expectations (JE) of Gen Z employees have an impact on Employee Turnover (ET) of Sri Lankan organizations was rejected. It means that no sufficient evidence appeared for an impact of job expectation of turnover. the last hypothesis of the study "Employer Value Propositions (VP) have an impact on Employee Turnover (ET) of Sri Lankan organizations" was accepted.

DISCUSSION

The research hypotheses were developed based on the findings of secondary literature that indicate that there are multi-faceted employee expectations that formulate an employee's reasoning process behind their decision to terminate their employment at their current job. As such three main categories were identified as contributing factors and they were taken as the independent variables –LE, JE and VP.

Regarding the first independent variable LE, it was presumed to have a strong impact on employees' turnover intention. This position was supported by various secondary literature, including Bushwa (2001) who noted the importance of work – life balance and other factors which highlighted the important of employees' personal life especially in the Asian context.

The results of this research corroborate the countless literature that support the importance of employees' personal life expectations in order to minimize

detrimental turnover. Although the impact of LE on ET as identified by this research is marginal, the impact can still be confirmed.

The research has confirmed that if a job can satisfy the Life Expectations of Generation Z employees, they are less likely to have turnover intention. When compared with the other two variables, Life Expectations have more value than Job Demands, but less value than Employee Value Propositions.

Life Expectations such as maintaining a good level of work – life balance, time allowed by the job to engage in personal interests / hobbies, time allowed by the job to spend time with family / friends, freedom from stress in everyday life and freedom from stress that hinders mental / physical health were all considered significant to Generation Z employees of the research.

Regarding the second independent variable JE, it was established by secondary literature that factors regarding the job role itself contribute towards one's decision to terminate employment. For example, research has revealed that job demands such as a high work pressure, emotional demands, and role ambiguity may lead to employee turnover (eg: Doi, 2005; Halbesleben and Buckley, 2004). However, the research hypothesis regarding the JE variable had to be rejected due to its statistical insignificance. While it is clear by the numerous other studies that the link between job expectations is impactful, this research has failed to confirm this hypothesis. This failure may be due to mistakes made in identifying the factors that constitute this variable and how these factors were incorporated into the questions of the survey. It is possible that various other factors that contribute to the vague idea of "job expectations" were left unidentified by the researcher leading to the failure of this hypothesis.

This research showed that the job demands are placed at a low value by Generation Z employees. They are not very likely to leave their job because of difficulties in their job role such as, having an excessive workload where they have to work overtime to cover duties, job duties being difficult to manage, their knowledge and experience being insufficient to manage their duties, not being sufficiently challenged / engaged and feeling a lack of job satisfaction. This could be because, as suggested by literature, Generation Z like a bit of a challenge and are unwilling to give up on the mere fact of having to work extra to fulfil job demands.

About the third independent variable VP, this research was able to confirm the findings of the multitude of other research that have found that employer

value propositions have an impact on employee turnover intention. For example, where Rue and Byars (2003) identified compensation as one of the main determinants of employee satisfaction and dissatisfaction, where dissatisfaction results in turnover as a final measure.

The research has confirmed that Generation Z places a higher importance on employer value propositions when compared to all other expectations from their job. Mainly the monetary compensation offered by the employer, followed by non-monetary benefits, career progression opportunities, work environment and company culture.

LIMITATIONS AND FUTURE RESEARCH

As in any other research this research also carries some limitations. Most notably, the sample size was reduced due to impracticality of data collection due to the pandemic situation. Which was also why the only source of primary data was from online survey. On the other hand, the findings of this study can be applied only to the financial sector of Sri Lanka and the Generalization of the finding is not possible due the limited sample.

Further research is suggested with a large sample since so that more generalized findings and conclusions can be made in turnover intention of Gen Z. Further, this study can be extended covering the other organizations operating in the financial sector in Sri Lanka for bringing more rigorous findings. Using of Mix Method of data collection can be applied for future research so that more elaborative and descriptive conclusion can be made in turnover intention of Gen Z in Sri Lanka.

IMPLICATIONS

This study shed light on turnover intentional behavior of Gen Z in the financial sector in Sri Lanka. Given the fact that higher level of turnover is recorded among Gen Z employees in the financial sector, the findings of this study are of help for managers to formulate policies for reducing the turnover of Gen Z. Accordingly, managers should formulate and implement HR strategies addressing the life and job expectation of employees resulting in increased EVP portfolio in the HR function. Meeting of life and job expectation of Gen Z employees will reduced the turnover intention of them.

This research may be useful to academia especially in the Sri Lankan context regarding the human resource management and enterprise planning

involving Generation Z employees. The researcher belonging to Generation Z may be helpful in filling the existing gap in research regarding the human resource management academia relating to Generation Z. The researcher being a human resource professional understands the importance of bridging generation gaps in the workplace and for employers to cater to the expectations of this young generation. The human resource professionals too may benefit from knowledge regarding the minimization of turnover of this age category employees.

CONCLUSION

This study was carried out with the aim of examining the impact of three selected factors on employee turnover of the Gen Z employees. The correlation coefficients between Life Expectations and Employer Value Proposition on Employee Turnover were found to have a negative relationship. Job Demands were found to have an insignificant relationship.

It has been observed that employees belonging to Generation Z contain a multitude of expectation from their jobs, as relating to the decision on whether they choose to leave or stay at their job. The expectations were categorized as expectation relating to their personal life, expectations relating to their job role and expectations of the benefits provided by the employer. It was found that Generation Z employees place more importance on benefits provided by the company. They also moderately value to maintain their personal life, family life and interests. It was also found that Generation Z employees do not place a significant importance on the job demands, therefore they are less likely to leave a job just because the job demands intrinsic to that job role become too challenging. However, in the end it is a culmination of the multitude of expectations of Generation Z employees that factor into their decision to leave or retain.

REFERENCES

- Abdullah, A., Ismail, M. M., & Albani, A. (2018). At-risk Generation Z: Values, talents, and challenges. *International Journal of Asian Social Science*, 8(7), 373-378.
- Adil, M.S. and Baig, M., 2018. Impact of job demands-resources model on burnout and employee's well-being: Evidence from the pharmaceutical organisations of Karachi. *IIMB management review*, 30(2), pp.119-133.

Association., A. C. (2021). American Compensation Association . Retrieved from ACA :<https://www.c-span.org/organization/?37985/>(Accessed: 10 May 2021)

Basak, S. K. (201). Comparison of University Academics Job Factors: Satisfaction and Dissatisfaction. *Journal of Economics and Behavioral Studies*, 6(6), 500-508.

Böhlich, S., &Axmann, R. (2020). Generation Z: A comparative study of the expectations of Gen Z and the perception of employers (No. 1/2020). IUBH Discussion Papers-Human Resources.

Budiman, Y., & Tan, P. H. P. (2022). The Influence of Job Stress, Job Satisfaction & Organizational Commitment Towards Turnover Intention for Millennials and Generation Z Employees in Internet Companies in Indonesia. *JurnalMantik*, 5(4), 2438-2443.

Bulut, S., &Maraba, D. (2021). Generation Z and its perception of work through habits, motivations,4 (4). P.1-6

Chillakuri, B. (2020), "Understanding Generation Z expectations for effective onboarding", *Journal of Organizational Change Management*, Vol. 33 No. 7, pp. 1277-1296. <https://doi.org/10.1108/JOCM-02-2020-0058>

Chillakuri, B. and Mahanandia, R. (2018), "Generation Z entering the workforce: the need for sustainable strategies in maximizing their talent", *Human Resource Management International Digest*, Vol. 26 No. 4, pp. 34-38. <https://doi.org/10.1108/HRMID-01-2018-0006>

Commercial Bank Annual Reports 2020. (2021). Retrieved from Commercial Bank Annual Reports 2020. <https://www.combank.lk/financials/annual-report/15/2020/index.html>,(Accessed: 8th May 2021)

Consumer Brand Managers' Job Stress, Job Satisfaction, Perceived Performance and Intention to Leave. (2004). *Journal of Marketing Management*. Published. <https://doi.org/10.1362/026725704773041140> (Accessed: 10th June 2021)

Daniel, E. G. (2010). Strategies for employee recruitment, retention and performance: Dimension of the Federal civil service of Nigeria. *African Journal of Business Management*, 4(8), 1447-1456.

Delecta, P. (2011). Work life balance. *International journal of current research*, 3(4), 186-189.

Deloitte Global 2021 Millennial And Gen Z Survey. (2021). Retrieved from <https://www2.deloitte.com/content/dam/Deloitte/gobal/Documents/2021-deloitte-global-millennial-survey-report.pdf>(Accessed: 10th May 2021)

Demerouti, E., Bakker, A. B., Nachreiner, F., & Schaufeli, W. B. (2001). The job demands-resources model of burnout. *Journal of Applied psychology*, 86(3), 499.

DiVanna, J. A. (2003, May 18). *Thinking Beyond Technology*. Palgrave Macmillan, London. Retrieved From <https://doi.org/10.1057/9781403914491>

Dolot, A. (2018). The characteristics of Generation Z. *E-mentor*, 74(2), 44-50.

Field, J. (2008, May 10). Job Satisfaction Model for retention. Retrieved From <https://Talentedapps.Wordpress.Com>.
<https://talentedapps.wordpress.com/2008/04/11/job-satisfaction-model-for-retention/>

Francis, T., & Hoefel, F. (2018). True Gen': Generation Z and its implications for companies. *McKinsey & Company*, 12.

Gaidhani, S., Arora, L., & Sharma, B. K. (2019). Understanding the attitude of generation Z towards workplace. *International Journal of Management, Technology and Engineering*, 9(1), 2804-2812.

Griffeth, R. W., Hom, P. W., & Gaertner, S. (2000). A meta-analysis of antecedents and correlates of employee turnover: Update, moderator tests, and research implications for the next millennium. *Journal of management*, 26(3), 463-488.

Halbesleben, J. R., & Buckley, M. R. (2004). Burnout in organizational life. *Journal of management*, 30(6), 859-879.

Halbesleben, J. R., & Demerouti, E. (2005). The construct validity of an alternative measure of burnout: Investigating the English translation of the Oldenburg Burnout Inventory. *Work & Stress*, 19(3), 208-220.

Heger, B.K., 2007. Linking the employment value proposition (EVP) to employee engagement and business outcomes: Preliminary findings from a linkage research pilot study. *Organization Development Journal*, 25(2), p.P121.

Hellgren, J., & Sverke, M. (2003). Does job insecurity lead to impaired well-being or vice versa? Estimation of cross-lagged effects using latent variable modelling. *Journal of Organizational Behavior: The International Journal of Industrial, Occupational and Organizational Psychology and Behavior*, 24(2), 215-236.

Hossain, S. M., Roy, M. K., & Das, P. K. (2017). Factors Affecting Employee's Turnover Intention in Banking Sector of Bangladesh: An Empirical Analysis. *ASA University Review*, 11(2).

Kain, J., & Jex, S. (2010). Karasek's (1979) job demands-control model: A summary of current issues and recommendations for future research. In *New*

developments in theoretical and conceptual approaches to job stress. Emerald Group Publishing Limited.

Khatri, N., Fern, C. T., & Budhwar, P. (2001). Explaining employee turnover in an Asian context. *Human Resource Management Journal*, 11(1), 54-74.

Kim, J., Chae, D., & Yoo, J. Y. (2021). Reasons behind generation Z nursing Students' intentions to leave their profession: A cross-sectional study. *INQUIRY: The Journal of Health Care Organization, Provision, and Financing*, 58, DOI:0046958021999928.

Kirchmayer, Z., & Fratričová, J. (2020). What motivates generation Z at work? Insights into motivation drivers of business students in Slovakia. *Proceedings of the Innovation management and education excellence through vision*, 6019-6030.

Kumar, A., Devadas, U.M. and Dhammika, K.A.S., 2021. Impact of employee value proposition on employee retention. *International Journal of Economics, Business and Human Behaviour*, 2(3), pp.19-33.

Lesener, T., Gusy, B. and Wolter, C., 2019. The job demands-resources model: A meta-analytic review of longitudinal studies. *Work & Stress*, 33(1), pp.76-103.

Martin, G., Gollan, P.J. and Grigg, K., 2011. Is there a bigger and better future for employer branding? Facing up to innovation, corporate reputations and wicked problems in SHRM. *The International Journal of Human Resource Management*, 22(17), pp.3618-3637.

Meilani, Y. F. C. P., Tan, J. D., Murwani, F. D., Bernarto, I., & Sudibjo, N. (2021). Motivating and retaining generation z faculty members in private universities. *Journal of Educational and Social Research*, 11(1), 245-245.

Mendis, M.V.S. M. M. (2017). The impact of turnover intention in reward system of the employees. *International Journal of Scientific & Technology Research*, 6(9), 34-65

Merriam-Webster Dictionary. (2021). Merriam-Webster.Com. <https://www.merriam-webster.com/dictionary/Generation%20Z>(Accessed: 11th June 2021)

Millennials and their employers: Can this relationship be saved? (2016). Deloitte.Com. <https://www2.deloitte.com/lk/en/pages/about-deloitte/articles/millennials-employers-relationship.html>(Accessed: 15th June 2021)

Minchington, B. (2005). *Employer Brand Leadership— A Global Perspective*, Australia

Mohammad Atiq and Afshan Bhatti (Feb. 2014). The impact of incentives on Employees turnover at Pakistan International Container Terminal Limited ("PICT") with respect to the different age brackets. *IOSR Journal of Business and Management (IOSR-JBM)*, 16(1), 53-60.

Moore, J. E. (2000). One Road to Turnover: An examination of work exhaustion in technology professionals. *MIS Quarterly*, 24(1), 141-168

Mossholder, K. W., Settoon, R. P., Armenakis, A. A., & Harris, S. G. (2000). Emotion during organizational transformations: An interactive model of survivor reactions. *Group & Organization Management*, 25(3), 220-243.

Ongori, H. (2007). A review of the literature on employee turnover. *African Journal of Business Management*, June, 49-58

Rasca, L. (2017, March). Human resources challenges for the 21 centuries. In *Proceedings of the International Conference on Business Excellence*.11 (1) 475-481.

Rodriguez, M., Boyer, S., Fleming, D., & Cohen, S. (2019). Managing the next generation of sales, gen z/millennial cusp: An exploration of grit, entrepreneurship, and loyalty. *Journal of Business-to-Business Marketing*, 26(1), 43-55.

Rue, L.W. and Byars, L. (2003). *Management, Skills and Application*, 10 ed., McGraw-Hill/Irwin, New York, p.259

Salanova, M., Agut, S., & Peiró, J. M. (2005). Linking organizational resources and work engagement to employee performance and customer loyalty: the mediation of service climate. *Journal of applied Psychology*, 90(6), 1217.

Sánchez-Hernández, M. I., González-López, Ó. R., Buenadicha-Mateos, M., & Tato-Jiménez, J. L. (2019). Work-life balance in great companies and pending issues for engaging new generations at work. *International journal of environmental research and public health*, 16(24), 5122.

Schroth, H. (2019). Are you ready for Gen Z in the workplace?. *California Management Review*, 61(3), 5-18.

Shamoo, A. E., & Resnik, D. B. (2009). *Responsible conduct of research*. Oxford University Press.

Sidorcuka, I., & Chesnovicka, A. (2017, September). Methods of attraction and retention of generation Z staff. In *CBU International Conference Proceedings*.5, 807-814.

Smith, J. L. (2009). 12 reasons employees leave organizations. Peoria Magazine. Com. Available from: <http://www.peoriamagazines.com/ibi/2009/dec/12-reasons-employees-leave-organizations>.

Sri Lanka labour demand survey. (2017, September 30). Battaramulla: Department of Census and Statistics, Ministry of National Policies and Economic Affairs. <http://www.statistics.gov.lk/>

Sun, J., Lee, J.W. and Sohn, Y.W., 2019. Work context and turnover intention in social enterprises: The mediating role of meaning of work. *Journal of Managerial Psychology*.34(1), pp 46-60

Tsai, Y., & Wu, S. W. (2010). The relationships between organisational citizenship behaviour, job satisfaction and turnover intention. *Journal of clinical nursing*, 19(23-24), 3564-3574.

Vojvodić, K. (2018). Generation Z in Brick-and-Mortar stores: A review and research propositions. *Business Excellence*, 12(3), 105-120.

Wickramasinghe, V. (2016). The mediating effect of job stress in the relationship between work-related dimensions and career commitment. *Journal of Health Organization and Management*. 30(3). 408-430

Wijebandara, H. M. M. A., Malalage, G. S., & Fernando, W. R. P. K. (2019). Factors Affecting Employee Turnover Intention among Non-Managerial Employees in Selected Financial Companies in Colombo District. *Kelaniya Journal of Human Resource Management*, 14(1),33-53

Yankeelov, P. A., Barbee, A. P., Sullivan, D., &Antle, B. F. (2009). Individual and organizational factors in job retention in Kentucky's child welfare agency. *Children and Youth Services Review*, 31(5), 547-554.



Peer-assessment: Sri Lankan English as a Second Language Teachers' Perception

By P.B.S.L. PUSHPAKUMARA¹

Peer-assessment offers various benefits. There is empirical evidence that peer-assessment enhances learner performance, develops cognitive and meta-cognitive skills, professional skills, personal and intellectual skills and social competencies. Also, previous studies on affective factors of peer-assessment suggest that peer-assessment reduces learner anxiety and stress and enhances confidence and motivation. In spite of these benefits, peer-assessment is not common in educational settings. Teachers, the key stakeholders of education, also tend to hold reservation regarding peer-assessment. Therefore, the present study was conducted using six English as a Second Language (ESL) teachers teaching in a compulsory English course in a state university in Sri Lanka to explore their perception regarding peer-assessment in ESL writing class. Qualitative data obtained through one-on-one interviews and focus group interviews were analyzed using content analysis method. Surprisingly, the results of the present study revealed that the participants believed that peer-assessment helps learners develop their cognitive and metacognitive skills, personal and intellectual skills, and some professional skills and saves teachers' time. Also, they believed that peer-assessment motivates learners. However, they identified limited English language proficiency and friendship as some key challenges to effectively implement peer-assessment in the language classroom. Group based peer-assessment and active teacher participation as a facilitator in the peer-assessment process were proposed as solutions to overcome these challenges and to ensure a successful implementation of peer-assessment in the ESL classroom. Taken together, the findings of the present study provide strong empirical support for the use of learner-centred peer-assessment in the ESL writing class and other similar contexts.

KEYWORDS - Peer-Assessment, Perception, ESL Writing

¹ Department of English language teaching, University of Sri Jayewardenepura, Sri Lanka. Email: sampath@sjp.ac.lk

INTRODUCTION

Peer-assessment is a widely spoken alternative assessment today. Learner centred peer-assessment which is defined as an arrangement for learners to consider and specify the level, value, or quality of a product or performance of other equal-status learners offers various benefits (Topping 2017). First and foremost, empirical evidence suggests that those learners who are involved in peer-assessment outperform others who receive teacher feedback only (Double, McGrane & Hopfenbeck, 2019). Further, previous research findings suggest that peer-assessment develops learners' cognitive competencies such as critical thinking and higher-level thinking (Falchikov, 2005), promotes learning, enhances learners' personal, intellectual and professional skills (Zhu & Carless, 2018) and social competencies such as communication skills, collaborative skills and lifelong learning (Nilson, 2003). Most importantly, there is empirical evidence in peer-assessment literature that peer-assessment reduces test anxiety and stress, enhances students' motivation (Peng, 2009), and enhances students' sense of ownership, responsibility and their motivation to learn (Sivan, 2000).

Studies have examined ESL teachers' perception about peer-assessment, and they generally conclude that teachers hold reservation regarding peer-assessment (Vickerman, 2009; Zhao, 2014). According to Falchikov (2004), teachers do not want to implement peer-assessment assuming that students lack the necessary experience to do the job, or due to the fear that students would collude and award over inflated grades. Similarly, Liu and Carless (2006) point out that teachers are reluctant to allow learners to assess peers because offering grades and marks by peers may affect the reliability of assessment. They further argue that academics do not like to allow students to offer grades because teachers consider assessment to be the sole responsibility of the teachers who possess the necessary knowledge and expertise to conduct reliable assessment (Liu & Carless, 2006). Also, many teachers do not like to integrate peer-assessment into their teaching because they think that peer-assessment is a time consuming activity (Cheng & Warren, 2005; Nasab, 2015). According to Peng (2009), teachers hold positive views regarding peer-assessment, but they are concerned about the friendship biases because students do not want to take a risk of jeopardizing their friendship (Peng, 2009). Thus, teachers generally tend to hold reservation regarding peer-assessment. Therefore, in spite of some benefits of peer-assessment, learner-centred peer-assessment has not become a

popular classroom practice in most of the educational contexts including higher educational institutes in Sri Lanka.

RESEARCH QUESTION AND OBJECTIVES OF THE RESEARCH

The usefulness of peer-assessment is devalued by some researchers claiming that peers usually offer vague non-specific feedback and provide no solid explanations (Min, 2005). However, studies conducted in other contexts to examine the learner perception and teacher perception regarding peer-assessment claim that learners and teachers hold positive perceptions about peer-assessment. For instance, Peng (2009) conducted a mixed method study in an EFL context in Taiwan employing eighty-eight high intermediate and 76 low intermediate college students and their class teacher. The college students of this study who followed a 3-credit year-long compulsory English course were asked to assess the group oral presentations of their peers. Peng used a closed-ended questionnaire, open ended questionnaire, semi-structured interviews, emails and a 300 word essay on the topic peer-assessment to understand the participants' perception of peer-assessment and the teacher's perception of peer-assessment and found that both learners and the teacher held positive perceptions of peer-assessment. Yet, published research discussing the teachers' perception about peer-assessment in the Sri Lankan educational context is limited (Kommalage & Thabrew, 2011; Silva et al., 2017). The present study, therefore, set out to bridge these gaps by postulating the following research question in order to investigate the Sri Lankan ESL teachers' views regarding peer-assessment.

Research question:

How do Sri Lankan university-level ESL teachers perceive peer-assessment?

METHODOLOGY

Six teachers who were teaching in a compulsory English programme in the University of Sri Jayewardenepura in Sri Lanka were involved in the study, and they shared their views regarding peer-assessment. They were numbered for anonymity purposes. Their details are shown in table 1.

Table 1: Details of the participants

Teachers	Highest educational/ professional qualifications	Teaching experience at tertiary level
Teacher 1	M.A. in Applied Linguistics	5 years
Teacher 2	M.A. in Applied Linguistics	4 years
Teacher 3	M.A. in Teaching English to Speakers of Other Languages	6 years
Teacher 4	M.A. in Applied Linguistics	4 years
Teacher 5	PhD in English	40 years
Teacher 6	M.A. in Applied Linguistics	6 years

Source: Compiled by the researcher, 2020

At the time of the study, one lecturer was working as a temporary assistant lecturer of the same university where the study was carried out, and others were teaching at different universities as visiting lecturers. Of the six teachers, two teachers observed students assessing nine writing tasks including paragraphs, essays and a letter written by their peers and gained hands on experience in peer-assessment. Their role during the peer-assessment exercise was critical. For instance, when the learners were involved in the peer-assessment process, they were grouped by the class teacher into small groups of six or seven. The teachers made sure that the learners interactively worked and helped each other to assess the peers' writing. Also, the class teacher facilitated the peer-assessment process by explaining the purpose of peer-assessment and how to use the marking rubric to objectively assess peers. All the teachers who participated in the study were female teachers with varying degrees of peer-assessment experience.

After the teachers conducted peer-assessment exercises, one focus group interview and two one-on-one interviews were conducted with the teacher participants of the study in order to gain a comprehensive understanding of their views about peer-assessment. An interview guide adapted from Peng's (2009) study was used to conduct semi-structured focus group interviews with the teacher participants of this study. The data obtained were analyzed using the content analysis method to identify themes and to draw conclusions.

RESULTS AND DISCUSSION

The present study takes a theme-based approach in presenting and discussing results. Accordingly, the teacher views related to each theme are presented and analysed in order to gain a better understanding of teachers' views regarding peer-assessment.

A. Cognitive and Meta-cognitive Competencies

Cognitive and meta-cognitive competencies such as critical thinking, higher level thinking and active independent learning rather than passive learning are considered to be important skills for students. The teacher participants of this study pointed out that peer-assessment helped the learners develop these skills. For instance, the teacher participant one pointed out that

“When the student thinks why this is wrong, they are actively involved in the process of learning. For instance, today activity took about twenty minutes to write and twenty minutes to correct it. So students were involved in learning for all the forty minutes. Some asked why this is wrong and how to correct it.” A similar view was shared by teacher four; “During peer-assessment, teacher becomes less authoritarian and teaching and learning become student centred. Instead of unidirectional feedback from teacher to the student, here we see that students give feedback to each other. They don't depend on me, which is good... as students seem to be actively involved in the learning process, I think it is good.”

Thus, the participants of the present study believed that peer-assessment enhanced the learners' critical thinking skills, higher order thinking skills, reasoning skills, reflective skills and independent active learning skills. These findings are consistent with the views shared by Falchikov (2005), Peng (2009) and Topping (2005).

B. Personal and intellectual development

Life-long learning, taking responsibility for one's own learning and enhancing knowledge through mutual interaction are important personal and intellectual skills. The results of the present study suggested that peer-assessment helped learners develop their personal and intellectual skills. For instance, peer-assessment encourages the learners to take the responsibility for their own learning. According to the teacher one,

“Now students do not generally read. They don’t read what they write. They don’t read to gather information. So this way at least they read others’ essays. So reading peers’ essays helps them to improve. Peer comment may trigger them more than my one.”

A similar view is shared by Tsui and Ng (2000) who claim that learners who are involved in peer-assessment exercises benefit from reading other students’ work as they prepare to give feedback.

C. Professional development

The participants of this study pointed out that peer-assessment helped learners develop key professional skills such as teaching skills, independent evaluative skills, professional collaboration and teamwork, communication skills, negotiation skills, listening skills and editing skills. For instance, the teacher participant one pointed out that “Peer-assessment helps the learners to develop editing skills.” A similar view is echoed by Leki (1990) who claims that peer-assessment helps learners develop various writing skills including brainstorming, outlining, drafting, rewriting and editing.

D. Time factor

Teachers of the present study pointed out that peer-assessment saved their time. The teacher participant one elaborated how teachers can save time during the peer-assessment exercise.

“If there is a procedure where peers give feedback for their friends before teacher marks the essay, that will help students to produce better pieces of writing. There will be an improved version by the time it comes to the teacher. During the process of editing and rewriting students will be learning. It saves teacher’s time for marking, because it has already been marked by a peer and there will be fewer errors. When we do peer-assessment, I have about 45 students in my class, all of them are peer marking after they write. So time is saved.” The finding that peer-assessment saves teachers’ time is consistent with the previous findings of McDowell (1995), and this is contrary to the views of Cheng and Warren (2005) and Nasab (2015) who argue that peer-assessment is time-consuming. In fact, planning and implementation of peer-assessment consume time, yet the time spent for peer-assessment appears to be worth as involvement in peer-assessment ensures improved learning and creates an opportunity for the learners to receive specific, timely and comprehensive feedback from their peers. This conclusion lends support

to the findings of Min (2005) who points out that the time spent on training for peer-assessment compensates for the learners' enhanced learning.

E. Learner motivation

The participants of this study shared their views related to affective factor, motivation of the learners. For instance, the teacher participant three said, "In my class, students enjoy correcting others' essays. They seem to feel that they are privileged. They like it." Thus, the results of the present study suggest that peer-assessment motivates learners. Previous studies report similar findings (Topping, 2005).

F. Challenges to peer-assessment

Teacher participants in the present study pointed out that the limited language proficiency is a key challenge to administer peer-assessment in ESL classes. For instance, the teacher participant one explaining during the focus group interview said, "One day I asked my students to write a paragraph and did peer correction. At the end of the day when I collected the papers, and I could see that none of them have spotted any error even a grammar or spelling error. They have ignored it. Maybe they are not very sure how to correct the error." Thus, limited language proficiency appears to be a key challenge in administering peer-assessment in ESL classes successfully. A similar view is echoed by Yu and Lee (2016) who question whether peer-assessment can be effectively and successfully implemented in ESL contexts where L2 proficiency plays a significant role in determining students' ability to give and utilize peer-feedback. Therefore, it is important to devise a mechanism to overcome this challenge.

Friendship was another challenge to implement peer-assessment successfully. According to the teacher participant one, friendship strongly operates in a country like Sri Lanka. "In our country, students just say something for the sake of saying something and simply because of friendship." Thus, learners believed that friendship negatively affects peer-assessment, in particular, in a country like Sri Lanka. This finding lends support to the findings of Connor and Asenavage (1994) who claim that students from collectivist cultures (such as Asian) tend to avoid giving critical comments in order to maintain interpersonal harmony, cooperation and consensus between friends. A solution is needed to overcome this challenge too.

G. Suggestions for effective peer-assessment

Group-based peer-assessment is recommended by some participants to resolve the aforementioned challenges including limited proficiency issues and ensure more effective and productive peer-assessment exercises objectively. For instance, the teacher participant three said, "We can put them into groups and then do it. Then there are diverse viewpoints. When someone doesn't know something, others can help." This finding supports the previous observations of Freeman (1995) who claims that group-based peer-assessment can ensure objectivity, reliability and validity of assessment.

CONCLUSIONS AND RECOMMENDATIONS

The findings of the present study indicate that the ESL teachers of the present study generally hold positive views regarding peer-assessment. They believed that peer-assessment develops learners' skills. However, when organizing peer-assessment activities, challenges such as learners' proficiency and friendship biases need to be effectively handled using some techniques such as effective grouping. Also, teacher guidance before, during and after the administration of peer-assessment is extremely vital as Zhu and Carless (2018) too point out in order to successfully implement peer-assessment and gain maximum benefits. Therefore, peer-assessment exercises can be cautiously used in ESL writing classes in Sri Lanka and other similar contexts to develop learners' skills. The generalisability of the findings of the present study is subject to certain limitations such as the small sample size drawn from one particular state university in Sri Lanka. Future studies need to be conducted with a larger sample representing several universities in order to shed more light on this under explored area.

REFERENCES

- Brinkmann, S. (2015). Learner centred education reforms in India: The missing piece of teachers' beliefs. *Policy Futures in Education*, 13(3), 342-359.
- Cheng, W., & Warren, M. (2005). Peer assessment of language proficiency. *Language Testing*, 22(1), 93-121.
- Connor, U., & Asenavage, K. (1994). Peer response groups in ESL writing classes: How much impact on revision? *Journal of Second Language Writing*, 3(3), 257-276.

Double, K.S., McGrane, J.A. & Hopfenbeck, T.N. (2019). The impact of peer-assessment on academic performance: a meta-analysis of control group studies. *Educational Psychology Review* (Published online).

Falchikov, N. (2004). Involving students in assessment. *Psychology Learning and Teaching*, 3(2), 102-108.

Falchikov, N. (2005). *Improving assessment through student involvement: Practical solutions for aiding learning in higher and further education*. New York: Routledge Falmer.

Freeman, M. (1995). Peer assessments by groups of group work. *Assessment & Evaluation in Higher Education*, 20(3), 289-300.

Kommalage, M., & Thabrew, H. (2011). Student-led peer assisted learning: the kuppi experience at the medical school of the university of Ruhuna in Sri Lanka. *Education for Health Change in Learning & Practice*, 24(2), 1-12.

Leki, I. (1990). Coaching from the margins: issues in written response. In: B. Kroll (ed.), *Second Language Writing: Research insights for the classroom*. (pp. 57 – 68). Cambridge: Cambridge University Press.

Liu, N.F., & Carless, D. (2006). Peer feedback: The learning element of peer assessment. *Teaching in Higher Education*, 11(3), 279-290.

McDowell, L. (1995). The impact of innovative assessment on student learning. *Innovations in Education and Training International*, 32(4), 302-313.

Min, H. (2005). Training students to become successful peer reviewers. *System*, 33(2), 293-308.

Nasab, F.G. (2015). Alternative versus traditional assessment. *Journal of Applied Linguistics and Language Research*, 2(6), 165-178.

Nilson, L.B. (2003). Improving student peer feedback. *College Teaching*, 51(1), 34-38.

Peng, J.F. (2009). *Peer assessment of oral presentation in and EFL context*. (Unpublished Doctoral Dissertation). Indiana University, Indiana: USA. Retrieved from ProQuest Dissertations and Theses database.

Silva, N.L., Parththipan, B., Rodrigo, C., Constantine, G., Fernando, S. D., & Rajapakse, S. (2017). Peer-assisted learning among Sri Lankan medical undergraduates: A cross sectional study. *BMC Research Notes*, 10(1), 595-300.

Sivan, A. (2000). The implementation of peer-assessment: An action research approach. *Assessment in Education: Principles, Policy and Practice*, 7(2), 193-213.

Tatto, M. T. (1996). Examining values and beliefs about teaching diverse students: Understanding the challenge for teacher education. *Educational Evaluation and Policy Analysis*, 18(2), 155-180.

Topping, K. J. (2005). Trends in peer learning. *Educational Psychology*, 25(6), 631-645.

Tsui, A.B.M., & Ng, M. (2000). Do secondary L2 writers benefit from peer comments? *Journal of Second Language Writing*, 9(2), 147-170.

Vickerman, P. (2009). Student perspectives on formative peer-assessment: An attempt to deepen learning. *Assessment & Evaluation in Higher Education*, 34(2), 221-230.

Yu, S., & Lee, I. (2016). Understanding the role of learners with low English language proficiency in peer feedback of second language writing. *TESOL Quarterly*, 50(2), 483- 494.

Zhao, H. (2014). Investigating teacher-supported peer assessment for EFL writing. *ELT Journal*, 68(2), 155-168.

Zhu, Q., & Carless, D. (2018). Dialogue within peer feedback process: Clarification and negotiation of meaning. *Higher Education Research and Development*, 37(4), 883-897.



Experiential Marketing, Destination Image, Tourists Satisfaction, and Tourists' Destination Loyalty for Sustainable Tourism (*Evidence from Tourists' Cultural Destinations in Sri Lanka*)

By Y.M.W.G.P.K. UDURAWANA¹

World tourism has significantly contributed to destinations generating more social, economic and environmental benefits. Therefore, all tourist destinations have identified sustainability as their main goal of tourism. There are plenty of research to discuss the effect of experiential marketing, tourists' satisfaction, destination image and destination loyalty than measuring these variables' effect on sustainable tourism. In the Sri Lankan context, though Sri Lanka has many world heritage destinations to facilitate sustainable tourism, it has only a few cultural attractions. Further, there was no research to address the experiential marketing effect on sustainable tourism through image, satisfaction and loyalty. This gap has been addressed through this research with three mediating variables referenced to cultural destinations in Sri Lanka. To collect data for the study 513 tourists representing all tourists who visited Sri Lanka in 2019 conveniently interviewed. The data were analyzed through the SPSS Amos software and was able to achieve all the research objectives and answer all the research questions. The findings of the study include adaptable strategies for the attention of all the destination-marketing authorities in Sri Lanka, which may help to facilitate experiential marketing for sustainable tourism through destination image, tourists' satisfaction, and destination loyalty for cultural destinations in Sri Lanka.

KEYWORDS: Experiential Marketing, Tourists Satisfaction, Destination Image, Destination Loyalty, Sustainable Tourism, Cultural Destination

¹ Senior Lecturer, Department of Business Management, Faculty of Management Studies, Rajarata University of Sri Lanka, Email: udurawana@mgt.rjt.ac.lk / udurawan@gmail.com

INTRODUCTION

Protecting the environment, enhancing social values and increasing profits are the main goals of any organization worldwide (WTTC, 2019). Dynamic competition has no space to survive in the long term if there is any process or project that has no alignment with a sustainable approach. Therefore, the tourism industry also must facilitate sustainable tourism. (WTTC, 2019)

In world tourism, cultural places that are more significant because of their historical recognition have a higher demand. The World Travel & Tourism Council (WTTC, 2019) highlighted that cultural destinations have more capacity to attract and retain more tourists. Having eight world heritage places Sri Lanka also attracted more than 2 million tourists in 2019 (SLTDA 2018). However, Udurawana et al (2020) have stated that almost all cultural places in Sri Lanka have the least tourist attraction.

Apart from that there is plenty of research to facilitate destination management organizations and researchers to develop tourism loyalty, satisfaction, and image (Kim et al (2013), Aliman et al (2016). There are a few studies that discuss experiential marketing and its effect on tourists' satisfaction and loyalty (Nazari et al. (2014), Aliman et al (2016). Further, discussing the Sri Lankan context many researchers have highlighted that though every cultural place has enough spiritual, peaceful, pleasant, historical value with ancient and indigenous knowledge, and other facilities for tourists, tourist attractions are not considerable. (Udurawana et al 2020)

Silva, (2002), Wanninayake, and Chovancova, (2012), Rathnayaka (2017) and Udurawana (2018), have explained tourists' satisfaction and/or destination image, tourists' destination loyalty behaviour, and destination marketing from different perspectives but none of these studies have examined the cultural places in an experiential marketing viewpoint. Hence, it was evident that existing literature does not have provision to explain the contribution of experiential marketing to sustainable tourism. Therefore, this study aims to explore the impact of experiential marketing on sustainable tourism through the mediating effect of destination image, tourists satisfaction and' destination loyalty.

LITERATURE REVIEWS

Sustainable Tourism

In 2019, the World Tourism Organization explained that sustainable tourism happens when tourism facilitates the fulfilment of destinations' economic, social, and aesthetic needs while enriching their cultural integrity important ecological processes, biological variety, and life support systems. Further, Jamie Lisse (2018) has stated that if tourists visit places with a positive mindset, it makes a progressive impact on the economy of the place, society and the environment. Therefore, the tourists' mindset is used to understand the concept of sustainable tourism, where tourist behaviour at the destinations add value for their people, places and profits. Therefore, Pulido-Fernández, Juan and López-Sánchez (2014) have analyzed the tourists' perceptions to measure sustainable tourism, where they used perceived sustainable tourism instead of sustainable tourism. Udurawana et al. (2021), on the other hand, have focused on perceived sustainable tourism to measure the effect of destination loyalty on sustainable tourism. Sustainable tourism has three dimensions namely, economic, social, and environmental wellbeing (Jamie Lisse (2018)). Jamie Lisse (2018), Sun, Kim, and Kim, (2014), and Udurawana et al (2021) have measured perceived sustainable tourism with the three components mentioned above.

Experiential Marketing

Experiential marketing also known as live marketing, event marketing or engagement marketing is explained as the 'living' impression formed by people's involvement with products, services, and businesses (Haeckel et al 2003). Schmitt, (1999), Oliver (1999), Pine and Gilmore, (1999), have contributed to identification of experiential marketing where they argued that experiential marketing has the ability to produce an unforgettable memory in the consumer mind. Sense, Feel, Think, Act, and Relate are the five factors of experiential marketing. Many scholars including Schmitt (1999), Schmitt (1999b), Brakus et al. (2009), Fournier et al. (2001), Gentile et al, (2007), and Schmitt (2010) have explained the experiential marketing with reference to these five factors. Udurawana and Wanninayake (2021), too used these five factors of experiential marketing as five dimensions with their studies.

Tourists Loyalty

Hawkins et al. (1995) have identified that consumer loyalty happens when consumers are continually involved with their particular products or services.

In tourism, a place or destination is called as a product, whereas Yoon and Uysal (2005) and Nazari et al. (2014) revealed that destination loyalty happens when tourists' have an intention to recommend the places or destinations to themselves and other visitors.

Hongmei et al. (2014), Nazari et al. (2014), Chenini (2017), Sangpikul (2018), and Udurawana (2018) have explored tourists loyalty behaviour in Sri Lanka, where the researchers have used recommending to others, intention to revisit, spending more at the destination, spending more time at the destination, and discussing positive movement of the places were the dimensions of tourists' destination loyalty.

Destination Image

Kim et al (2013) have defined destination image as a totality of impressions, beliefs, ideas, expectations and feelings accumulated toward a place over time. Tasci et al., (2007) have explained the destination image as an interactive system of tourists' feelings, sentiments, thoughts, and imaginings explaining a destination.

Most researchers have used the attributes of a destination to measure the visitors image (Brakus et al. (2009), but Aliman et al (2016) and Udurawana and Wanninayake (2021) have used attractions, amenities, accessibility, activities, ancillary services, and available packages as the dimensions of the destination image.

Tourists Satisfaction

Oliver (1997) has defined satisfaction as an assessment of, or a judgement about, a consumption event or its essential parts. Severt et al. (2007) have defined tourists' satisfaction as the extent of the tourists' fulfillment of pleasure, which depends on the experience about a product, or service feature that fulfills the tourists' desires, expectations and wants in association with the trip.

Researchers have also measured tourists' satisfaction by considering the visitors' feelings about the facilities and the experience they got at the destination. Many researchers including Udurawana and Wanninayake (2020), Aliman et al (2016), Song et al (2012), and Prayag and Ryan (2012) have considered destination fees, freedom from hazards, secure places, attraction, quality of services, hospitality and experience as the dimensions of tourists' satisfaction.

The Impact of Experiential Marketing

There are plenty of researchers that have tested the impact of experiential marketing and tourists' loyalty behavior. Stratigea and Hatzichristos (2011), Udurawana and Wanninayake (2021), R. Öztürk (2015), and Cohen et al (2014), have stated that experiential marketing has significantly affected tourists destination loyalty through the mediating effect of tourists satisfaction and destination image. Udurawana et al (2020) have stated that there are only a few studies to explain the loyalty effects has on sustainable tourism.

Further, Masarrat (2012) has explained how tourists' loyalty facilitates sustainability. They have explained that if a region has an attractive capacity, it means that the region has attracted more and more tourists who have contributed to the region's economic and social wellbeing through spending more time, money, and spreading positive discussions.

The researcher developed the research model for this study considering the model developed by Udurawana and Wanninayake (2021). They have used the following table to describe experiential marketing, tourists' satisfaction, destination image and destination loyalty.

Table 1: Dimensions of Variables

Variable/ Factors	Indicators	References	
Experiential marketing	SENSE	Sight, sound, touch, taste and smell.	Schmitt (1999), Oliver (1999), Pine and Gilmore. (1999). Holbrook and Hirschman's (1982). Brakus et al. (2009), Fournier et al. (2001), Gentile et al. (2007)
	FEEL	Moods, emotions, feel secure, feel comfortable, feel safe in your transaction	
	THINK	Problem Solving (find more information). creative thinking, arouse interactions, surprising, intrigue, curiosity (interested), willing to share, involve	
	ACT	Stay, behavior, social interaction, Adopt lifestyles, motivation, inspiration, emotions, recommendation	
	RELATE	Position, stimulates relationships, social attention, associations, memories, connection, engage cultural values, group feeling,	

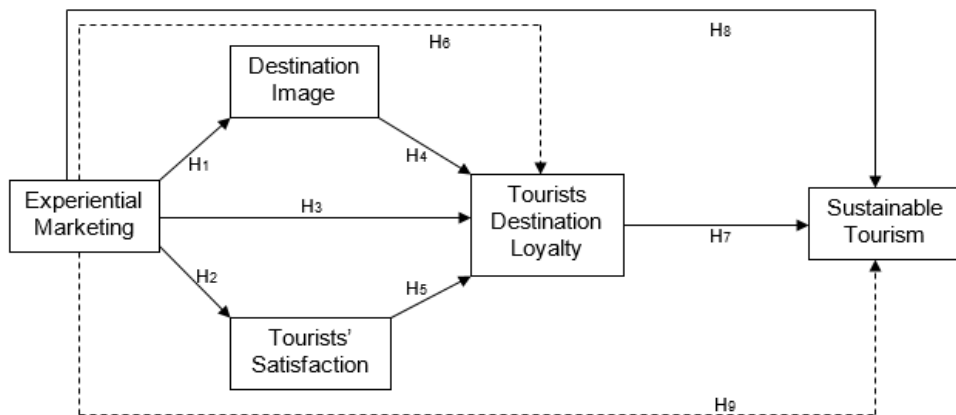
Designation Image	Infrastructure, Environmental attraction, Excited natural and cultural resources, Reasonable charging system, Appreciable social environment, Entertainment, Safety feelings, Peaceful perception	Wijaya (2013), Aaker (1996), Crompton, (1979). Brakus et al. (2009), Artuger et al. (2013), Ranjbarian et al. (2017)
Loyalty	Stay more times, Repurchase/revisit, extent positive word-of-mouth, recommend the place to others, long term relationship with, spent more, valued places	Yoon & Uysal (2005), Sangpikul, (2018), Zhang et al. (2014). Chenini (2017). Piotr (2004)
Satisfaction	Freedom, Fair Chargers, Enough Security, Exciting Attraction, Quality Service, Hospitality, And Thrilled Experience	Aliman et al. (2016), Song et al (2012), Prayag & Ryan (2011), and Jawaria et al. (2010)

Source: Udurawana and Wanninayake (2021)

Negruşa et al. (2015) and Campón-Cerro et al. (2017) also discussed the importance of loyalty towards sustainability, where they explored how tourists' loyalty to a destination has contributed to enriching the economy, society and environmental values of the destination. Udurawana et al (2020) have stated that tourists' destination loyalty has significantly contributed to enhancing sustainable tourism. Lee and Xue (2020) have identified the value of destination image and loyalty that have facilitated to the development of a sustainable destination.

These relationships among the variables have directed the following research model, where the researcher considers identifying the impact of experiential marketing on sustainable tourism through the mediating effect of destination image, tourists' satisfaction and loyalty. The dotted line of the figure represents the indirect effect of the variable.

Figure 1: Research Model with Hypotheses



Source: Developed by the Researcher

The following nine hypotheses have been developed based on the above research model.

- H1 Destination image has been significantly affected by experiential marketing
- H2 Tourists satisfaction has been significantly affected by experiential marketing
- H3 Tourists' destination loyalty is significantly affected by the experiential marketing
- H4 Tourists destination loyalty is significantly affected by the destination image
- H5 Tourists' destination loyalty is significantly affected by the tourists' satisfaction
- H6 Tourists' destination loyalty is significantly affected by experiential marketing through the mediating effect of destination image and or tourists satisfaction
- H7 Tourists destination loyalty significantly affected on sustainable tourism
- H8 Sustainable tourism has been significantly affected by tourists' destination loyalty

- H9 Experiential marketing has significantly affected on sustainable tourism through the mediating effect of destination image, tourists satisfaction and destination loyalty.

RESEARCH DESIGN AND METHODOLOGY

This study's philosophy was positivism and aligned with the deductive approach. As an explanatory study, the researcher developed the study under a survey strategy with a cross-sectional time horizon under the mono method quantitative methodology. The researcher conveniently selected 513 international tourists as a representative sample from all tourists who visited Sri Lanka in 2019. Tourists' preferences and attitudes on cultural experiences were collected through a standard questionnaire and data were analyzed through the AMOS software.

The validity of the constructs was tested through Average Variance Extracted, (AVE) and Construct Reliability (CR). The reliability was tested through Cronbach's Alpha. All the variables were in the acceptable region.

Table 2: Construct Validity and Mean Values for the Variables

Variable	Dimension	Alpha	AVE	CR	No of Items	Mean
Experiential Marketing	Sense	0.736	0.65070	0.98225	5	2.456
	Feel	0.708	0.61040	0.96574	5	3.240
	Think	0.700	0.86468	0.96841	8	3.245
	Act	0.793	0.69193	0.96644	8	3.352
	Relate	0.729	0.60906	0.87964	8	2.857
Destination Image		0.803	0.60006	0.89792	8	2.881
Tourists Satisfaction		0.737	0.52291	0.96817	7	2.790
Destination Loyalty		0.759	0.53003	0.95787	7	2.470
Sustainable Tourism	Social Wellbeing	0.743	0.50236	0.96381	8	3.314
	Economic Wellbeing	0.735	0.52555	0.98215	7	2.742
	Environmental Wellbeing	0.838	0.57274	0.97990	8	2.807
Overall Model		0.814			79	

Source: Developed by the Researcher

All the mean values were located in 2 to 3 range, which means that tourists have moderately agreed to the experience of the cultural place.

To test the hypothesis, the researcher analysed the data through the following AMOS diagram, where the following effects were explored.

The below table has shown the direct effect of one variable has been on another through the R-value and its significance.

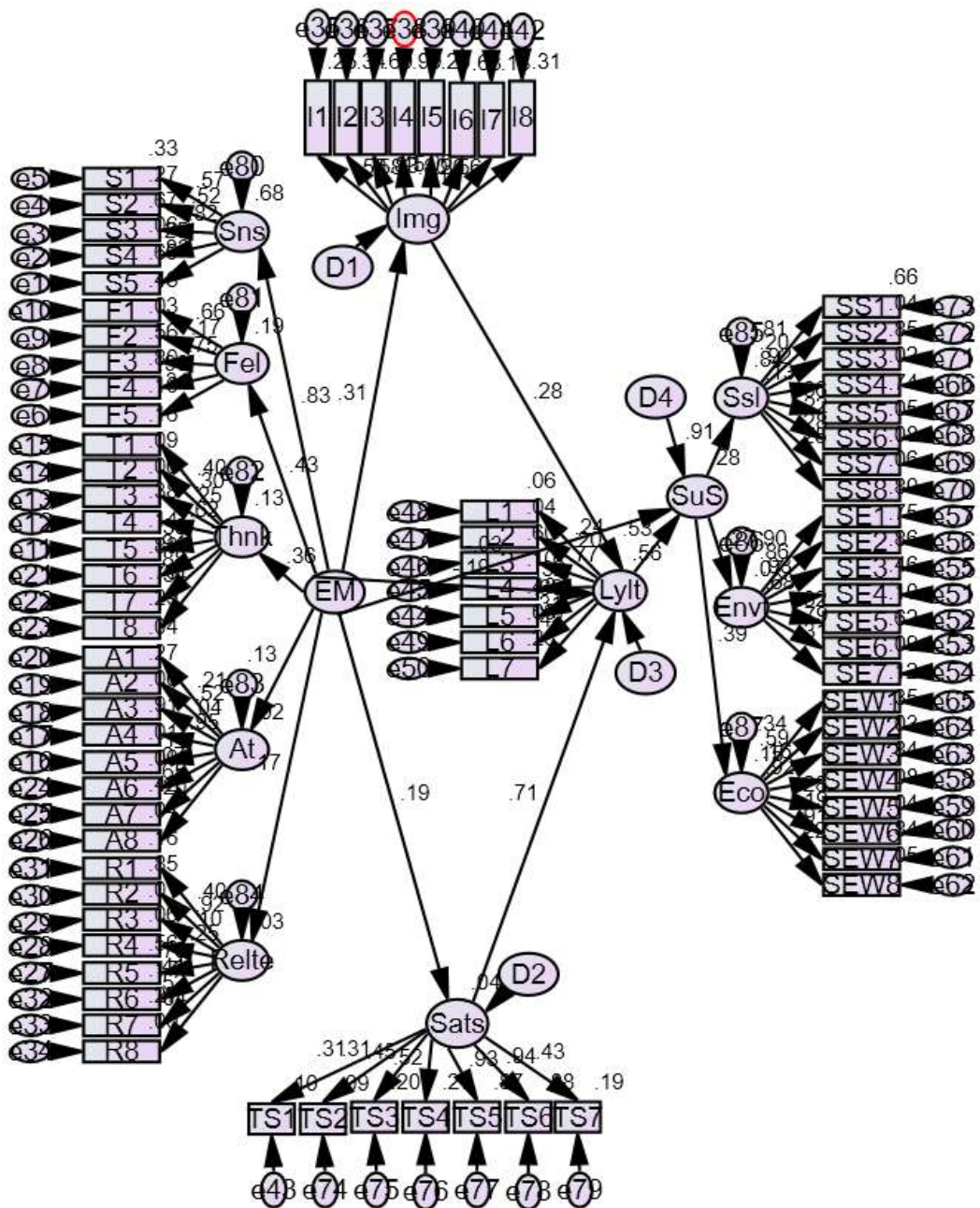
Table 3: Results Summary: Path diagram of the Structural Model

Predicted Variable	Effect	Predictor Variable	R ²	P
Destination Image	<---	Experiential Marketing	0.312	0.000
Tourists' Satisfaction	<---	Experiential Marketing	0.187	0.000
Destination Loyalty	<---	Destination Image	0.277	0.005
Destination Loyalty	<---	Tourists' Satisfaction	0.710	0.000
Destination Loyalty	<---	Experiential Marketing	-0.188	0.094
Sustainable Tourism	<---	Destination Loyalty	0.533	0.000
Sustainable Tourism	<---	Experiential Marketing	-0.031	0.588

Source: Developed by the Researcher

According to the results given in the table, experiential marketing significantly and positively affected destination image (H1 – Accepted) and tourists' satisfaction (H2 – Accepted). Tourists' destination loyalty has been significantly and positively affected by the destination image (H4 – Accepted) and tourists' satisfaction (H5 – Accepted). Experiential marketing did not contribute to changing destination loyalty (H3 – Rejected). However, if the destination expects destination loyalty from experiential marketing there should be a mediating contribution by tourists' satisfaction and image, it means there is a mediating effect from satisfaction and image to upgrade the destination loyalty (H6 – Accepted). Hypothesis 7 was accepted as tourists' destination loyalty has significantly affected on sustainable tourism. However, the main hypothesis developed to explain the main objective of the study was rejected (H8) as the direct effect of experiential marketing was not significant on sustainable tourism. Then researcher explored that there was an indirect effect among the variable. He found that experiential marketing has a weak positive but significant effect (27%) on sustainable tourism (H9 – Accepted) through the mediating effect of tourists satisfaction, destination image, and destination loyalty.

Figure 2: AMOS Diagram for the Research Model



Source: Developed by the Researcher

The following table explains the indirect effect among the variables.

Table 4: Standardized Indirect Effect

Predicted Variable	Indirect Effect	Predictor Variable	Coefficient
Destination Loyalty	<---	Experiential marketing	0.219
Sustainable Tourism	<---	Experiential marketing	0.270

Source: Developed by the Researcher

It is obvious that destination loyalty has significantly affected (53% - Table 3) sustainable tourism. However, sustainable tourism has also been slightly affected (27%) by experiential marketing through the mediating effect of tourists' satisfaction, destination image and loyalty.

CONCLUSIONS AND RECOMMENDATIONS

This study has facilitated the achievement of all the objectives and testing of all hypotheses. Results proved that tourists' destination loyalty occurs when experiential marketing has the capacity to upgrade tourists' satisfaction and destination image. Further, experiential marketing has a positive impact on destination image and satisfaction. Moreover, destination loyalty has strongly effected on creating sustainable tourism in cultural places in Sri Lanka. Thus, the researcher achieved his main research objective, i.e., proving that “experiential marketing has positively affected sustainable marketing through the mediating effect of tourists satisfaction, destination image and destination loyalty. Therefore, Sri Lanka Tourists Development Authority (SLTDA) and Destination Management Officers (DMO) must initiate programmes to develop the cultural places with outstanding experiences that are able to appeal to all types of senses of the visitors. If they expect tourism sustainability only through developing of the areas under experiential marketing, it is not fruitful. As the results of the study have explained there is no direct impact of experiential marketing on sustainable tourism (H8 was rejected). Therefore, SLTDS and DMOs must discuss sustainable tourism through experiential marketing after clearly identifying the visitors' satisfaction, image and loyalty. One of the visitors from Singapore stated that after seeing the history of Ruwanwaliseya, “If this dagaba was protected as it was at finding around eighteen century without developing, I would be delighted. Not only that there are so many common dagabs without different images. Therefore seeing one dagab is enough rather than visiting other

dagabs". Therefore, we must develop the cultural places in Sri Lanka especially considering visitors' image and satisfaction.

Hence, it is best for DMOs to develop cultural areas giving considering the five senses of experiential marketing such as sensory, affective, cognitive, behavioural, and relational perceptions. Further, SLTDA and DMOs need to develop the existing programmes and introduce more exciting activities considering the destination image and satisfaction.

Also, considering visitors' loyalty DMOs should improve quality infrastructures, certify visitor security, and arrange quality food-lodging-financing facilities for visitors. If a destination introduces more entertaining and adventure opportunities using the environment around cultural areas, and improve nightlife for them to spend more time, generating loyalty and sustainability behaviour can be done effectively. Further, if there are jogging, fishing, boat riding, water- games, tree houses, hiking, and village tourism using paddy fields tourists will be encouraged to spend more time at these cultural locations. Apart from these, most of the places need to have Wi-Fi facilities, 24*7 operation, and good social well-being the destination image and satisfaction in the cultural areas can be increased.

Finally, the findings highlight that there should be unity among all the stakeholders of cultural places to promote and keep tourists at these destinations. There should be common policies, practices and procedures when dealing with tourists' within a cultural destination while maintaining its unique recognition and simultaneously offer to diversified services. It means that cultural places must maintain at least one solution for everyone, obeying the concept 'something for everyone under greater hospitality' (Udurawana et al 2020) to offer a memorable experience for its visitors.

REFERENCES

Aliman, N. K., & Mohamad, W. N. (2016) 'Linking service quality, patients' satisfaction and behavioral intentions: an investigation on private healthcare in Malaysia'. *Procedia-Social and Behavioral Sciences*, 224 (2016), 141-148.

Schmitt, B. (2010) 'Experience Marketing: Concepts, Frameworks and Consumer Insights', *Foundations and Trends in Marketing* Vol. 5, No. 2 (2010) 55–112

Brakus, J., Schmitt, B.H., and Zarantonello, L. (2009) 'Brand Experience: What Is It? How Is It Measured? Does It Affect Loyalty?', *Journal of Marketing* 73 (May): 52-68.

Campón-Cerro, A. M., Hernández-Mogollón, J. M., & Alves, H. (2017) 'Sustainable improvement of competitiveness in rural tourism destinations': The quest for tourist loyalty in Spain, *Journal of Destination Marketing & Management*, 6(3), 252-266.

Chenini A, (2017) 'Building Destination Loyalty Using Tourist Satisfaction and Destination Image': A Holistic Conceptual Framework, MPRA Paper No. 90639, posted 19 Dec 2018 09:17 UTC.

Cohen, S., Prayag, G. & Moital, M. (2014) Consumer behaviour in tourism: Concepts, influences and opportunities. *Current Issues in Tourism*. 17. 872-909. 10.1080/13683500.2013.850064.

Fournier, S., Sensiper, S., McAlexander, J.H., and Schouten, J.W. (2001) 'Building Brand Community on the Harley-Davidson Posse Ride', Boston, MA: Harvard Business School Publishing.

Masarrat, G. (2012) 'Tourists Satisfaction towards Tourism Products and Market': A Case Study of Uttaranchal, *International Journal of Business & Information Technology*, , IJBIT, E-ISSN: 2047-0363, Copyright © Exceling Tech, Pub, UK

Haeckel, S.H. & Carbone, Lewis & Berry, Leonard. (2003) How to Lead the Customer Experience. *Marketing Management*. 12. 18-23.

Jamie Lisse (2018) 'What Is the Meaning of Sustainable Tourism'?, derived from <http://traveltips.usatoday.com/meaning-sustainable-tourism-2297.html> on 6.05.2018

Kim, S. H., Holland, S., & Han, H. S. (2013) 'A structural model for examining how destination image, perceived value, and service quality affect destination loyalty': A case study of Orlando. *International Journal of Tourism Research*, 15(4), 313-328

Lee, S. W., & Xue, K. (2020) A model of destination loyalty: Integrating destination image and sustainable tourism. *Asia Pacific Journal of Tourism Research*, 25(4), 393-408.

Nazari, Hosseini, M.A.S., and Tabatabaie, V., (2014) 'Impact of Price fairness on Price Satisfaction, Customer satisfaction and Customer Loyalty in Iran Telecommunication Market', (Case: MTN Irancell Company) *Asian Journal of Research in Marketing*, Vol. 3, No.1, pp. 131-144.

Negruşa, A. L., Toader, V., Sofică, A., Tutunea, M. F., & Rus, R. V. (2015). Exploring gamification techniques and applications for sustainable tourism. *Sustainability*, 7(8), 11160-11189.

Oliver R. L. (1977) 'Effect of Expectation and Disconfirmation on Post exposure Product Evaluations - an Alternative Interpretation,' *Journal of Applied Psychology*, 62(4), p. 480.

Oliver, R. (1999) 'Whence Consumer Loyalty', *Journal of Marketing*, Vol. 63 (Special Issue), p. 33- 44.

Pine, B.J., and Gilmore, J.H. (1999) 'The Experience Economy: Work is Theatre and Every Business a Stage', Boston, MA: Harvard Business School Press.

Prayag, G., & Ryan, C. (2012) 'Antecedents of tourists' loyalty to Mauritius': The role and influence of destination image, place attachment, personal involvement, and satisfaction. *Journal of Travel Research*, 51(3), 342–356.

Pulido-Fernández, Juan & López-Sánchez, Y.. (2014) 'Perception of Sustainability of A Tourism Destination', *Analysis From Tourist Expectations. International Business & Economics Research Journal (IBER)*. 13. 1587. 10.19030/iber.v13i7.8908.

R. Öztürk, (2015) 'Relationships between Experiential Marketing, Customer Satisfaction and Customer Loyalty' as an empirical Examination in Konya

Rathnayaka, R. M. U. R. K. (2017) 'Effects of Experiential Marketing towards Customer Satisfaction': With Special Reference to Online Fashion Stores in Sri Lanka. 8th International Conference on Business & Information ICBI – 2017, Faculty of Commerce and Management Studies, University of Kelaniya, Sri Lanka. p.55.

Sangpikul, A. (2018) 'The effects of travel experience dimensions on tourist satisfaction and destination loyalty': the case of an island destination', *International Journal of Culture, Tourism and Hospitality Research*, Vol. 12 No. 1, pp. 106-123

Schmitt, B. (1999) 'Experiential Marketing: How to Get Customers to Sense, Feel, Think, Act, Relate to Your Company and Brands'. New York: The Free Press.

Severt, D., Wong, Y., Chen, P., & Breiter, D. (2007) 'Examining the motivation, perceived performance and behavioral intentions of convention attendees': Evidence from a regional conference. *Tourism Management*, 28(2), 399-408.

Silva, D.A.C., (2002) 'Sustainable tourism development in Sri Lanka': an appraisal of the international inbound tourism demand, the tourism industry and national tourism policy. *Journal of Entrepreneurship*, 14 (2), 183-186

Song, H., Veen, R., Li, G., & Chen, J. (2012) 'The Hong Kong tourist satisfaction index'. *Annals of Tourism Research*, 39(1), 459–479.

Sri Lanka Tourism Development Authority, (2018), Annual Statistics Report, published by the Sri Lanka Tourism Development Authority

Stratigea, A., & Hatzichristos, T. (2011) 'Experiential marketing and local tourist development': A policy perspective. *International Journal of Leisure and Tourism Marketing*, 2(4), 274-294.

Sun, Y., Kim, K. H., & Kim, J. (2014) 'Examining relationships among sustainable orientation, perceived sustainable marketing performance, and customer equity in fast fashion industry', *Journal of Global Fashion Marketing*, 5, 74–86. doi:10.1080/20932685.2013.866319

Tasci, A. D. A., Gartner, W. C., & Cavusgil, S. T. (2007) 'Conceptualization and operationalization of destination image.' *Journal of Hospitality & Tourism Research*, 31(2), 194-223. <http://dx.doi.org/10.1177/1096348006297290>

Udurawana, Y. M. W. G. P. K., & Wanninayake, W. M. C. (2020). Experiential Marketing for Destination Loyalty (Reference To Tourists' Cultural Destinations In Sri Lanka), *International Journal of Scientific & Technology Research*, Volume 9 - Issue 9, September 2020 Edition

Udurawana, Y. M. W. G. P. K., & Wanninayake, W. M. C. (2021). The Effect of Experiential Marketing, Destination Image, Tourists' Satisfaction on Destination Loyalty: Evidence from Tourists' Cultural Destinations in Sri Lanka. *South Asian Journal of Tourism and Hospitality*, 1(1).

Udurawana, Y. M. W. G. P. K., Wanninayake, W. M. C. B., Laksiri, W. M. R., & Puwanenthiren, P. (2020). Tourists' Destination Loyalty is leading for Perceived Sustainable Tourism (Reference to Tourists' Cultural Destinations in Sri Lanka).

Udurawana, Y.M.W.G.P.K. (2018). Determinants of Tourists' Destination Loyalty; (With Special Reference to the Sacred Areas at Anuradhapura in Sri Lanka). 19th Conference on Postgraduate Research, International Postgraduate Research Conference 2018, Faculty of Graduate Studies, University of Kelaniya, Sri Lanka. p9

Udurawana, Y.M.W.G.P.K., and Wanninayake, W. M. C. (2021). Experiential Marketing, Destination Image, and Tourists' Destination Loyalty (Reference to Tourists' Cultural Destinations in Sri Lanka), *International Conference on Business Management -2020*

Wanninayake, W.M.C.B., & and Chovancova, M. (2012). Store Personality and Behavioral Intentions of Customers: a Comparative Study of Retail Industry in the Czech Republic and Sri Lanka. *ACTA Universitatis Agriculturae Et Silviculturae Mendelianae Brunensis, Czech Republic*. Vol. LX (7), pp 477-484.

World Travel & Tourism Council (WTTC 2019), *Travel & Tourism Competitiveness Index*, published by the World Economic Forum's Platform for

Shaping the Future of Mobility, World Economic Forum, Geneva, ISBN-13: 978-2-940631-01-8

Yoon & Uysal (2005) 'An examination of effect of motivation and satisfaction on destination loyalty': a structural model, *tourism management*, 26(1), 45-56



Informal Care for Disabled and Elderly Population in Contemporary Sri Lankan Society

By I. GUNARATHNA¹

The role of the family in providing care is a historical and culturally rooted practice in Sri Lanka. Regardless of ethnicity, people are devoted to protecting the family; the most loving and warm nest for many people to spend their lifetime. Caring for people with disabilities and caring for elders have been an embedded practice in the Sri Lankan family system, however, due to rapid economic and socio-cultural changes a shift in the caring tradition has been observed. This study, therefore, aimed to explore the current informal caring practice among Sinhalese people with disabilities and elders. The study has focused on the care, cultural aspects of the care, social organizations, and the organized structure to provide care. In addition, social relations of care and the community support and assistance to provide care at the community level were also studied. The study was conducted in the Hapugoda No: 405 Grama Niladari Division in the Harispattuwa Divisional Secretariat of the Kandy District and the findings derived from the study are used to identify the significance of the informal care and the care providers, challenges faced by the care providers and the opportunities to enhance the informal care provisions in Sri Lanka.

KEYWORDS: Care Practices, Social Organization, Culture of Care

INTRODUCTION

Informal Care in relation to disability and elderly is defined as “Care and support needs that is carried out by relatives, friends, acquaintances or neighbours, often without a contractual agreement or formal payment”

¹ Lecturer, Department of Sociology, University of Peradeniya, Sri Lanka

(European Centre for Social Welfare Policy and Research, 2010). Informal care mostly take place at voluntary basis, however sometimes it can be argued that it has been the exclusive alternative that many families find in taking care of elders and people with disabilities. This study therefore primarily focused on the provision of informal care and the characteristics and nature of the informal care provision from the cultural aspect. According to the Australian Institute of Health and Welfare (2021) informal care givers are people who provide care to those who need it within the context of an existing relationship, such as a family member, a friend or a neighbour. Therefore, this study also determined to explore the situation of the informal care providers and the challenges and the realities they encounter. Sri Lanka has a strong sharing and caring legacy. The traditional helping system of “Nikam”, the practice of volunteering for those who need help, especially people with disabilities and elders was culturally entrenched. According to Herath (2004), the Sri Lankan tradition is rooted with a central value system, where individuals maintain close relationships with each other. The family system and the social organization of the family cared for each other, especially in child rearing and caring practices. The historical family identified in Sri Lanka is in the form of extended family, where individuals were tied by kinships and generationally lived together. Kinship pattern and the kinship network was much stronger and the kinship protected the people who lived together, sharing common resources.

The term ‘care’ is involved with love and affection in social work discipline and usually ‘care’ refers to the “act or process of looking after people by undertaking tasks that they are unable to do for themselves (Harris, *et al*, 2013, p:52). According to the definition, it is evident that ‘care’ target for those who need assistance and help at all times. However, this term has been criticized by many activists in the field of ‘Disability’. Care can be categorised as formal care and informal care. Formal care is the service or the assistance provided by the mix of service providers, including paid care givers, social workers, therapists, counsellors, disability assistants and so forth. Informal care refers to a range of emotional and instrumental supports provided by social networks, neighbours, friends and family members (O’Leary, *et al*, 2010, p:6). Informal care is more associated with emotional support, love, and affection than fulfilling a job role for a second party. Informal care on the other hand can be considered as a responsibility and accountability of the family members, closed relatives and sometimes the neighbours’ if they closely associated with concerned families in looking after elders and children.

Social Organization of Care According to the American Psychological Association (APA) Dictionary of Psychology (2022), is defined as, the complete set of social relationships among members of a society or other groups, which determine the structure of the group and the place of individuals within it. These relationships can be based on several variables: kinship, age, sex, area of residence, and in human beings, religion, matrimony, or common interests. Accordingly, the social organization of the Sinhalese culture and its influence on the provision of care is significant. In the most historic period, the care and the affection for the neediest was provided by the closed social networks. However, the development of private property ownership, interest on living separately, growth of urbanization as well as industrialization generate a society with the demand for 'care'. The mandatory family responsibility for care therefore takes a different form and generates an industry of care. Similar to the changes in the world, in Sri Lanka also there has been changes in the traditional informal care system due to following changes in the socio- political structure.

01. Colonization
02. 1977 Open Economy
03. Globalization
04. Global Pandemic

The above historical milestones transform the socio- political context in Sri Lanka, especially after the colonization, the traditional conventional helping system was changed as the new form of culture and tradition were incorporated within the country. Further the independence and the introduction of open economy escalated the urbanization, migration, foreign trade, and inclusion of private and non-governmental organizations in the Sri Lankan economy. The open economy facilitated and opened doors for women employments, women migration especially for middle income countries as domestic labourers. Moreover, the internal migration was increased in search of employments as well as women education was expanded and as a result the proportion of working women was increased. Women were promoted to acquire new social roles and status after the 1977 open economy. Indirectly the new move caused the changes in the informal care industry as the role of the women were changed and the gap was created within the family specially to look after elders, children and people with disabilities. Accordingly, the informal care work specially in looking after older

population and people with disabilities confined to assent the new social world and its strategies.

Ageing and Disability are world recognized social concerns. Rapid increase in longevity is caused due to advancements of the health system and the increase of the number of people with disabilities is due to the national and international war and changes of food and habits of people around the world. Recognition of new disability types (as an example identification of Breast cancer as a disability) are some of the reasons to counter the world attention on elderly and disabled people. Due to the prevalence of breast cancer in the US, the Social Security Administration (SSA) listed breast cancer as a disabling condition and a potentially qualifying disability. As a result, the neo-liberal market economy prepared well to supply the upbringing demand in many forms, and among them, the most amount of trends was observed in the formal care or in the paid care. Introduction of paid homes to look after elders and people with disabilities, train paid care workers in the care industry, care teaching and learning are few of the new reforms in the care. In addition, Diploma in Health Care, Elder Care, Diploma in working with senior citizens can be also recognized under neo liberal reforms in the care field. The government of Sri Lanka too adapted certain strategic measures to look after elders and people with disabilities by establishing elder care homes and homes for people with disabilities. On the other hand, the private sector also timely recognized the national and international demand and open admission paid care for people with disabilities and elders. Additionally, the Buddhist and especially Christian religious based organizations initiated to look after the needy through their religious teachings and practices. The Covid-19 pandemic created a new normal situation in the world and that also signified the informal care and formal care in protecting humankind from the Corona virus.

METHODOLOGY

The study adapted the qualitative research design as the research problem of the study need to be explored from the perspectives of the informal care providers. The study location is the No: 405, Hapugoda Grama Niladari Division which is located in the Kandy District. The village is recognized with semi urban characteristics and great majority of the people of the village are low middle income Sinhalese Buddhists. Primary data were gathered through personnel interviews conducted with 10 families with elders and 05 families with people with disabilities. In addition, focus group discussion was

conducted with 10 members from the Village development society of the No:405, Hapugoda Grama Niladari Division. Key informant interviews were conducted with the Reverent of the temple, Development officer, Elders rights promotion officer and the Grama Niladari of the Village and one purposively selected care giver during the data collection. In addition, secondary data was gathered through reports and records particularly on the Hapugoda Grama Niladari division. The collected data was analysed through thematic analysis method and the recommendations and the findings deriving from the study will be used to enhance the social work interventions with care takers of disabled and elderly population.

RESULTS AND DISCUSSIONS

No: 405, Hapugoda Grama Niladari Division is located 07 Kilometres away from the Kandy Municipality. The total number of population of the village is 1202. Among them 613 are females and 589 are males. The age distribution of the villagers are as follows.

Table 1: Age Distribution of the Population

Age Distribution	Number of People
0-5 Years	74
6-18 Years	216
19-60 Years	709
Above 60	203

Source: Field Data, 2021

Table 2: Disabled Population of the Village

Nature of the Disability	Number of PWDs
Quadriplegia	02
Mental Disabilities	02
Visually Impaired	01
Amputee	01
Other	03

Source: Field Data, 2021

Among the total population, pensions are received by 65 number of people and Public Senior Citizen Assistance is received by 63 elders. There were 02 individuals who received assistance for chronic illnesses.

Table 3: Profile of the Respondents-Care Givers of PWDs

Sex	Age (years)	Civil Status	Family Members	Nature of the Disability	Relationship to the PWDS
Female	61	Married	05	Mental Disability (Autism plus Down-syndrome male 24 years)	Son
Female	54	Married	05	Multiple Disability- 16 Years of Age Female Child	Daughter
Female	63	Married	06	Physical Disability- Amputee	Sister
Female	70	Widowed	02	Multiple Disability- 22 Years of Age Male	Son
Male	68	Widower	03	Mental Disability- 47 Years of age Male	Son

Source: Field Data, 2021

The above table explains the nature of the disability of the care receiver and the relationship status to the main care provider with relevant background information. According to the findings, it was reported that majority of the informal care givers are females bounded with family related duties and responsibilities. Almost all the respondents are Sinhalese, Buddhists and they have strong relationships with the temple of the village nonetheless the relationship of the care receiver with the religious institute and the participation for religious activities were minimal. Further, majority of them are married and are having more than 05 members in a family. Informal care takers were mostly the mother or father of the child, except in one identified case. As revealed, a disabled woman of 70 years of age is being looked after by her 63 year old sister who lives very close to her house.

A. Background Information of the Care Givers

All the respondents were unemployed and the identified 68-year male widower is a retired conductor of the Sri Lanka Transport Board, Kandy. As revealed, the disabled person's expenses for medication and the other requirements are being fulfilled by the family members. Moreover, the informal care taker has to manage the household work as well as the well-being of the PWDs. As explained by one mother who is 63 years of age. "I have to look after my nephew as well as my sister. Other children are scolding

me for going to take medication with my sister”, as revealed, this mother had to take her daughter’s child to the school and soon after, returns home to take her sister to injections for her leg. She sometime missed her breakfast and she expressed that “I have lost my weight and health condition due to the stress that I have”. As care giving is a physically and psychologically strenuous task, caregivers are often identified with poor health (Lin *et al*, 2019) As explained by one informal care giver, her children have separated and hardly visit home due to the mental illness of their brother. As explored, the mother of this male is the only person to look after him and tolerate distresses given by the child. The other children have asked the mother to institutionalized their brother and come and live with them. However, the mother totally rejected that idea and determined to help and assist the child until her death. She sometimes goes for daily paid work to sustain both. The child who is at the age of 16 with multiple disabilities is cared by her mother who is a health professional in the government sector. From the birth the child is under the paraplegic condition. She struggles a lot to manage her child’s health and to protect the families’ financial stability. The mother of this family hired a paid care giver from the neighbourhood to care the daughter during office time, and after she returned until the next day, all the work is carried out by the mother as this child could not even stand and walk.

B. Sense of Love and Affection

As revealed and identified, majority of the informal care workers are having a great compassion towards their loved ones, and especially this was visible when it is mother or father of the child. The role of a mother and father is ascribed. The ascribed role is associated with socially constructed performances which are more challenging for parents with disabled children. As stated in one case study, the mother of the disabled child died due to a heart attack in 2021 October and the father had to take the responsibility of the mother. But, the sudden loss of the mother, who had been the child’s immediate care taker, and to whom the child was too attached to, made him so vulnerable and arrogant. Therefore, the father had to switch his traditional role as the father and had to be the second mother to this child. As affection was more powerful within these families. The informal care givers showed reluctant to send their children with severe disability conditions to institutionalized care. However, they received less support and facilitation from other family members.

C. Social Organization of Care

Social Organization was mainly identified from the family, neighbourhood and relatives. The support for many informal care workers was received from the family and the neighbourhood also facilitated in many instances to look after the disabled child. However, this is not the same for adults with disabilities. In many instances, neighbours' willingness was high to look after children with disabilities when the mother or the care workers abstains. The neighbourhood of the village is tied by kinship. Hence close and tied relationships were observed among each other. Rather in neighbourhood where there are close relatives, it is closely knit. As an example, they share their food with close families in the vicinity and specially the concern was given on the protection of the disabled child. They mostly keep an eye on the children with disabilities. Majority of the informal care givers appreciate the support rendered by the neighbours in non-material and material form than with family members.

D. Culture of Care for PWDs

The care for people with disabilities was seen as a merit. A merit which the informal care givers earned during their birth. As mentioned above, majority of these respondents were Sinhalese Buddhists and they believed that being disabled is caused due to the fate of life and the destiny of life. There were mainly two types of fate they collectively agreed and believed.

- Destiny or the Fate of the Care Giver
- Destiny or the Fate of the Caretaker

Fate is shared by the informal care provider and the receiver. As one stated during the personnel interview: "This is the Karma of both, the child and myself, both have done bad to someone in last birth, so we have to pay for it". The family members believed karma on top of everything along with medical reports. The respondent who is a graduate and a health professional also was not ready to accept the fact that her child has a neurological impairment, and she also believed this as a part of their Karma in life. The neighbourhood was identified as one of the main resource providers as physical as well as non- physical help was received from the neighbours. Food sharing practices, caring the PWDs during emergency, provision of financial assistance were significant for many respondents, in addition, to the great advantage they receive from neighbours which was the mental support during an emergency, especially in deaths and illness of a close family members, neighbours supported them to share their sympathy and supported

members to share the loss of the family member. As revealed by one respondent, a 24 year multiple disabled child with autism spectrum disorder was having sexual desires and he used depraved words and used his organs to get sexual satisfaction. This has been a secret of the family and subsequently, the family members visited a psychiatric doctor to receive medication and the young male was advised to undergo a medication process. However, this incident was shared by the mother of the child with a close neighbour and this message passed to many of the neighbours in the village and the child and the mother had to face certain oppressive situations in public places.

E. Background Details of Elderly Care Givers

According to the sample of the study, 10 elderly informal care takers identified and conducted a focus group discussion and three personal interviews from the selected participants. There are 203 of elderly in the Hapugoda Grama Niladari division. Among them majority of the elders are females, and they receive home based care from the informal care givers. It is an obvious fact that self-care becomes declined with the old age. Song et al (2020) mention that "The ability of older people to provide self-care decreases with old age as they decline in physical and cognitive functions and develop chronic conditions. Hence, the assistance become essential. As identified from the findings majority of the elders do receive the support from care givers and informal care givers are mostly females, either daughter or the daughter in law of the family. There were 10 elderly care takers who were purposefully identified to collect data. The main selection criteria were the age limit of the elderly males and females. Those who are above 65 years of age represent the sample.

F. Feminization of Elder Care

Majority of the women work as informal care givers while fulfilling the roles and responsibilities of a family. The triple burden of the womanhood identified from the findings, the family responsibilities, economic responsibilities and the social responsibilities have to be fulfilled by the mother of the family. Women are inherently gifted with care, affection and love. Traditionally, caregiving responsibilities were the responsibilities of females of the family ((Lin *et al*,2019). This belief had forced women to take the informal care takers role. As identified, two daughters in law identified in the study had quit their jobs to care their children and look after the elderly at home.

G. Sandwiched Generation

Burke et al, (2017) explains sandwich generation as, the challenge of balancing work and multigenerational care giving responsibilities as an increasing number of employed women and men raise young children. Further they support adult and children. Moreover, care for ageing parents while managing their own household and work responsibilities. The levels of employment and education of women have increased over the last few years in the world as well as in Sri Lanka. However, in this study almost all the care takers are home-based, and they have not been employed for a longer period of time; some have quit jobs due to the responsibilities associated in the family life. Percentage of elderly population has almost doubled during the period from 1981 to 2019 according to the Annual Health Statics, 2019, Sri Lanka.

H. Limitation in the Social Life

Due to the responsibilities associated with elders and children, many informal female care givers have sacrificed their social life. They have omitted social gatherings, abstained from family trips, limited participation in village level gatherings (mostly the husband participates for funerals, arms giving and weddings). The informal care taker has confined her time to stay home to look after the elderly and there were certain disputes among the husbands and wives. However, the disputes hardly progressed to a conflict due to strong family relationships and family unity. As stated by one informal care giver (38-year-old daughter in law) "There are arguments between myself and my husband due to the burden I have in looking after his mother, I hardly find time to visit my parents and treat them, I even do not have money, but I bear everything to protect family life because we do everything not for us but for children". As explained by Bialon & Coke, (2012 p :212), "caregivers identified the presence and severity of behavioural problems and poor functional status as stressors to their care giving burden".

I. Cultural aspect of Elder Care

As identified, the great majority of villagers are Sinhalese Buddhist and many of them are relatives and landowners from the heredity. There were mainly 04 caste groups identified in the village and the following terms are popular among villagers to name relevant caste groups Rate- Govigama, Bodiwansha. Berawa, Pali-Washermans/Radha. These groups lived separately in the village but they lived in harmony but no cross caste marriages were done among member villagers but of course many cross caste marriages were done outside the village. Regardless of the caste,

people believe that taking care of elders specially parents is a responsibility of the children and the one who lives in “Mahagedara” (The house where your parents lived during the old aged) had to take the main responsibility rather than other children of the family. There were 03 temples in the village and one represents the Amarapura Nikhaya and the rest of the 02 temples represent the Siyam Nikhaya. The teaching of these temples and the religious practices made the villagers to care of their old parents and many of the families accepted it as a responsibility. However, the only elderly who was unmarried with OCD syndrome was harassed by the Sister in law, mentally and physically. This woman has expressed his oppression within the family to many neighbours around and she received the support from neighbours during emergencies specially when she got sick. However, the cultural norm of the village regarding taking care of elders are more positive and constructive and there are no disputes reported to the GN of the village.

J. Social Organization of Elder Care

Many of the elders are looked after by the family members and children. However, there were instances where they received the paid care workers' assistance during the hospitalization of the elderly mother or father. Especially during the hospitalization many families of the village used to hire a paid care worker to stay with the parent, but a few with very low economic status used to stay with the elderly mother or father. As stated by one informal care giver, “We do not go to stay with the mother during the hospitalization, because if I stayed, no one is there to cook and look after my children. Even husband cannot stay as he has to go for work and earn. If not, the whole family will face problems”. Accordingly, getting a service of a paid care worker during the hospitalization is a practice of many middle class families in the village but not always with families with low economic status.

CONCLUSION

According to the findings of the study, it was identified that, villagers who lived in Hapugoda GN division accepted and practiced the traditional Buddhist teaching of caring elders and people with disabilities as a merit for their next birth. The religious teaching of karma and rebirth has made them to be devoted for care giving. However, the care giving has been the main responsibility of women rather than men and this social learning has been passing from one generation to another. Feminization of care therefore is a problem in the village. Further, this belief and practice hindered the social relationships of many women limiting their participations and contribution. The

intervention from the field level officers is minimal in the village and there are more opportunities for community based social workers to intervene to develop the well-being of the informal care workers at family level.

REFERENCES

Bialon, L.N. and Coke, S., 2012. A study on caregiver burden: stressors, challenges, and possible solutions. *American Journal of Hospice and Palliative Medicine®*, 29(3), pp.210-218.

Burke, R.J. and Calvano, L.M. eds., 2017. *The sandwich generation: Caring for oneself and others at home and at work*. Edward Elgar Publishing.

Harris, J. and White, V., 2018. *A dictionary of social work and social care*. Oxford University Press.

Heng, J.L., Fan, E. and Chan, E.Y., 2019. Caregiving experiences, coping strategies and needs of foreign domestic workers caring for older people. *Journal of clinical nursing*, 28(3-4), pp.458-468.

Herath, H.M.D.R., 2004. (Ed.). *Indigenous Knowledge, Environment and Traditional Value System*. Induwara Research Collection. Ariya Publication, Warakapola, pp. 79 – 107.

O'Leary, K.J., Kulkarni, N., Landler, M.P., Jeon, J., Hahn, K.J., Englert, K.M. and Williams, M.V., 2010, January. Hospitalized patients' understanding of their plan of care. In *Mayo Clinic Proceedings* (Vol. 85, No. 1, pp. 47-52). Elsevier.

Peckham, A., Rudoler, D., Li, J.M. and D'souza, S., 2018. Community-based reform efforts: The case of the aging at home strategy. *Healthcare Policy*, 14(1), p.30.

Song, X., Mitnitski, A. and Rockwood, K., 2010. Prevalence and 10-year outcomes of frailty in older adults in relation to deficit accumulation. *Journal of the American Geriatrics Society*, 58(4), pp.681-687.

VandenBos, G.R., 2007. *APA dictionary of psychology*. American Psychological Association.

European Centre for Social Welfare Policy and Research. What are the areas we are working on in relation to persons with disabilities? Available at: <https://www.euro.centre.org/> (Access 06 June 2022).

Australian Institute of Health and Welfare. (2021). Available at : <https://www.aihw.gov.au/>. (Access 05 May 2022).

The Peterson Institute for International Economics. Available at: <https://www.piie.com/>. (Access 10 July 2022).

Annual Health Statistics. (2019). Sri Lanka. Available at: http://www.health.gov.lk/moh_final/english/public/elfinder/files/publications/AHB/AcsHlaistiS%202019.pdf. (Access 14 June 2022)

How to Qualify for Disability with Breast Cancer in 2021. Available at: <https://www.disability-benefits-help.org/disabling-conditions/breast-cancer>. (Access 28 May 2022)



BOOK REVIEW

A. Adikaram, T. Gooneratne and M. Udunuwara
Crafting Your Research: A Guide to Management Student Book for Writing and Presenting.

Stamford Lake (Pvt) Limited, Sri Lanka.
pp.125.ISBN:978-624-55544-14-1

By A. IDDAGODA¹ AND H. DISSANAYAKE²

Chapter one contains a worthy explanation of the problem statement, research questions and objectives. The authors highlighted the fact that some of the research students interchangeably use the aim of the study and the research problem. Under this chapter, a reader can get a clear idea about the research problem and the aim of the study. Based on the identified research gaps the problem statement needs to be formulated. There is a clear description of the research gap types: empirical, theoretical, knowledge, methodology, and practical. It is a known fact that the moment the research student identified his/her research gaps, it is like he/she won half the battle. Rest is maintained the logical flow between research questions, and research objectives, based on the theoretical and empirical assertions derive the hypotheses. Iddagoda (2022) also has a similar view.

In a thesis soon after the research gaps, research questions and objectives formulate, the conceptualization or a thorough literature review begins. Under Chapter two the authors of this book provide a good understanding of the importance of a literature review, the steps to carry out the literature review and types of scholarly works such as refereed academic journals, non-

¹ Senior Lecturer, University of Sri Jayewardenepura, Sri Lanka; e-mail: anuradhaiddagoda@sjp.ac.lk; ORCID: <https://orcid.org/0000-0003-2586-430X>

² Senior Lecturer, Wayamba University of Sri Lanka; email: hiranya@wyb.ac.lk ; ORCID: <https://orcid.org/0000-0002-4963-5125>

refereed academic journals, conference proceedings, policy reports, books, newspapers and magazines etc. extract of a spreadsheet for organizing literature is another salient example for a beginner to the research world. In this chapter, the authors also describe the systematic literature review. However, if they explain the PRISMA model and bibliometric analysis as well, then it would be like icing on the tasty cake that they have baked.

Chapter three is titled “Using Theory in the Research”. Identifying the theoretical gaps and bridging the gaps is vital, especially for a PhD study. First, the authors of this book provide a clear explanation of the theory. This is another example that they identify the pulse of a novice research student. There are examples of the theories used in management research, such as agency, role, stakeholder, and institutional. Write and Snell (1991) state that in the general systems theory there are three components. They are namely, inputs, processes and output. Using this theory, a researcher can see an organization as one system. Therefore, the reviewers’ view is better to add the general system theory as well as an example. Then it would be another beautiful flower to the bouquet of ‘key theories in management research.

Mainly there are two types of research: namely, basic research and applied research. In Chapter four, the authors provide a ubiquitous explanation of the differences between these two. They also explain when to carry out research, key features of high-quality applied research, stages of conducting applied research and designing the research.

Chapter five is dedicated to complying with ethics. The view of the authors of this book is that “Complying with ethics as well as being honest and trustful is of utmost importance in research. it relates to the integrity of a research”. From this chapter, a researcher can get a clear idea about, gaining approval from the ethics review committee of the university/institute, ethics in research design, ethics in data collection and ethics in presenting results and writing the report. It is like a quadruplet of complying with ethics.

This book consists of six chapters and one of the interesting points that the authors address is the relationship with the research supervisor. Managing people is also vital when doing research. The research supervisor is also human. Therefore, a research student should enrich him or herself with the virtues such as empathy, respect and integrity. This is a noteworthy book that ignites research interest in anyone in a systematic and scientific way.