



PROCEEDINGS OF THE

RESEARCH CONFERENCE ON BUSINESS STUDIES

26th October 2020

“Business Transformation: Merging the West and the East”

EXTENDED ABSTRACTS



**Faculty of Business Studies
Vavuniya Campus of the University of Jaffna, Sri Lanka**

ROBS 2020

RESEARCH CONFERENCE ON BUSINESS STUDIES – 2020
(RCBS – 2020)

Theme

“Business Transformation: Merging the West and the East”

26th of October, 2020

BOOK OF EXTENDED ABSTRACTS

Faculty of Business Studies
Vavuniya Campus of the University of Jaffna
Vavuniya
Sri Lanka

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Conference Tracks

Track 1 Accounting

Track 2 Finance

Track 3 Human Resource Management

Track 4 Business Economics and Entrepreneurship

Track 5 Knowledge Management and Project Management

Track 6 Marketing and Hospitality Management

Contents

	Page No.
Message from the Vice Chancellor	x
Message from the Rector	xi
Message from the Dean of the Faculty	xii
Message from the Convener	xiii
Message from the Editor in Chief	xiv
List of Extended Abstracts and Authors	xv-xxii
Keynote Speakers	xxiii
Keynote Abstract-I: Information Security	xxiv-xxvi
Behaviour Research – East Meets West	
Keynote Abstract-II: Business Transformation: The Trends in Sri Lankan Corporate Sector, a Case Study	xxvii-xxx
Track 1: Accounting	1-77
Track 2: Finance	78-153
Track 3: Human Resource Management	154-232
Track 4: Business Economics and Entrepreneurship	233-286
Track 5: Knowledge Management and Project Management	287-354
Track 6: Marketing and Hospitality Management	355-429

Message from the Vice Chancellor



I am happy to give this message to the 3rd Research Conference on Business Studies (RCBS-2020). This conference is organized by the Faculty of Business Studies, Vavuniya Campus of the University of Jaffna. I congratulate the Rector of the Vavuniya Campus, Dean of Faculty of Business Studies, and the Conference organising Committee for conducting this conference in both physical and virtual settings.

This conference focuses on the theme: ‘Business Transformation: Merging the West and the East’. Theme of the conference is impressive, and meeting the current trends. This research conference is an opportunity for the nation's young scholars to meet and share their knowledge with the wider academic community. Vavuniya Campus is growing steadily by developing its infrastructure facilities and academic activities. Organizing this research conference supports such developments and growth. I believe that this research conference would bring in new ideas and knowledge to the region and to the country.

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

All glories to God

Prof. Sivakolundu Srisatkunarajah
BSc (Hons), PGED (Merit), Ph.D. (Heriot-Watt)
Professor in Mathematics
Vice-Chancellor
University of Jaffna
Sri Lanka

Message from the Rector



It is with great pleasure and privilege that I am writing this message to the proceeding of the 3rd Research Conference on Business Studies (RCBS-2020). This conference is held on 26th October 2020 in the Faculty of Business Studies, Vavuniya Campus of the University of Jaffna, Sri Lanka. The theme of this conference is “Business Transformation: Merging the West and the East”.

This conference aims to address the current issues that includes various areas such as Accounting, Finance, Management, Business, Economics, Project Management, English Language Education, and Information Technology. This conference creates a forum for the researchers to present and discuss their research findings; exchange their views and ideas with their counterparts and also to develop research culture. This conference is inevitable for creating and disseminating knowledge. 77 extended abstracts received from various countries including Bangladesh, Malaysia, and Sri Lanka. According to the review results, the program committee members have selected 63 high quality papers to be presented in this conference. These Papers were grouped for six tracks: Accounting, Finance, Business Economics and Entrepreneurship, Human Resource Management, Knowledge Management and Project Management, and Marketing and Hospitality Management, to be presented in the conference. The conference is furnished by the participation of illustrious two keynote speakers with a proven track record of research in the focused theme.

I take this opportunity to thank and congratulate the conference organization committee, Dean/ Faculty of Business Studies, and faculty staff for their untiring effort in making this research session a successful event. My thanks are also due to Chief Guest, Keynote speakers, and all the delegates who participate in this conference.

I wish the 3rd Research Conference on Business Studies all success.

Dr. T. Mangaleswaran
Rector
Vavuniya Campus of the University of Jaffna
Sri Lanka

Message from the Dean of the Faculty



I am pleased to deliver this congratulatory message to the 3rd Research Conference on Business Studies - RCBS 2020 of the Faculty of Business Studies, Vavuniya Campus of the University of Jaffna. The faculty conducts the research conference once every two years. This time the conference is conducted in both physical and virtual mode due to limited access by presenters during this Covid-19 pandemic.

The conference theme, “Business Transformation: Merging West and East”, is best suited for today's business entities to succeed in the competition. For many years, the West has been the acknowledged leader in business thinking. As globalization has increased, Western ideas have been embraced with enthusiasm and energy in emerging and developed markets worldwide. In the same way, the East challenges this hegemony and brings another Eastern perspective to our thinking. Therefore, it is inevitable to merge the ideas and best practices of business transformation to thrive in the ever-changing business world. The conference presents the research findings of academics, practitioners and researchers. This will be an excellent opportunity to learn new insights from researchers. The conference proceedings consist of sixty-three articles in six tracks, namely; Accounting, Finance, Business Economics and Entrepreneurship, Human Resource Management, Knowledge Management and Project Management, and Marketing and Hospitality Management.

I congratulate the conference committee for conducting this third research conference and extend my best wishes for its success.

Dr. Y. Nanthagopan
Conference Chair/ RCBS-2020
Dean
Faculty of Business Studies
Vavuniya Campus of the University of Jaffna
Sri Lanka

Message from the Convener



I am glad to send a message to the Proceedings of the 3rd Research Conference on Business Studies (RCBS-2020). This conference is held on 26th October 2020, in both physical and virtual settings. Together with the faculty staff, the conference committee launch the conference, and the papers are presented online. The conference organizing committee faced challenging issues due to the Covid-19 pandemic situation in conducting the conference. However, our determined conference committee worked in team spirit and made this event a success. The conference focuses on the theme: ‘Business Transformation: Merging the West and the East’ to address the current issues in the Business Management discipline. We received seventy-seven extended abstracts from various countries, including Bangladesh, Malaysia, and Sri Lanka. These extended abstracts were blind-reviewed by subject specialists. A total of sixty-three papers have found their place in the proceedings.

I pay my special gratitude to the Special Guests, both Prof. Tanya McGill, Professor in the discipline of Information Technology, Mathematics and Statistics at Murdoch University in Australia and Prof. S.W.S.B. Dasanayaka, Senior Professor attached to Department of Management of Technology and the Dean of the Faculty of Business, University of Moratuwa, Sri Lanka for delivering the keynote addresses. I always remember the Dean of the Faculty of Business Studies for his unwavering guidance and support in making this event a successful one. Finally, I appreciate the commitment of superiors, the Rector of the Vavuniya Campus, and the Vice-Chancellor of the University of Jaffna for their overall administrative support.

Dr. A. Rukshan
Convener/ RCBS-2020
Faculty of Business Studies
Vavuniya Campus of the University of Jaffna
Sri Lanka

Message from the Editor in Chief



It is my privilege and pleasure to pen this message on the occasion of the 3rd Research Conference on the Business Studies (RCBS) of the Faculty of Business Studies, Vavuniya Campus of the University of Jaffna, for 2020. The theme of the 3rdRCBS is 'Business Transformation: Merging the West and the East' which has enormous relevance to the multitude of titles in the conference tracks such as Accounting and Finance, Agri-Business, Business Economics, Entrepreneurship, Human Resource Management, Knowledge Management, Marketing, Project Management, Tourism and Hospitality Management, International Business, Information Systems, Cross-Cultural Communication and Business Communication. From the 77 Extended Abstracts received for the conference; 63 Extended Abstracts were accepted after a rigorous review process for presentation.

As the Editor-in-Chief, I would like to express my sincere gratitude to the Vice-Chancellor (University of Jaffna), Rector (Vavuniya Campus of the University of Jaffna), and Dean (Faculty of Business Studies, Vavuniya Campus of the University of Jaffna) for their outstanding leadership in organizing this conference. It is my great pleasure to appreciate the members of the Editorial Board and Editorial assistants for their commitment and support for getting this quality Conference Proceedings.

Thanks are also extended to the reviewers for their valuable and timely contribution. Finally, I would like to place my sincere appreciation for the Correspondence and Co-authors who submitted the Extended abstracts to the RCBS-2020. I wish to congratulate them on their future academic and research endeavours.

Profound Regards,
Mr. C. Larojan
Editor-in-Chief/ RCBS-2020
Faculty of Business Studies
Vavuniya Campus of the University of Jaffna
Sri Lanka

List of Extended Abstracts and Authors

No.	Title	Page No.
<i>Track 1: Accounting</i>		
01	The level of Internet Financial Reporting Disclosure in listed companies in Sri Lanka Krishnasamy, T and Pratheepkanth, P	2-8
02	Does board diversity affect Corporate Social Responsibility in Sri Lanka? Pratheepkanth, P and Arulvel, K. K	9-12
03	Impact of ownership pattern and board structure on Corporate Social Responsibility Reporting: A study of listed Banks in Sri Lanka Pamila, S and Sangeerthana, P	13-18
04	Impact of value relevance of accounting information on share price: A study of listed Banks in Sri Lanka Sangeerthana, P and Pamila, S	19-24
05	Impact of audit committees and boards on the quality of reported earnings: A study of listed Diversified Holdings industry in Sri Lanka Nihuma, F	25-30
06	The impact of firms' earnings on the stock market: A study on Food Beverage and Tobacco industry in Colombo Stock Exchange Kasthury, S and Anandasayanan, S	31-37
07	The impact of income on tax compliance: The empirical evidence from small and medium taxpayers of Sri Lanka Nadee, D and Premaratna, S. P	38-45
08	Right issue announcements and share prices: An event study approach Jayarathne, M. D. S and Samarakoon, S. M. R. K	46-50

09	The role of traditional and modern financial performance metrics in predicting shareholders' wealth	51-57
	Alahakoon, A. M. U. M. P	
10	Firm-specific characteristics and environmental disclosure: A study of selected listed companies in Sri Lanka	58-64
	Silva, M. A. G. A. D	
11	Intellectual capital and financial performance of Sri Lankan Listed manufacturing companies	65-70
	Thusintha, M	
12	The level of environmental disclosures in annual reports and firm-specific attributes of Sri Lankan listed companies	71-77
	Wijekumara, J. M. N, Madushanka, D. M. T and Kumara P. M. S	

Track 2: Finance

01	Easter attack 2019 and Hotel and Travel sector in Sri Lanka: An event study approach	79-84
	Kodithuwakku, K.A.S.S and Samarakoon, S.M.R.K	
02	Stock market liquidity and firm performance: Evidence from a Frontier Market	85-89
	Fernando, W. M. D. N and Samarakoon, S. M. R. K	
03	Asset pricing with liquidity risk: Evidence from a Frontier Market	90-98
	Herath, H. M. K. M and Samarakoon, S. M. R. K	
04	Stock market liquidity and firm dividend policy: Evidence from a Frontier Market	99-105
	Hettiarachchi, M.H.A.S.U and Samarakoon, S.M.R.K	
05	Role of heuristic on individual investment performance	106-112
	Pratheepan, N and Rathirane, Y	

06	Corporate financial distress prediction: An application of Multiple Discriminant analysis Rathnayake, K. D. S. M and Samarakoon, S.M.R. K	113-118
07	Corporate risk management and firm performance: Sri Lankan perspective Rozairo, H. P and Samarakoon, S. M. R. K	119-124
08	Financial performance on share price: A study of listed Banks in Sri Lanka Panuja, E	125-128
09	Beta and returns: Evidence from Colombo Stock Exchange Fernando, P. M. S and Samarakoon, S. M. R. K	129-134
10	Credit risk management and financial performance: A study of listed Banks in Sri Lanka Asvini, N and Pamila, S	135-139
11	Factors influencing the financial satisfaction of CSE investors in Jaffna district Luxan, K and Kengatharan, L	140-145
12	Capital structure and investment growth: A case study of listed manufacturing companies in Sri Lanka Jonathan, K and Balagobei, S	146-153
<hr/> <i>Track 3: Human Resource Management</i> <hr/>		
01	Training and development and employees' performance: A study based on state banks in Jaffna Sumangala, P and Raveendran, T	155-161
02	Humour at the workplace: Leader's humour and employee's trust in the leader Robinson, J	162-167

03	Green Human Resource Management research in emergence: A review and future directions Ajenthiny, A	168-173
04	The role of abusive supervision on the relationship between person-job fit and engagement Robinson, J	174-178
05	Reward and job satisfaction among the nurses in the Jaffna teaching hospital Ajenthiny, J	179-185
06	A comparison study of the top five journals on Human Resource Management indexed with Scopus Janen, T	186-193
07	The role of labour law in the protection of employees during COVID-19 pandemic in Sri Lanka Mudalige, N. K. K and Edirisinghe, A. A	194-198
08	The relationship between emotional intelligence and job performance. A study among Sri Lankan teachers Yahiyan F. S	199-204
09	The impact of protean career orientation on career planning Shanthakumary, M. C. M. A and Velnampy, T	205-211
10	Mediating effect of job engagement on the relationship between leadership styles and organizational performance Khan S. A and Athifah, N	212-216

11	The impact of stress in Sri Lankan youth Yahiyan, F. S	217-222
12	Factors influencing the effectiveness of bilingual educational programs by a selected school in Jaffna zone Ganeshalingam, M	223-232

Track 4: Business Economics and Entrepreneurship

01	Factors affecting the utilization of machinery for paddy cultivation: Special reference to Ibbagamuwa Divisional Secretariat Division Bandara, N. R. S. R, Weerasinghe, K. G. G and Jaysinghe, N. M. A	234-239
02	Household income and expenditure behavior in Northern Province in Sri Lanka: A non-parametric analysis Koperunthevy, K, Paulina Mary G. P and Neruja, N	240-245
03	Determinants of market participation: Special reference to paddy farmers in Verugal Division Suventhiran, K and Karunaanithy, K	246-257
04	Non-performance of contractual obligations in international commercial contracts in the wake of Coronavirus: A legal perspective Yasoda, W	258-261
05	Entrepreneurial motivation and self-employment intention: Special reference to management undergraduates in Jaffna district Jasinth, N and Renusha, V	262-267

06	Effect of microfinance services on the performance of micro-entrepreneurs: A study in Pilimathalawa area Swarnika, K. L and Pushpanathan, A	268-274
07	An insight into the critical success factors influence on women entrepreneurship Mathushan, P and Pushpanathan, A	275-279
08	The challenges and consequences of Covid-19 epidemic on entrepreneurship: A qualitative study on entrepreneurs Mathushan, P, Kengatharan, N, Nanthagopan, Y	280-286

Track 5:

Knowledge Management and Project Management

01	The impact of knowledge sharing on performance: Evidence from Sri Lankan public sector employees Abeyrathna, S. P. G. M and Priyadarshana, A. J. M	288-297
02	A review of methodological choice: Research paradigm underpins Tharsika, K and Pratheepkanth, P	298-304
03	Knowledge sharing behaviour among Sri Lankan public University undergraduates: An application and extension of the theory of planned behaviour Sasiraj, S, Umanakenan, R and Achchuthan, S	305-311
04	Qualifying title statements of library catalogue of the University of Jaffna Ketheeswaren, S, Charles, E. Y and Chandrasekar, K	312-319

05	A critical evaluation of resonant and dissonant leadership and their implications during the COVID-19 pandemic situation in Sri Lanka Poongothai, S and NoorulSafna, M. I	320-327
06	Street illuminance level analysis towards responsive headlight automation Kuhanesan, S and Amjath, M. I. M	328-335
07	Risks and risk management of Kandy City Wastewater Management Project (KCWMP) Dasanayaka, D. M. T. and De Zoysa, M	336-341
08	Effects of project risk management strategies on project performance Thilakarathna, R. D. G. N. M and Mathivathany, S	342-349
09	Participatory Approaches in Community Development Projects: An exploratory study of NGOs in Northern Province Diluxshana, T Nanthagopan. Y and Thirugnanasampanthar, S	350-354

Track 6:

Marketing and Hospitality Management

01	Impact of celebrity endorsement on brand image among Sri Lankan adolescents: Special reference to Manmunai North of Batticaloa district Luckmizankaria, P	356-364
02	Online banking functionality and customer satisfaction: Empirical evidence from Northern Province, Sri Lanka Sutharsiny, J and Umakanth, N	365-369
03	Green consumer values: Consumer's lifestyle towards eco-friendly products and purchase	370-379

	intention in the Fast Moving Consumer Goods (FMCG) sector	
		Gunawardana, T. S. L.W
04	Customer service encounter satisfaction of super shop: A study on Dhaka City	380-387
		Md. Nahid, M and Fatema, A
05	Does social media advertising enhance consumers' purchase intention?	388-395
		Md. Abdul, A, Mst. Anjuman, A, Rafijul, A and Tusher, G
06	Corporate Social Responsibility (CSR) activities and brand equity of Dialog Axiata PLC, Sri Lanka	396-401
		Madubashini D. K, Pushpanathan A
07	Linking social capital and people's involvement in the tourism context of Sri Lanka: Special Reference to the Mirrisa, Galle district	402-406
		Shanmuganathan, K, Abeysekera, N, Gamini, L.P.S and Chandralal, L
08	Analyzing the relationship between destination attributes and satisfaction of tourists who visit Rathnapura district	407-413
		Sumithra N. K
09	The relationship between motivation and retention in the homestay business in Ella	414-420
		Sumithra N. K
10	Potential of enhancing agro-tourism in agrarian land Gurubeula Matara, Sri Lanka	421-429
		Shammika D. L. A. H and Sooriarachchi,

Keynote Speakers

Professor Tanya McGill

Professor in Information Technology
Murdoch University
Australia



Biopic: Tanya McGillis, a Professor in Information Technology at Murdoch University in Western Australia. She has a Ph.D. from Murdoch University. Her primary research interests include information security behaviour, technology adoption, e-learning, and ICT education. She has over 100 publications, including articles in *Computers and Human Behavior*, *Decision Support Systems*, *Behaviour and Information Technology*, *Computers and Security*, and *Journal of Organizational and End User Computing*.

Senior Professor Sarath W. S. B. Dasanayaka

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Biopic: Dr. Sarath W. S. B. Dasanayaka is currently working as Senior Professor of Management of Technology and Dean for the Faculty of Business at the University of Moratuwa. He was Professor and former Head of the Dept. for the Department of Management of Technology in the Engineering Faculty at the University of Moratuwa, Sri Lanka. On many occasions, he worked as MBA Course Coordinator and Heads of the Depts. He earned his Master's and PhD (Doctorate) degrees from Erasmus University of Rotterdam, Netherlands. He obtained post-doctoral training on Technology management from Sheffield University in UK and Techno Entrepreneurship training from MIT extension training in IBA in Pakistan. He has served for industry and academia for over 33 years and carried-out many international professorial level academic and consultancy assignments in over 10 countries.

Keynote Abstract-I

Information Security Behaviour Research – East Meets West

Professor Tanya McGill
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Abstract

Information security and privacy threats are rising, and significant costs result from the information loss and the business disruption that ensues. In response to this growing issue, organizational spending on IT security is at an all-time high, with global information security spending expected to be more than \$124 billion in 2019 (Moore & Keen, 2019).

Technical protections are part of the solution but improving human security behaviour is integral to effective protection. Even the best technology, if used improperly or rejected by users, can leave an organization vulnerable. The human side of information security is being tackled from many angles by many researchers around the world. Some of the areas being investigated include how to deliver effective security training and awareness initiatives, how to improve users' ability to remember passwords and how to create an effective organisational security culture. This address shares some of the information security and privacy research my colleagues and I have undertaken and discusses areas that require more attention. The presentation focusses on the following research question:

- *Do the findings of information security research undertaken in developed countries apply in developing countries?*

The first project relates to the role of information security culture in improving information security behaviour, and specifically to the factors that influence information security culture in government organisations in Bhutan (Tenzin, McGill & Dixon, 2020). The student researcher's starting point was that Bhutan is different and that previous research undertaken in developed countries might not apply in Bhutan. But of course, existing research is generally the starting point for new research, so the model tested drew from existing research – and there was justification for the hypotheses from both developed and developing countries. Government employees were surveyed, and we found that what was hypothesised based on research in other countries was also relevant in Bhutan; that is, senior management support for information security activities, having information security policy,

conducting training and awareness campaigns, having good interpersonal trust between employees, and fostering an employee-oriented organizational culture influence information security culture. The study also found that establishing an effective information security culture contributes to good information security behaviour. The finding about the role of interpersonal trust is particularly valuable as it clarifies the importance of interpersonal trust in establishing an effective information security culture, and through that good information security behaviour. So, is anything different about information security culture this developing country? The key differences are probably not in terms of absolute relationships, but in the levels of the factors and maybe the strengths of the relationships. For example, levels of interpersonal trust are higher in Bhutan, probably because of their national culture. But there has been less commitment to implementing good information security policy, and to conducting training and awareness campaigns. So, the same relationships are likely to exist, but the levels of the various factors that influence information security culture probably differ.

Another example where the research explicitly compared a developed and developing country is Thompson, McGill, Bunn, and Alexander (2020). In this project Australia and Sri Lanka were compared with respect to privacy concerns about government surveillance. We found that the results of four of the six hypothesised relationships were the same in the two countries – but that two differed. Concerns about the actual collection of information influence the protections individuals take in both countries. Also, their need for surveillance and their trust in the government influence acceptance of surveillance in both countries. Privacy concerns about secondary use of data did not influence of acceptance in either country.

The key differences between the countries were in whether concerns about having information collected influenced people's acceptance of data collection, and it did in Australian but not in Sri Lanka, and also in whether acceptance of surveillance influenced the protections people take, and again it did in Australia but not in Sri Lanka. We proposed that these differences, and differences in the strengths of some relationships, are due to differences in power distance (Hofstede, 2011), and this was partially supported as people from higher power distance countries appear to be more accepting of those in positions of authority collecting information. So again, national culture plays a role in differences in findings between countries.

The third project that I will discuss investigated how individual differences influence information security and privacy behaviour. There has been limited research on how demographic differences influence information security

behaviour yet understanding this could be important in identifying users who are more likely to have poor information security behaviour, and in then tailoring initiatives to more effectively target particular groups of users and the security issues they face. McGill and Thompson (2020) focussed on one key individual difference – gender – and examined differences in security and privacy behaviour. We found that there were significant differences between males and females in over 40% of the security and privacy behaviours we considered, suggesting that overall levels of both are significantly lower for females than for males in Western countries. Also, the behaviours in which differences were found appear to be those that require more technical skill. These results suggested that training should be tailored, so that it targets the areas most needed by particular subgroups of the population.

However, we did not know if these differences would be found in non-Western countries. Further analysis undertaken for this conference has shown that there are differences between the privacy protections used by Australians and those used by Sri Lankans. Also, the gender differences found in Australia and the US do not appear to occur in Sri Lanka. This means that conclusions based on the implications of these findings may not transfer well to other countries. These differences emphasise the importance of understanding the context in which the research is conducted well, and not just assuming that research findings and conclusions are transferrable. Caution is needed, but this means that there are many opportunities to replicate and extend research that have been undertaken in other countries.

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Keynote Abstract-II

Business Transformation: The Trends in Sri Lankan Corporate Sector, a Case Study

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Many philosophers and business Gurus often stated that the survival and growth of any business depend on its capabilities to transform and adapt to any circumstances with internal and external eco-environmental changes. The concept of business transformation is not just a 21st-century buzzword; it's a strategy that all CEOs globally need to embrace. Why? Because business transformation is about intent, identifying what needs to change and strategically updating from within in a focused way. At the start of business, many leaders may not be aware of this transformation requirement. But after some time, business leaders understand that it is imperative for survival and to build a more successful and resilient business. In a nutshell, business means change with continuity and transformation with innovations. This is the only way to push business firms to the next higher level. Today business transformation mainly involves three aspects:

- Operational transformation – doing current things cheaper, faster, and/or better, often with the assistance of digital technology. This seems to reflect the restrictive definition of change management.
- Operational model transformation (Core transformation) – doing what you've been doing but in a completely new way.
- Strategic transformation – fundamentally changing the essence of the organization. Poorly done, it's often called foolhardy or destructive; done well and its 'brave' or 'revolutionary.'

Objectives of the paper are to understand the level of awareness among the Sri Lankan Business Leaders on the importance of business transformation, to ascertain the directions and tactics which are followed by the Sri Lankan companies in business transformation, to identify the main barriers for the business transformation by the Sri Lankan companies with the current turbulent business environment, to trace the possible future directions of this business transformation of the local companies and to share the final remarks made by the Sri Lankan business leaders on this aspect.

110 CEOs targeted but in the absence of CEOs, CFOs, CTOs, CIOs, and local reps interviewed. But for this presentation, only 100 respondents' data used. Sectors covered: Large scale and medium scale firms only. The main targeted areas are the manufacturing and services sectors. The manufacturing sector mainly tea, rubber and coconut, garment and apparel. Service sector mainly Telecom., IT and Software, finance, insurance, commercial and development banking, and tourism, aviation, media and hospitality sectors covered by looking at their contribution to the overall economy. Small, Micro and Cottage level set-ups ignored to minimize the complexity of the research and a separate study is on-going for these setups. Literature survey and structured interview sessions were used to collect data with the help of a questionnaire. Collected data analyze based on the thematic analysis and possibility will be explored to use grounded theory or advanced multivariate data analysis techniques. The sample was selected by using the convenience sampling method. For this presentation, only use the descriptive data analysis part. The total sample is 100 firms. Manufacturing sector 30 firms. These manufacturing firms consist of Tea Processing and exports 05 firms, Rubber Processing and exports 10 firms, Coconut Processing and exports 05 firms and Garment and Apparel 10 firms. ICT and Software sector 35 firms. These firms consist of Telecom 03 firms, It 07 firms and Software 27 firms. Finance, Insurance and Banking sector 20 firms. These firms consist of finance 05 firms, Insurance 03 firms and Commercial and Development Banking 12 firms. Tourism/Hospitality/Airline/Media 15 firms. These firms consist of 08 Hotels, 03 Airlines and 04 Media firms.

This study shows the directions and tactics which are followed by the Sri Lankan companies in business transformation are digital transformation of customer experience, operational processes and business models, new tactics for tax, legal and regulatory risks, acceptance of Gig economy with new HR practices, work norms and organizational changes, cooperation/ collaboration with all stakeholders, and mergers and business acquisitions, business diversification and outsourcing for more resilient and core areas, business process changes for cost-minimizing and efficiency improvements, usage and adoption of analytics with changes in overall supply chains, AI, machine learning and ergonomics adoption and overall transformation of all business functional areas for more innovations.

This study found that the most resistant business areas for change in the transformation process are changing the organizational culture, adoption of new models for financial management, adoption of new models for talents acquisition and management, adoption of new models for marketing and sales management, adoption of new models for change management, adoption of a

new business model for transport, adoption of new models for R&D management, adoption of new models for ICT, adoption of new models for project management, adoption of new models for knowledge management and adoption of new models for supply chain coordination.

This study shows the biggest barriers to transformation of a company are legal, tax and regulatory issues, organizational complexity, uncertainty about the future business environment, lack of stakeholder's support, fear of disruption for customers, problems with change management capabilities, rigid techno and organizational setups, costs, profitability and efficiency issues and lack of commitment from mid-level management. This study found that the strategy shift and possible future directions with the current turbulent business environment are International distant markets to regional and local markets, improvements in good governance, transparency with accountability in all aspects in business, business diversification to capitalize emerging new business opportunities created by the pandemic, adoption of many risks management strategies with contingency plans, seeking government monetary, fiscal and other benefits and concessions, in-person to on-line mode adoption in all possible business functions and move to Gig economy model in HR.

Sri Lankan key business leader feels that,

- Business Transformation is the process of fundamentally changing the systems, processes, people and technology across whole functional business areas or business units to achieve measurable improvements in efficiency, effectiveness and stakeholder satisfaction, mainly with customer satisfaction focus.
- Business transformation is about identifying techniques or processes that are not being serviced to their maximum capacity and how alternate solutions can be applied to digitize or streamline technology to further gain market share, increase revenue and customer satisfaction or reduce inefficient expenditure.
- Business transformation is a change management strategy that can be defined as any shift, realignment, or fundamental change in business operations to make changes to processes, people, or systems (technology) to better align the company with its business strategy and vision.

- Any type of transformation may bring turbulence in our companies, but we know how to manage it with our experience with the right change management strategies. With our markets growing and expanding daily, prioritizing effectiveness and efficiency in our systems and the employees who use them is absolutely paramount to push business to the next higher level.
- It's important to think of business transformation as an evolving strategy rather than a time setting by Sri Lankan company leaders. Now higher management of many Sri Lankan companies knows that no one cannot escape from change and it is paramount in any business. Therefore, leaders must run their companies with a transformation mind setup.

Today business success is measured not only by economic and financial gains. It involves many other social, environmental, and morality aspects. In order to achieve this complete success business transformation with change is paramount. Sri Lankan key business leaders seem like in fore-front when it comes to transforming their businesses even very turbulent situations by adopting the world-class best practices with right bench markings without a second to any other developed nation. “We have realized that if we don’t transform the way we do business, we are going to die. It’s not about changing the way we do technology but changing the way we do business.



Track 1: Accounting



The level of Internet Financial Reporting Disclosure in listed companies in Sri Lanka

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Abstract

This study aims to analyze what extent Internet Financial Reporting (IFR) disclosure in the Sri Lankan Context by using the secondary data collected from the 50 sample company's websites. Descriptive statistics related to IFR-Index and the one-sample t- test is used to ascertain the current IFR disclosure level in Sri Lanka for the financial years 31st March 2020. The results indicate that the overall level of IFR-Index is only 42%. The total content index sub-score is, on average, 41%, and the level of presentation format index sub-score on average is 44%. The study relied upon that the level of IFR practices in the Sri Lankan context is very poor compared with counterparts. This study implies the Sri Lankan companies and policymakers have to take action to promote such reporting practices in Sri Lanka.

Keywords: Colombo Stock Exchange (CSE), content attributes, internet financial reporting and presentation attributes

Introduction

In the modern technological business world, most contemporary companies use the Internet Financial Reporting (IFR) to communicate financial and non-financial information with stakeholders through the company's e-sources (Marston & Polei, 2004; Omran & Ramdhony, 2016). Traditionally, once in a year, the financial information had been communicated through a printed annual report. Whereas at present, the companies can be published the company's performance information more frequently viz., e-sources than the traditional method. Moreover, IFR has some robustness that is an innovative presentation of information with faster and lower cost, dynamic multimedia format, broader, and easier access to information for a larger group of the user without selection, creating interest to potential investors and boosting company image (Siti, Fatima & Nazli, 2016). It is a powerful weapon used by the corporation ,to disseminate the corporate information to its stakeholder, and it is considered a precondition for a company's sustainability. Therefore, IFR is essential to tie in with continuous disclosure on the internet, or else adverse consequences will be faced by the particular entity.



A considerable number of studies have been carried out in developed countries with advanced capital markets (Turmin, Abdul Hamid & Mohamad Ghazali, 2016). Notwithstanding, these findings from developed countries may not be suitable for other countries with various business environments and various stages of market development (Aly & Simon, 2008). Even though the growth of internet usage in Sri Lanka has been incredibly increased, research scholars' works related to IFR still is a dearth. The lack of disclosure regarding the company's information may lead to several consequences such as business failure (Miththrananda & Priyanath, 2020), affecting the firm performance (Bishara, Andrikopoulos & Eldomiaty, 2020), increasing the agent opportunism behavior (Miththrananda & Priyanath, 2020), affecting the stock price (Azrak, Saiti, Kutan & Ali, 2020), high profile accounting scandals (Leopizzi, Iazzi, Venturelli & Principale, 2020) and etc. Day to day, the advanced new technology has been updated, which also impacts IFR level. Thus, previous research studies regarding this aspect became irrelevant because the company may update its corporate website. Therefore, examine the current extent level of IFR practice in Sri Lanka is needed a better understanding. Sandhu and Singh (2019) find on the average of IFR practices in India context is only 61.90%. Meanwhile, India is an emerging company as well as it is located near to Sri Lanka.

Literature Review

Turmin, Abdul Hamid and Mohamad Ghazali (2016) state that since 1955 business firms have paid serious attention to using internet technology to disseminate the company information to its stakeholders. Marston and Polei (2004) document that the advanced Internet technology provides the company with new opportunities to replace and develop traditional ways of investor and stakeholder communication, which means that IFR is a substitute method to paper-based reporting, with many advantages.

The last few years, empirical study discloses that the extent of IFR adoption varies among countries (Silva & Ajward, 2018). Yassin (2017) finds out that at the Jordanian public shareholding companies listed on the ASE disclosure the 69% and 97% of content and presentation attributes respectively through e-source, which portrays that companies in Jordan provide quality information required to enhancement. Similarly, Marston and Polei (2004) discover that 89% of German companies present the company's website information. Whereas Silva and Ajward (2018) conclude that level of IFR disclosure in Sri Lanka is only 16.2%, and the average of content and presentation format disclosure is 12.52% and 26.88% correspondingly. While Botti, Boubaker, Hamrouni, and Solonandrasana (2014) conducted on 32 French CA CAO firms, the result reveals that 52.8% adopt IFR disclosure. There are a few



studies in the Sri Lankan context. Thus, the interest of academic researchers on IFR practices in the Sri Lankan context has been increased.

Methodology

This study stands on the positivist paradigm because the research phenomenon can be observed; thus, this study lies with the quantitative research approach, and data is collected through its website. As of 31st March 2020, there are 290 companies listed on Colombo Stock Exchange. Among these, companies that possess websites are considered as a population of this study. The selected sample includes 50 companies based on the highest market capitalization as of 31st March 2020. Based on the literature review, the following hypothesis is developed:

- H₀: The IFR disclosure (mean value of IFR-Index) practice in Sri Lanka is equal to or less than 60%
- H₁: The IFR disclosure (mean value of IFR-Index) practice in Sri Lanka is more than 60%

IFR-Index (IFRI) is used to investigate the level of IFR practices and is based on a review of the electronic distribution of business information by the Financial Accounting Standards Board (FASB, 2000) and previous literature (Agboola & Salawu, 2012; Bozcuk, 2012; Marston, 2003). The attributes of the IFRI consist of 35 items, which are divided into two sub-parts, i.e., 25 and 10 items are Content and Presentation attributes, respectively. Further content attributes breaking down into four parts (Company Information (CI)-5 items, Financial and Investor related financial Information (FNRFI)-11 items, Corporate governance disclosures (CGD)-7 items, Social responsibility disclosures (SRD)- 2 items). The study uses an unweight index for scoring every item in IFRI, applying scores 0 and 1. Score 1 is assigned when the corporate website presents any attribute; otherwise, the score is 0. The following formula measures IFRI:

Equation 1:- Internet Financial Reporting Index

$$\text{IFRI} = \frac{\sum_{i=1}^{n_j} X_{ij}}{n_{ji}}$$

Source:Silva and Ajward (2018)

n_j = Number of relative items applicable to company

X_{ij} = “1” if the item is disclosed, otherwise ”0”



Results and Discussions

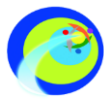
Table 1. Descriptive statistics on IFRI attributes

	Total Content Attributes (TCA)				TCA	Total Presentation Attributes	Total IFRI Attributes
	CI	FNRFI	CGD	SRD			
Mean	3.56	3.84	1.58	1.24	10.22	4.4	14.62
Minimum	1	0	0	0	1	1	2
Maximum	5	9	5	2	20	10	30
Median	4	4.5	2	2	10.5	4	15
Std. Dev.	1.16	2.12	1.29	0.94	4.40	1.92	5.90

Table 2. Descriptive statistics on IFRI

	Total Content Index (TCI)				TCI	Total Presentation Index (TPI)	IFRI
	CI-Index	FNRFI-Index	CGD-Index	SRD-Index			
Mean	0.71	0.35	0.23	0.62	0.41	0.44	0.42
Minimum	0.20	0.00	0.00	0.00	0.04	0.10	0.06
Maximum	1.00	0.82	0.71	1.00	0.80	1.00	0.86
Median	0.80	0.41	0.29	1.00	0.42	0.40	0.43
Std. Deviation	0.23	0.20	0.19	0.47	0.18	0.19	0.17
Skewness	-0.60	-0.28	0.43	-0.51	-0.35	0.53	-0.21
Kurtosis	-0.13	-0.16	-0.10	-1.71	-0.44	0.09	0.002

Tables 1 and 2 depict the descriptive statistics of IFRI attributes and IFRI for the sample of 50 companies, respectively. The mean value of CI-Attributes 3.56 out of 5 attributes finds its own website, i.e., CI-Index is 71%. It indicates that Sri Lankan companies highly disclose company-related information through the website in order to enrich the company image among the stakeholders. Meanwhile, the average of FNRFI-Index is 35% (average is 3.84 out of 11 attributes), indicating that Sri Lankan companies disseminate the less amount of FNRFI. Furthermore, CGD-Index is the lowest value among the sub-parts content index. In contrast, SRD-Index is more than CGD-Index by one and a half times. Astara, Mitoula and Theodoropoulou (2015) point out that corporate social responsibility practices drive its sustainable development. Therefore, Sri Lankan companies focus on publishing information related to SRD. Total score IFRI- Attributes refer to both content and presentation attributes used by the sample companies in Sri Lanka. 41% is the average value of the TCI with an 18% standard deviation. Similarly, the average usage of TPI is 44%, with a 19% standard deviation. The presentation format works as a primary tool to attract potential investors and align them with the corporate website in a sustainable way. This study observes that the disclosure pattern on the companies' corporate website in Sri Lanka is not sufficient to entice the stakeholders.



The average score of IFRI is 42%; it shows that the level of internet financial reporting practices in Sri Lanka is relatively low. Similarly, Silva and Ajward's (2018) study discovered that an IFR practice in Sri Lanka is low, but the percentage level of IFR (16.2%) has slightly deviated from the result of this study. The reasons for such a difference may be the sample company's variation or IFR-Attribute (content and presentation) variation from this study. The minimum value of IFRI exposes that all the sample company websites have at least more than one attribute out of thirty-five. The maximum value of IFRI discloses that none of the company websites consists of all the thirty-five attributes, i.e., at least one attribute is missing.

One sample t-test

Table 3. One sample t-test

	IFRI
Mean	0.42
Variance	0.03
Observations	50.00
Hypothesized Mean	60.00
t Stat	-2500.70
P(T<=t) one-tail	0.00
t Critical one-tail	1.68

Table 3 illustrates the result of the one sample t-test of IFRI. The p-value is 0.00. The critical value of one tail is 1.68, while the test statistic is -2500.70, which is lower than the critical value. Thus, the null hypothesis is accepted; that is, the mean value of the IFRI is lower than the 60%. It indicates that listed companies in Sri Lanka haven't disclosed the more company's information to its stakeholders.

Conclusions and Recommendations

IFR is served as the bridge between the company and its stakeholder. As far as previous literature regarding the level of IFR practices, there is a dearth of studies on this aspect in developing countries, especially in the Sri Lankan Context. Hence, it is necessary to study this aspect in the Sri Lankan context. This study aims to ascertain the level of IFR practices in the Sri Lankan context.

This study finds that level of IFR practices in the Sri Lankan context is very poor. The company can reap various benefits through excellent IFR practices (Silva & Ajward, 2018). Therefore, the company has to pay more attention to enrich its continuous disclosure practices on the internet, and policymakers should promote such reporting practices in Sri Lanka. This study only selected the 50 companies based on the highest market capitalization, which



may not represent the total population of this study, so the future study could have been used other sampling techniques and increase the sample size. This study used the cross-sectional time horizons, which did not show the time effect; thus, future research could have been used longitudinal time horizons and take consideration what are the factors determine the level of IFR.

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Does board diversity affect Corporate Social Responsibility in Sri Lanka?

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Abstract

paper aims to examine the impact of board diversity on corporate social responsibility (CSR) in Sri Lanka. This study uses quantitative techniques to assess the board diversity and CSR of Sri Lankan firms. A 100-firms sample, randomly drawn from the Colombo Stock Exchange (CSE)-listed firms. Secondary data for the financial year 2017/18 are obtained from the CSE databases and are used to calculate the board diversity and CSR for the sampled firms. It is found that the diversity of board resources positively affects CSR. Diversity of board may encourage companies to invest in CSR, which will enhance the image of their companies. The study also proves a positive effect of women directors on CSR disclosure, which indicates that women on a board may improve CSR; board changes may provide necessary signals to investors indicating the potential for an improved firm image.

Keywords: board diversity, corporate governance and corporate social responsibility

Introduction

Boards have long been the subject of management research, and the attention paid to corporate boards has increased substantially in recent years (Daily, Dalton & Cannella, 2003). The board diversity is how to constitute the board composition; its emphasis on different types of directors working under the board of the directors of the firms (Bear, Rahman & Post, 2010). These board diversity factors may decide organisations' success/failure as all decision-making processes may depend on this vary type of board of director's perspectives (Rao & Tilt, 2016). In recent years, Corporate Social Responsibility (CSR) has become an essential aspect among policymakers and the academic field (Bear, Rahman & Post, 2010; Rao, 2016). While, CSR has become an important aspect in business practices (Servaes & Tamayo, 2013). During this period, the research documented that there is relatively little research that examines the relationship between board diversity and CSR. A few studies have explored what makes boards function well as groups, and the role that directors play in influencing and running the organization in general (Daily et al., 2003), and this study seeks to contribute to this line of research. This study evaluates whether the attributes of board diversity influences and the effect of CSR in Sri Lanka. Sri Lanka has an



emerging economy. It is still considered less developed and has received much attention in the financial literature during recent years. Especially, after the conclusion of the domestic ethnic wars from 1970 to 2009, Sri Lanka has entered a post-war recovery phase where reform of the financial system has become pivotal in accelerating economic growth. Sri Lanka has recently started adopting several economic reforms, namely, infrastructure development, deregulation processes, and fostering international integration. As a result, CSR investment has increased significantly.

Literature Review

Two organisation theories, resource dependence theory, and agency theory provide the broad theoretical underpinnings for how board diversity and composition influence CSR ratings and how, in turn, CSR influences corporate reputation. These theories were utilized because they represent two critical functions of the board (Hillman & Dalziel, 2003). CSR is an area of corporate concern and helps organisations build corporate strategy and corporate reputation (Galbreath, 2006). Whereas, board diversity handles conflicts of interests between internal stakeholders and external stakeholders on creating value by a company; nonetheless, these conflicts of interests cannot be effectively resolved by contracting (Pergola & Joseph, 2011). Board diversity plays a vital role in this process.

Methodology

This study uses quantitative techniques to assess the board diversity and CSR of Sri Lankan firms. A 100-firms sample, randomly drawn from the Colombo stock exchange (CSE)-listed firms. Secondary data for 2017/18 are obtained from the CSE databases and are used to calculate the board diversity and CSR for the sampled firms. The diversity of director resources and the number of women on the board are used to measure board diversity. CSR – a 22-item instrument adapted from Aupperle, Carroll and Hatfield (1985), and Maignan (2001) was utilised to measure CSR dimensions. This synthesis leads to the following hypothesis in this study.

- H₁: There is a significant impact on the diversity of director resources on corporate social responsibility.
- H₂: There is a significant impact on the women board members on corporate social responsibility.

Results and Discussions

The average diversity of board resources is 0.623, and its standard deviation is 0.112, suggesting that the firms in the sample may be somewhat consistent in the variety of resources that directors bring to the board. The average



number of women on these boards was 1.265, with a standard deviation of 1.001, and a range of 0–4. The coefficients for board resources and CSR diversity were positive and statistically significant ($p < 0.01$), offering support for this hypothesis. The number of women board members' coefficient was positive and statistically significant for CSR ($p < 0.01$). Accordingly, this hypothesis was supported.

Conclusions and Recommendations

It is found that the diversity of board resources positively effects on CSR. Diversity of board may encourage companies to invest in CSR, which will enhance the image of their companies. The study also proves a positive effect of women directors on CSR disclosure, which indicates that women on a board may improve CSR; board changes may provide necessary signals to investors indicating the potential for an improved firm image.

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Impact of ownership pattern and board structure on Corporate Social Responsibility Reporting: A study of listed Banks in Sri Lanka

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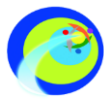
Abstract

The main aim of the study is to examine the impact of ownership pattern and board structure on Corporate Social Responsibility (CSR) reporting of listed banks in Sri Lanka over the period from 2015 to 2019 by using ownership proxies, namely foreign ownership and institutional ownership, board structure variables such as board size, board diversity and board independence and CSR reporting. This study considered 13 banks listed in Sri Lanka, and data is collected from annual reports of respective banks. Descriptive and inferential analysis was performed with the help of STATA's latest version. Regression analysis confirmed that ownership pattern has a significant impact on banks' CSR reporting while board structure has an insignificant impact. Correlation analysis revealed that foreign ownership, institutional ownership, and board size have a significant positive relationship with CSR reporting while board diversity and board independence have an insignificant positive relationship. Descriptive statistics show that there is room for improvement in CSR reporting. The study's findings can have important implications for regulatory organizations, banks, stakeholders, non-governmental organizations, and firms.

Keywords: board Structure, corporate social responsibility reporting, listed banks and ownership pattern

Introduction

A board of directors is a recognized group of people who jointly oversee an organization's activities and have emerged as a governing body to initiate action on voluntary activities and programs related to Corporate Social Responsibility (CSR) (Brammer & Pavelin, 2008). Ownership pattern has an important influence on the board's priorities and that these priorities will determine the optimal composition of the board of directors (Desender, 2009). Firms that have a separation of ownership are performing more CSR activities to be a good corporate citizen in the corporate world (Sufian & Zhan, 2013). In this context, both ownership patterns and board structure play a relevant role in determining the level of CSR reporting. CSR refers to finding a balance between the financial and non-financial goals of corporations



while acting in society's best interests a whole (Kiliç, Kuzey & Uyar, 2015). The process of providing financial and non-financial information about interactions between companies regarding environment, employees, society, and consumer issues is called SR reporting (Hackston & Milne, 1996). It involves extending the company's accountability beyond the traditional role of providing a financial account to the owners of capital. The studies examined the impact of ownership patterns, and board structure on CSR reporting found controversial results (Kiliç et al., 2015). There is a paucity of literature on this area in the context of emerging countries, and prior studies exclude banks (Soliman, Eldin & Sakr, 2012; Li & Zhang, 2010). As a result, this study focuses on finding the impact of ownership patterns and board structure on CSR reporting of listed banks in Sri Lanka from 2015 to 2019.

Research Objectives

- to examine the impact of ownership pattern and board structure on CSR reporting of listed banks in Sri Lanka.
- to identify the relationship between the ownership pattern, board structure, and CSR reporting of listed banks in Sri Lanka.

Literature Review

CSR reporting has received an increasing amount of attention in both the academic and business fraternities. The term CSR reporting deals with disclosing information by a firm about social and environmental effects of its economic actions to interest groups, namely regulators, investors, and environmental lobby groups within society and society at large. Positive CSR disclosure enhances the company's favorable image in the eye of its customers, potential employees, and investors (Alniacik et al., 2011). A focus on CSR moves firm attention away from a purely profit-maximizing objective in the exclusive interest of shareholders to one that considers the interests of a broader set of stakeholders (Barnett, 2007).

Sukcharoensin (2012) argued that more profitable firms are inclined to utilize CSR disclosure as a self-regulating mechanism, as they are under political pressure and public scrutiny. Adams (2002) stated that disclosing information on social and environmental issues could minimize the risks of external parties' powerful consumer boycotts. Soliman et al., (2012) indicated a significant, positive relationship between CSR ratings and ownership by institutions and foreign investors, and shareholding by top managers is negatively associated with a firm's CSR rating. The researchers also concluded that different owners have differential impacts on the firm's CSR



engagement. Kiliç et al., (2015) investigated the impact of ownership and board structure on CSR reporting within the banking industry and proved that there is a significant positive effect of size, ownership diffusion, board composition and board diversity on the CSR disclosure of the banks. Galbreath (2017) concluded that insiders' concentration increases on boards has a negative effect on CSR, and insider training on CSR positively moderates the relationship between insiders and CSR.

Methodology

Research Design

This study used a quantitative research approach because numerical and secondary data are used. The data utilized for this study was extracted from the annual reports of listed banks from 2015 to 2019. A sampling includes all 13 listed banks listed in CSE. The researcher focuses on listed banks as banks have a great responsibility to society as its operations depend on public funds. As a result, they engaged in socially responsible activities and reported more CSR items in their annual reports than other firms.

Hypotheses of the study

- H₁: There is a significant impact of ownership patterns on CSR reporting of listed banks in Sri Lanka.
- H₂: There is a significant impact of board structure on CSR reporting of listed banks in Sri Lanka.
- H₃: There is a significant relationship between ownership pattern and CSR reporting of listed banks in Sri Lanka.
- H₄: There is a significant relationship between board structure and CSR reporting of listed banks in Sri Lanka.

Results and Discussions

Table 1 shows that the CSR reporting level does not vary between the banks as the maximum is 0.0555 and the minimum is 0.0119. On average, CSR reporting is 2.29%, and it shows that there is room for improvement as it is at a primitive level.

Table 1. Descriptive Analysis

Variable	Observations	Mean	Min	Max	Std. Devi
CSR reporting	65	0.0229	0.0119	0.0555	0.0889

According to correlation analysis, there is a significant positive relationship between foreign ownership ($r=0.2568$; $p<0.05$), Institutional ownership ($r=0.2999$; $p<0.05$), Board size ($r=0.2854$; $p<0.05$) and CSR reporting. Other variables, namely Board independence and board diversity, have an insignificant positive relationship with CSR reporting.



Table 2. Correlation Analysis

Variable	Foreign ownership	Institutional ownership	Board size	Board Independence	Board diversity
CSR reporting	0.2568*	0.2999*	0.2854*	0.0629	0.0407

Table 3 shows that there is 14.53% of the variance in CSR reporting. The *p*-value is 0.0077, which is lower than 0.05, shows a significant impact of ownership pattern on CSR reporting. The adjusted R² value is 0.1178, which means that the ownership pattern on CSR reporting creates an 11.78% impact. Coefficient estimation shows that the impact of foreign ownership and institutional ownership on CSR reporting is significant as their *p* values are lower than 0.05. This means that increase in foreign ownership and institutional ownership can help to improve CSR reporting.

Table 3. Multiple Regression Analysis

CSRR	Coefficient	Std. Err	t	P > t
Foreign ownership	0.0104562	0.0052161	2.00	0.049
Institutional ownership	0.0508075	0.0211679	2.40	0.019
CONS	-0.0236364	0.0177516	-1.33	0.188
Observation	65		R-squared	0.1453
F(2,62)	5.27		Adjusted R-squared	0.1178
Prob>F	0.0077		Root MSE	0.00835

Table 4 shows that there is 8.25% of the variance in CSR reporting. The *p*-value is 0.1514, which is higher than 0.05, shows an insignificant impact of board structure on CSR reporting. The adjusted R² value is 0.0374, which means that a board structure on CSR reporting creates only a 3.74% impact. Coefficient estimation shows that the impact of board size on CSR reporting is significant as its *p*-value is lower than 0.05. This means that increase in board size can help to improve CSR reporting.

Table 4. Multiple Regression Analysis

CSRR	Coefficient	Std. Err	t	P > t
Board size	0.0009248	0.0004054	2.28	0.026
Board independence	-0.0000695	0.0006352	-0.11	0.913
Board diversity	-0.0001714	0.0009432	-0.18	0.856
CONS	-0.0236364	0.0177516	4.22	0.000
Observation	65		R-squared	0.0825
F(3,61)	1.83		Adjusted R-squared	0.0374
Prob>F	0.1514		Root MSE	0.00873



Conclusions and Recommendations

This study examined the impact of ownership pattern and board structure on CSR reporting of listed banks in Sri Lanka over 2015-2019 by using the secondary data gathered from annual reports of banks. Data is analyzed using descriptive statistics, correlation, and regression analysis using STATA12. It is concluded that there is a significant impact of ownership pattern on CSR reporting, while board structure has an insignificant impact. Researcher suggests that the banks should have to enhance the CSR reporting by investing more money on CSR activities and also it is better to report their CSR activities in their annual reports as it will help various parties to identify the interaction of the company with the society.

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Impact of value relevance of accounting information on share price: A study of listed Banks in Sri Lanka

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Abstract

This study aims to examine the impact of value relevance of accounting information on the share price of listed banks in Sri Lanka throughout 2015-2019. The banks' share price was used as the dependent variable whilst the independent variables include Earning per share, Book value per share, Dividend per share, and net operational cash flow per share. The study made use of secondary data gathered from annual reports of banks. Descriptive and inferential analyses were performed. Regression analysis confirmed a significant impact of value relevance of accounting information on the share price of listed banks in Sri Lanka. Correlation analysis revealed a significant positive relationship between Earning per share, Book value per share, Dividend per share, and the share price of the banks, while operational cash flow per share has an insignificant positive relationship. This study's findings will assist both potential and existing investors in making investment decisions in listed banks in Sri Lanka.

Keywords: listed banks, share price and value relevance of accounting information

Introduction

Accounting information is the language of business used by corporate firms to communicate their financial positions to their stakeholders by the publication of annual financial statements containing the required financial accounting information. Financial accounting information is the product of corporate accounting and external reporting systems that measures and publicly discloses audited, quantitative data concerning publicly held firms' financial position and performance. All accounting information has to meet up with the qualitative characteristics and be prepared for its target users' consumption. Value relevance is defined as “the ability of accounting numbers to summarize the information underlying the stock prices, and it deals with the usefulness of financial statement information in stock valuation. Value relevance seems as proof of the quality and usefulness of accounting information can be interpreted as the usefulness of accounting data for investors' decision-making process. Accounting information will lead the investors to come up with the right investment decision. Based on the information available, the finance managers can make decisions about the



company's future. Stock's price is the most apparent and essential criteria for determining the firm's value. So, stock price maximization is the most important goal for most corporations to maintain their economic growth and credibility in investors' minds. Financial information is the primary source that most investors can use usually as it is usually the specific information that can decide whether investors invest the company's stock or not. For financial reporting to be effective, accounting information should be completed as relevant and reliable (Hendricks, 1976). Accounting information is potentially useful in establishing the probability distribution of expected future earnings, dividends, or prices, hence establishing current prices. This study examines the impact of value relevance of accounting information on the share price of listed banks in Sri Lanka throughout 2015-2019.

Literature Review

Barth, Beaver and Landsman (2001) stated that for financial information to be value relevant, it is a condition that accounting numbers should be related to current company value. If there is no association between accounting numbers and company value, accounting information cannot be termed value relevant and, hence, financial reports are unable to fulfill one of their primary objectives. Theil (1968) defined information as a change of expectations in an event's outcome and proved that the firm's financial statement is value relevant if it leads to a change in investors' assessments of the probability distribution of future returns. Beaver (1968) supported this definition and added that a sufficiently large change should exist to induce a change in the decision maker's behavior. According to Kothari (2001), the impact of financial statement information on capital markets is an enduring and well-documented research area. The value-relevance stream of this research is based on the premise that if the information is useful, investors will adjust their behavior, and the market will respond through changes in stock prices. Francis and Schipper (1999) suggested four possible alternative interpretations of value relevance. The first interpretation considers accounting information as leading stock prices by capturing intrinsic share values. The second interpretation indicates that if the variables used in valuation models originate from financial statement information, the information is termed value relevant. The third interpretation is based on the statistical association between accounting information and market value, where the main objective is to measure whether investors use the information in setting prices. Finally, the fourth interpretation is seen in a long window perspective, where the correlation between accounting information and market values are statistically examined. Francis and Schipper (1999) and Nilsson (2003) define value relevance from four perspectives ;(a) the



predictive view of value relevance. (b) The information view of value relevance: The value relevance is measured in terms of market reactions to new information. (c) Fundamental analysis view of value relevance: (d) the measurement view of value relevance

Methodology

Research Design

This study used a quantitative research approach, and secondary data were used. The data utilized for this study was extracted from the annual reports of listed banks from 2015 to 2019. The study population considers banks listed in CSE and sampling includes all 13 listed banks listed in CSE.

Hypotheses of the study

- H₁: There is a significant impact of value relevance of accounting information on the share price.
- H₂: There is a significant relationship between the value relevance of accounting information and share price.

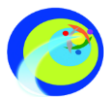
Results and Discussions

Table 1 shows that share price indicates the mean value of 95.380(SD=74.174), and it varies from 3.4 to 260.4. The earnings per share (EPS) shows the average value of 11.188 with a standard deviation of 11.00, and the minimum and maximum value respectively are -.55 and 47.35. The Dividend per share (DPS) shows an average of 4.534 with a minimum of 0, and the maximum value is 18.75. The book value per share (BVPS) indicates the central tendency of 78.889 (with a standard deviation of 60.322), and the minimum and maximum value respectively are 3.4 and 251.38. The Net operational cash flow per share (NOCFPS) indicates the mean value of 7.189 (SD=31.296), and it greatly varies from -106.59 to 116.35. These results indicate that maximum and minimum figures are varied among the proxies, which implies a space between Sri Lankan banks in terms of sustaining its businesses.

Table 1. Descriptive Statistics for Variables

Variables	Obs	Mean	Std.Dev	Min	Max
Share price	65	95.380	74.174	3.4	260.4
EPS	65	11.188	11.00	-.55	47.35
DPS	65	4.534	4.532	0	18.75
NAVPS	65	78.889	60.322	3.4	251.38
NOCFPS	65	7.189	31.296	-106.59	116.35

Table 2 shows that share price is 88% positively associated with earnings per share and significant at 1% level. This signifies that the higher the firm's earnings, the higher the share price. At the same time, it could be noted that earnings are very significant in the firms' growths, diversification practices,



investments, and shareholders’ wealth maximization. There is a positive correlation between share price and book value per share, which is 90%, which is significant at the 1% level. It indicates that those firms with high book values experience an increase in their share price. Also, the dividend per share is positively associated with the share price of listed banks in Sri Lanka at 87% and significant at 1%. This signifies that increase in dividend per share results in to increase in the share price of listed banks in Sri Lanka. BVPS has the highest positive correlation of 90% with the share price, which is significant at 1% level. Moreover, there is an insignificant relationship between NOCFPS and Share price with a positive sign of $p > 0.05$ ($r = -0.1835$).

Table 2. Pairwise Correlation Analysis of Variables

Variables	Share price	EPS	DPS	BVPS	NOCFPS
Share price	1.000				
EPS	0.8859 ***	1.000			
DPS	0.8754***	0.8742***	1.000		
BVPS	0.9032***	0.8280***	0.8592***	1.000	
NOCFPS	0.1835	0.3363***	0.2666***	0.1839	1.000
	0.1434	0.0062	0.0318	0.1426	

*** Correlation is significant at the 0.01 level, **Correlation is significant at the 0.05 level

Table 3 shows that the R^2 value of four performance proxies indicate that 88.5% of the observed variability Share price is explained by selected value relevance information. The F -statistics and significance levels (Table 4.8) show that the model generates statistically significant outcomes. The adjusted r^2 value of 0.8782 with the p -value of 0.000 and this model indicates there are significant variations of value relevance of accounting information on the share price. It means that 87.82 percentage of influence is created by EPS, DPS, NAVPS, and NOCFPS, whereas the remaining 12 percent (approximately) of impact is made by other proxies that are not depicted in the model recommendation.

Table 3. Regression Model Summary

Number of observations	65
F(4,60)	116.36
Prob>f	0.0000
R-squared	0.8858
Adj r-squared	0.8782
Root MSE	25.887

Table 4 displays the results of the coefficient estimation for each performance measure studied. The impact of EPS ($t=4.08$ and $p=0.00$), ($t=4.91$ and



$p=0.000$), and share price of these firms are significant at the 1 percent level. The changes in EPS and BVPS affect the share price. Whereas if the EPS or BVPS increases, the share price will increase. On the other hand, DPS and NOCFPS indicate an insignificant impact on share price, DPS has a positive sign ($t=1.57$ and $p=0.122$), and NOCFPS has a negative sign ($t=-1.62$ and $p=0.110$).

Table 4. The relationship between the value relevance of accounting information and share prices

Share price	Coef.	Std.Err	T	P>(t)	95%	conf. Interval
EPS	2.69	0.66	4.08	0.000	1.37	4.01
DPS	2.66	1.69	1.57	0.122	-0.73	6.05
BVPS	0.549	0.11	4.91	0.000	0.32	0.77
NOCFPS	-0.181	0.11	-1.62	0.110	-0.40	0.042
Cons	11.13	5.37	2.07	0.042	0.39	21.87

Conclusions and Recommendations

This study examined the impact of value relevance of accounting information on the share price of listed banks in Sri Lanka over 2015-2019 by using the secondary data gathered from annual reports of banks. Data were analyzed using descriptive statistics, correlation, and regression analysis. It is concluded that the value relevance of accounting information such as EPS and BVPS has a significant impact on the share price at a 1% significance level, and DPS and NOCFPS indicate that there is an insignificant impact on the share price.

The researcher suggested that the management of listed banks in Sri Lanka should maintain their earnings stability and consistency. The management should make a public offer of ordinary shares and, if possible, a bonus offer to boost their shareholders' funds. This may give the firms more opportunities to have funds for diversification of their investments and increase their net book value. Investors should consider using net book value for investment decisions when earnings are negative since book value compensates for negative earnings. Investors should use book values of equity to evaluate firms with small-sizes and high intangible assets.

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Impact of audit committees and boards on the quality of reported earnings: A study of listed Diversified Holdings industry in Sri Lanka

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Abstract

The purpose of this study is to examine the relationship between audit committees (AC) and board of directors with earnings quality of the firms listed on diversified holdings sector, over the period 2012/13 to 2016/17 by using AC proxies, namely AC expertise, AC independence, and AC meetings and board structure variables such as board expertise, board independence, and board size. For the study, a sample of 17 companies has been selected, and Standard Jones Model (1991) has been employed for calculating discretionary accruals. Results from correlation and regression analysis suggests that measures of AC - audit meetings and board structure- board size are significantly related to earnings quality in a manner that is generally consistent with the predictions of agency theory. Furthermore, the results depicted insignificant negative impact of other AC and board characteristics on discretionary accruals, except board expertise, which had an insignificant positive impact on discretionary accruals.

Keywords: audit committee (AC), board characteristics (BOD), discretionary accruals (DACC) and earnings quality

Introduction

Over the past two decades, Corporate Governance (CG) system and practices have gained significant attention because of corporate scandals taken place around the world at prominent companies such as Waste management company, Enron, Worldcom, Tyco, Bernie Madoff, and Satyam appear to have shaken the confidence of investors. Amid a growing number of financial reporting scandals, the role of Audit Committees (AC) and boards in corporate governance has been the topic of active debate among policymakers, managers, investors, and academics. There is great attention on the Board of Directors (BOD) to discharge their duties with high ethical values and accountability in their commitment to good governance practices. The AC plays a significant role in CG regarding the organization's direction, control, and accountability. Moreover, the quality of financial reporting ensures the accuracy of the company's reported financials and their usefulness for forecasting future cash flows. In contrast, earnings quality



measures fulfill a crucial objective of financial reporting, which is improving decision usefulness for investors.

Given that AC is the principal liaison between management and auditors and is chiefly responsible for reporting on earnings quality to the BOD. Due to the separation of ownership and control, agency conflict arises among managers and shareholders in a business. In such circumstances, the managers use management to use their professional judgment in financial reporting to materially misstate the financial statement numbers to accomplish their self-interest objectives (Kankanamage, 2015). Among the measures established to reduce the self-serving nature of the agent is an independent AC. Therefore, there is a high demand for governance mechanisms such as Board subcommittees composed of directors with the appropriate attributes such as independence, expertise, and experience to prevent or reduce the agent's selfish interest. Also, issues of earnings manipulation created the need for reliable, high-quality financial reporting. Therefore, the study focuses that an appropriately structured AC and Board will act to ensure high quality of reported earnings (QRE).

Literature Review

One of the objectives of CG is to ensure that the financial report has high quality and reliable data. The earnings information in the financial report that investors will analyze before making any decision in investment. Therefore, if the earnings information has low quality and contains inaccurate data, the investors may make wrong decisions. The executives are considered the agents responsible for preparing the financial statements and business performance for the shareholders. Previous studies have focused on the role of the board of committee on operating AC and external auditor to observe the AC's effectiveness, supervise and oversee financial reports. This partly depends upon the BOD constitution and the AC of each firm that are factors of a good quality profit account (Bradbury, 2004). The management division holds more information over shareholders in which asymmetric information is generated between them (Jensen & Meckling, 1976, Healy & Palepu, 2001). Shareholders will ensure financial reporting prepared by administrators to affirm the accuracy of the prepared report. In general, the management division uses services provided by professional external auditors to conduct the audit and comment on financial reports and verify whether or not the report is prepared in compliance with generally accepted accounting standards. Auditor's opinion on financial reports can assure users. According to theories, auditors will perform to benefit shareholders and reduce agency problems between the agent and the principal. It is possible that



administrators would hire auditors who serve high-quality standards. The relationship between CG and information quality has been vigorously debated in developed countries (Agrawal & Chadha, 2005); (Brown, Falaschetti & Orlando, 2010). There are few studies on corporate financial reporting in the context of Sri Lanka, such as (Kajanathan, 2012), (Velnampy & Pratheepkanth, 2013) and (Kankanamage, 2015).

Methodology

Sample selection

The sample is selected from 299 companies listed on the CSE during 2012/13-2016/17, representing 20 business sectors as of 29th March 2018. The whole diversified holdings sector is selected as a sample where it consists of nineteen companies. Two companies are excluded from the sample. This leaves a final sample of 17 companies.

Mode of analysis

Secondary data gathered was organised in spreadsheets for analysis. STATA 12 is used and interpreted with different statistical tools like descriptive statistics, correlation, and regression analysis.

Hypotheses of study

- H₁: There is a significant impact of audit committee characteristics on QRE.
- H₂: There is a significant impact of board characteristics on QRE.
- H₃: There is a significant relationship between audit committee characteristics and QRE.
- H₄: There is a significant relationship between board characteristics and QRE.

Results and Discussions

Correlation analysis

Table 1. Correlation analysis

	DACC	Audexp	Audindp	Audmeet	Bdexp	Bdindp	Bdsize
DACC	1.0000						
Audexp	-0.0809	1.0000					
Audindp	0.4619	-0.3729**	1.0000				
Audmeet	-0.1286	-0.3531**	0.1477	1.0000			
Bdexp	0.2408	0.0010	0.1801	0.0097	1.0000		
Bdindp	0.0780	0.5416**	-0.3492**	-0.0164	0.8825	1.0000	
Bdsize	0.4781	0.0000	0.0011	0.0097	-0.0405	0.0097	1.0000



	0.4023	0.3698	0.0000	0.9302	0.7127		
Bdsize	-0.2453*	-0.0941	-0.2045	0.3055**	-0.0059	-0.1709	1.0000
	0.0237	0.3917	0.0604	0.0047	0.9576	0.1179	

*Significant at 0.05 level , **Significant at 0.01 level

According to Table 1, the correlation matrix shows a negative relationship between DACC, Audexp, Audindp, Audmeet, Bndp, and Bdsize, which means that an increase in audit expertise, audit independence, audit meeting, the board size, and board independence leads to a reduction in discretionary accruals by the firms, hence this improves the earnings quality and vice versa. However, this negative relationship is weak in form. However, there is a significant negative relationship that exist among discretionary accruals, audit meetings, and board size. Moreover, there is a positive relationship between DACC and bexp, which means that bexp leads to an increase in discretionary accruals and vice versa, however, the positive relationship between DACC and bexp is very weak (0.0780).

Regression analysis

AC characteristics are interrelated with board characteristics for these reasons and consistent with (Klein, 2002). The regression analysis was carried out separately to determine the impact of AC characteristics on the discretionary accrual and the board characteristics on the discretionary accruals. As such, the results for audit committee characteristics and discretionary accrual are appended below.

Table 2: Regression analysis (Audit committee characteristics)

DACC	Coef	Std. Err.	t	P> t
Audexp	-0.010673	.027426	-0.39	0.698
Audindp	-.0440819	.0395788	-1.11	0.269
Audmeet	-.0035148	.0017435	-2.02	0.047
R-squared	=	0.0693		
Adjusted R squared	=	0.0335		

In this model, R square value depicts that a 6.93% change in the DACC is explained by the Audit committee variables under review (Audexp, Audindp, and Audmeet), leaving 93.07% of the change in DACC as unexplained. Here the value of an adjusted R square is 0.0335, Slightly less than the value of 0.0693. The model is considered to be overall statistically significant, giving the prob F statistics value of nearly 0.000, and it means that the variables used in the regression specification can jointly predict the quality of reported earnings. According to the results, all the AC characteristics have a negative relationship with DACC, wherein the relationship between DACC and Audmeet is significant.



Table 3: Regression analysis (Board characteristics)

DACC	Coef.	Std. Err	t	P> t
Bdexp	.0267333	.0380357	0.70	0.484
Bdindp	-.0509999	.0386676	-1.32	0.191
Bdsize	-.007582	.0030124	-2.52	0.014
R-squared		=	0.0837	
Adjusted R-squared		=	0.0497	

In this model, R square value depicts that 8.37% change in the DACC is explained by the Board characteristics under review (Bdexp, Bdindp, and Bdsize), leaving 91.63% of the change in DACC is due to other factors. Here the value of an adjusted R square is 0.0497, Slightly less than the value of 0.0837. The model is considered to be overall statistically significant, giving the prob F statistics value of 0.0251, and it means that the variables used in the regression specification can jointly predict the quality of reported earnings. According to the results, Board characteristics such as Bdindp and Bdsize have a negative relationship with DACC, wherein the relationship between DACC and Bdsize is significant, while board expertise has a positive relationship with DACC.

Conclusions

This research study has also investigated audit and board characteristics' impact on the quality of reported earnings (using discretionary accruals. A sample of 17 companies, listed on the Colombo Stock Exchange, had been selected, and 5years of data from the year 2012/13 to 2016/17 had been used for panel data analysis. The results of linear regression model depicted a significant effect of audit meetings, and board size has been observed on discretionary accruals. Thus, it has been concluded that manipulating earnings can be restricted/reduced by increasing the percentage of independent non-executive directors, appointing directors with accounting and financial expertise to the board, having more meetings. The relationships reported are in line with the results of previous researchers.

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The impact of firms' earnings on the stock market: A study on Food Beverage and Tobacco industry in Colombo Stock Exchange

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Abstract

The research is conducted with the primary objective of identifying the impact of Earnings Per Share on Market Price Per Share, evidence from the Food, Beverage, and Tobacco companies listed on the Colombo Stock exchange over the period 2013-2019. In this study, the researchers used Earnings Per Share as independent variables and Market Price Per Share as a dependent variable, whereas Firm Size as a control variable. Descriptive Statistics, Correlation Analysis, Panel regression analysis, and Variance Inflation factors were used for the data analysis. The data were collected for 25 companies from the Food, Beverage and Tobacco industry from 2013 to 2019. Moreover, the sampling method used was Random sampling. The data were analyzed using the statistical software named Eviews 9. The findings revealed that Earnings Per Share affects the Market Price Per Share significantly and positively at a 95% confidence level, whereas Firm Size also has a positive and significant impact on Market Price Per Share.

Keywords: earnings per share, firm size and market price per share

Introduction

In the modern era, stock market investments have become one of the various investment options quite attractive to foreign and local investors. With definite regulations and the ease of access to the stock market, stock as an investment instrument is demanded by the top-class investors and has attracted the interest of small investors. The motive that drives an investor or a business entity to invest their funds in stocks is the expectation of a high return rate or the acquisition of a company. The stock prices do not remain constant for long; instead, it fluctuates according to the market expectations. To maximize the share price, the organizations attempt to maintain the stable cash flows by enhancing their revenues and reducing the costs. In a stock market, the factors influencing the stock prices include financial policy, monetary policy, foreign trade policy, and other macro-economic factors, financial information, and other internal factors. Financial Information is one



of the main elements that the investors use in making decisions on whether to invest in a company's stock or not.

Investors generally look at financial information by accessing the financial statements of companies. The information on earnings can be retrieved from the income statement and utilized to improve future profitability. The main intention of every organization is to enhance the profitability and maximize the shareholders' wealth. The profitability of corporate companies can be evaluated with the Earnings Per Share, whereas the market capitalization or generation of shareholders' wealth can be measured with the Market Price Per Share. However, those firms with greater profitability do not always generate higher market prices, and those with minute profitability do not lead the market price to fall. Thus, it is significant to identify the relationship between Earnings Per Share and Market Price Per Share. So, this study's objective is to examine the impact of Earnings per share on Market Price Per Share.

Research Problem

Many researchers have researched relationship between Earnings Per Share and Market Price Per Share, taking evidence from different countries' stock exchanges. According to the Colombo Stock Exchange Annual Reports, All Share Price Index of Food, Beverage and Tobacco industry fluctuates continuously (ASPI 30.04.2020 = 697.73, ASPI 31.05.2020 = 724.05, ASPI 31.06.2020 = 737.92, ASPI 30.07.2020 = 736.75). Investors often look at the share price movement before making any investment decisions. So, Earnings Per Share is one of the critical factors determining the Market Price Per Share. Moreover, some researchers have found Earnings Per Share has a significant positive impact (Menaje, 2012) on Stock Returns. Velnampy and Pratheepkanth (2011) examined Earning per share (EPS) and its impact on the Share price in Milanka Companies in Colombo Stock Exchange (CSE) and concluded more than 70% of Milanka companies have a positive relationship between earning per share and share price movements. Some other scholars have proved there is a significant negative relationship between Earnings Per Share and Stock Return. In line with the study undertaken by Anwaar (2016) on the impact of Firms' Performance on Stock Returns (Evidence from Listed Companies of FTSE-100 Index London, UK), findings indicated that there is a significant negative impact of Earnings Per Share on Stock Return. Umar and Musa (2013) intended to examine the relationship between Earning per share and Stock prices of firms listed Nigerian Stock Exchange (NSE), Nigeria. They concluded that the earning per share (EPS) has no predictive power for the stock prices. They suggested that Nigerian firms' stock prices shall not be predicted by the earning per share of the firms. Since several researchers have proved positive, negative, and no impact of



firm performance indicators on stock, this paper examines the impact of firm performance on Stock Return in the context of Sri Lanka. So, that is why the problem still exists what should be the actual impact of firms' performance on Stock Returns. Hence, this research's main problem is to study "to what extent the Earnings Per Share impact Market Price per Share of listed Food, Beverage and Tobacco companies in Sri Lanka".

Literature Review

Tharshiga (2013) examined the Impact of Earning Per Share (EPS) On Share Price (10 Listed Manufacturing Companies in Sri Lanka) and four-year data (2009-2012) were taken on random sampling method for this study. Correlation and regression are used to find out the impact of earning per share on the share price. Analyzed results revealed there is a strong positive relationship between Earning per share and share price. Further earning per share can explain 89.7% on the share price of ten sample manufacturing companies in Sri Lanka. Pushpa Bhatt and Sumangala (2012) also found the same result in their studies.

Wijesundera, Weerasinghe, Krishna, Gunawardena and Peiris (2015) examined the predictive power of five financial ratios on Stock Returns in the Colombo Stock Exchange over ten years from 2004 to 2013. In this study, the Stock Return predictability was measured using financial ratios. As for the regression analysis results, only ROE, EPS, and MV/BV have a significant positive relationship with the Stock Return. Wijerathna, De Silva, Prabod, Sandaruwan and Prashath (2018) concluded that there is a positive relationship between share price and earnings per share in studying the impact of accounting variables on the share price of Sri Lanka. Khan, Islam, Choudhury and Adnan (2014) had undertaken the study on how Earnings Per Share affect share price and firm value. In their findings, they concluded that share price does not increase that much with the earnings per share increase, highlighting the reasons that several other factors such as macro-economic factors, microeconomic factors within the company, director's role, etc. are needed to be considered by an investor before making any investment. In a study conducted on Earnings Per Share and Stock prices of firms listed in the NSE, Umar and Musa (2013) argued that there was an insignificant relationship between earning per share (EPS) and stock prices of the firms in Nigeria with the sample of Nigerian firms.

Methodology

The present study considered the 289 companies listed in CSE, representing 20 business sectors as of 29th May 2020. Out of 20 sectors, the researchers have selected the Food, Beverage, and Tobacco industry, comprising 50



companies. Among 50 companies, only 25 companies were selected as the research sample using random sampling techniques. For this sample, the data were collected from the annual financial statements for 2013 – 2019.

Conceptual Framework

Independent & Control Variables

Dependent Variables

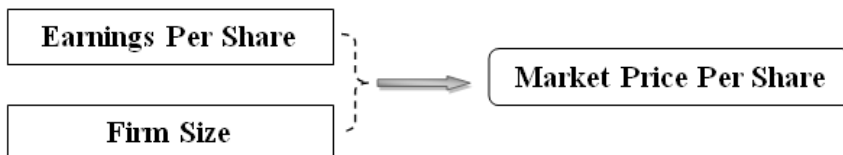


Fig 1. Conceptual Framework

Hypotheses of the study

H₁: Earnings Per Share significantly impacts share price.

H₂: Firm Size significantly impacts share price.

Regression equation

$$MPS = \beta_0 + \beta_1 \text{EPS} + \beta_2 \text{FS} + \varepsilon$$

Where,

MPS = Market Price Per Share

EPS = Earnings Per Share

FS = Firm Size

β = Beta coefficient

ε = Error

Results and Discussions

Descriptive Statistics

Table 1. Descriptive Statistics of the variables

	MPS	EPS	FS
Mean	244.7707	6.101214	12.73096
Median	49.00000	2.160000	14.59966
Maximum	2799.900	80.77000	16.18358
Minimum	0.000000	-6.050000	0.000000
Std. Dev.	505.1721	13.56869	4.434667

According to Table 1, the average value of Market Price Per Share in the Food, Beverage, and Tobacco industry, on average, is 244.77, and its median value is 49. Also, this has a minimum value of 0 and a maximum of 2799.90.



At the same time, the mean value of Earnings Per Share is 6.10, ranging from –6.05 to 80.77. The standard deviation of Market Price Per Share and Earnings Per Share is 505.17 and 13.56, respectively.

Correlation Analysis

Table 2. Correlation matrix of the variables

Correlation	MPS	EPS	FS
MPS	1.000000		
EPS	0.262563	1.000000	
	0.0484		
FS	0.141713	0.189672	1.000000
	0.0949	0.0248	

Based on Table 2, Correlation Matrix, the coefficient value of Earnings Per Share and Market Price Per Share is 0.262563 and its p-value is 0.0484. It is clearly identified that there is a positive correlation between the Earnings Per Share and Market Price Per Share, and its relationship is significant at 95% confidence level. Also, the coefficient value of Firm Size and Market Price Per Share is 0.141713, and its p-value is 0.0949, which indicates Firm Size is positively correlated with Market Price Per Share and their relationship is not significant 5%. However, only the Relationship between Firm Size and Earnings Per Share is significant at 5% ($r=0.189672$, $p<0.05$).

Regression Analysis

Table 3. Ordinary Least Square Regression

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-857.2940	685.8803	-1.249918	0.2138
EPS	0.0359729	0.009212	3.899891	0.0002
FS	0.007524	0.003023	2.488868	0.0140
R-squared	0.927799	Durbin-Watson stat		1.392598
Adjusted R-squared	0.914950			
F-statistic	72.20596			
Prob(F-statistic)	0.000000			

Table 3 describes the Regression analysis. The R squared value is 0.9278 which means the variation explains 92.78% variation in the Market Price Per Share in the Earnings Per Share. The value of F statistic is 72.20 and its probability is 0.000, which is less than 0.05. Overall, this model is best fitted. Moreover, the Durbin Watson Stat value represents 1.39. Concerning the



impact, the Earnings Per Share has a coefficient value of 0.0359, representing a positive impact of Earnings Per Share on Market Price Per Share. Also, this impact is significant at a 95% confidence level. Additionally, the Firm Size is positively and significantly impact on Market Price Per Share.

Variance Inflation Factor

Table 4. VIF Test

Variables	Coefficient Variance	Uncentered VIF	Centered VIF
C	16673.29	9.310077	NA
EPS	10.16327	1.248567	1.037320
FS	95.14193	9.647775	1.037320

Table 4 shows the Variance Inflation Factor. Accordingly, the Centered VIF of Earnings Per Share and Firm Size is less than 10. Thus, there is no multicollinearity problem among the independent variables.

Conclusions and Recommendations

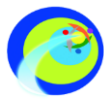
Earnings Per Share is an essential indicator of firm performance since this indicates a firm's prospects. From the findings, it can be concluded that Earnings Per Share affects the Market Price Per Share significantly and positively at 95% confidence level. This is supported by Velampy and Pratheepkanth (2011) findings, Wijesundera, Weerasinghe, Krishna, Gunawardena, and Peiris (2015). Moreover, Firm Size also has a positive and significant impact on Market Price Per Share. Therefore, Hypotheses H1 and H2 are accepted. Since the other control factors may affect the Market Price Per Share, it is better and useful to incorporate them in future research. Also, to identify the impact on Earnings Per Share on the stock market, it would be better to measure the fluctuations in the stock market return. Investors should pay attention to the Earnings Per Share and Dividend Per Share, Book Value Per Share, the income from main operations ratio, quick ratio, accounts receivable, turnover ratio, inventory turnover ratio, and liquidity ratio which assure investors of more secure income.

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The impact of income on tax compliance: The empirical evidence from small and medium taxpayers of Sri Lanka

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Abstract

Tax compliance has been examined from various perspectives by researchers since its impact on the economy is vital. This study aims to explore the relationship between the income and the taxpayer's compliance behavior using the assumptions in the Slippery-Slope Framework. The research focuses only on the small and medium level business community in Sri Lanka. The study empirically examines how a taxpayer's income influences tax compliance decisions with the perception of trust in the tax regime's authority and power. A self-administered questionnaire has been distributed to obtain the information needed from the target group and received 408 responses. Kendall's tau-b and Spearman's correlation coefficients were used to measuring the association's direction between two variables. The findings suggest that voluntary compliance has a positive connection, while enforced compliance shows a negative association with the taxpayer's income level. Also, the results prove that the level of income is a determinant of tax compliance. Besides, it has been established that the tax authority should take adequate measures to review the strategies developed to implement tax policy. This Research expects to give an insight into the operations of the revenue authority and decisions taken by policymakers and academics to explore the factors that encourage tax compliance.

Keywords: income level, slippery-slope framework and tax compliance

Introduction

This study examines the influence of small and medium scale business owners' income fluctuations concerning total tax compliance. The research anchors on the Slippery-Slope Framework (SSF) assumptions to forecast the variance of business income levels, which influence tax compliance patterns in respect of voluntary and enforced compliances. The contribution made by the tax revenue in support of the economy of a country is essential. The government utilizes tax money on standard development programs, such as supplying public goods, enhancing infrastructure facilities, and creating competitive business opportunities. Therefore, the government attempts to improve tax compliance practices among the taxpayers by using different game plans. Tax fairness inevitably aims to create a system, equal and



straightforward to all taxpayers. A fair tax system motivates the business community to comply more with the tax laws. In a culture where all similar businesses are treated equally and taxed at a uniform rate, the society would not find any contradictions, prejudices, or biases thrust upon them by the authorities. Simultaneously, the reasoning of taxpayers' ability to pay should be thoroughly examined when drafting the tax policy and the law that shapes and regulates a tax system's fairness. According to Kirchler (2007), taxpayers are concerned with the fairness of the tax system. If they realize the tax system is not fair and far from being transparent, the non-compliance rate will increase accordingly, which invariably would give rise to a negative impact on the volume of state revenue collected. In such a situation, the government forces people to pay taxes. When people understand their responsibilities to the state, they tend to make voluntary contributions to the treasury. Therefore, forging a healthy bond between the taxpayer and the tax authority is essential to improve tax revenue collection. In line with this argument, Gangl, Hartl, Hofmann and Kirchler(2019) opine that thassociation's quality between the taxpayer and the tax collector impacts the revenue collection process.

Research problem

There is no empirical evidence in the literature to provide a conclusive answer to how the level of business income impacts the tax compliance behavior of Small and Medium Enterprise (SME) taxpayers in Sri Lanka. Also, the assumptions of SSF have not been tested in respect of the income level of the SME taxpayer in Sri Lanka. Therefore, this descriptive study attempts to ascertain the influence of the level of business income relying upon the SME taxpayers' perception and their compliance behavior. The compliance behaviour measures in terms of voluntary and enforced. This study focuses on finding answers to the questions given below:

- Is there any relationship between the SME taxpayer's level of income and voluntary tax compliance behavior in Sri Lanka?
- Is there any relationship between the income level and enforced tax compliance behavior of the SME taxpayer in Sri Lanka?

This paper aims to study the impact of the level of income of SMEs on tax compliance patterns in Sri Lanka.

Literature Review

Slippery-Slop Framework (SSF) and tax compliance

The factors influencing the taxpayer's compliance behavior could be identified according to economic, behavioral, and psychological determinants (Kirchler, 2007). The SSF has been developed to discuss the compliance



patterns from economic and behavioral points of view, assuming that the power of the authority and trust in the authority would build up into two different relationships between taxpayers and tax collectors, that illustrates the pattern of tax compliance (Kirchler, 2007). Kirchler, Hoelzl and Wahl (2008) highlighted that tax compliance could occur either voluntarily or by forcing the taxpayer. However, both voluntary compliance and enforced compliance increase the total volume of tax collection (Kastlunger, Lozza, Kirchler & Schabmann, 2013). The high level of faith the taxpayer places in the tax regime, and the government tends to increase voluntary tax compliance volume. Most countries work extensively to develop the taxation strategies focusing on voluntary tax compliance systems because it is very much cost-effective and creates a friendly atmosphere between the taxpayer and tax collector (Hauptman, Gürarda, & Korez-Vide, 2015). However, when taxpayers do not comply with the existing tax law, the tax regime uses the powers vested in them by the government to collect money from the taxpayers, though it generates a hostile environment (Kirchler, Hoelzl & Wahl, 2008).

Level of income and tax compliance behaviour

Taxes are part of the business income. The amount of tax payable is decided by the level of the revenue generated during the period considered. Therefore, among many factors, the income level is also an essential determinant of taxpayers' compliance behavior (Mohammed & Dabor, 2016). The government applies different approaches when imposing taxes to determine how much people should pay according to their earnings. Low-income earners tend to submit incorrect reports and evade tax (Johns & Slemrod, 2008). Contrary, Alm, McClelland, and Schulze (1992) found that a high level of business income encourages the business community to pay more taxes to the state. A different view of the income source was pointed out by Kirchler, Muehlbacher, Kastlunger and Wahl (2007) in an experiment conducted to study the impact of hard-earned money and the easy earnings on tax compliance contributions. According to their findings, if income was earned by surmounting many roadblocks and obstacles, reluctance inhibits people on such occasions. Naturally, they would be hesitant to declare the actual amount of income. Ho and Wong (2008) researched the relationship between the level of income and tax compliance and found that income has no direct influence on tax compliance. Similarly, Durham, Manly and Ritsema (2014) concluded the study with the results indicating no significant association between overall compliance and the income source of business. On the other hand, Muzainah and Gurama (2016) found that income level positively and significantly influences on tax non-compliance.



Research Gap

As none of the studies have tested income level concerning tax compliance in Sri Lanka, this study attempts to fill that gap and understand how the level of income impacts SME taxpayers' tax compliance decision.

Methodology

A quantitative research approach was applied in this study. The sample size of four hundred eight respondents has been selected randomly from the total registered SME taxpayers of Inland Revenue as of December 31, 2019. The survey was conducted in January 2020. There were eighteen (18) questions in the survey form, which were used to measure the variables. This paper discusses voluntary compliance and enforced compliance on total tax compliance at different income levels. The respondents' perceptions for the questions were measured using a 5-point Likert scale, in which the level of agreement spread from 1 = strongly disagree to 5 = strongly agree.

Conceptual framework

The framework illustrated in figure1 was developed using SSF assumptions to examine the relationships between the variables of voluntary compliance, enforced compliance, and tax compliance at four different income levels, as indicated in the questionnaire form, i.e., Rs. <100 Mn., Rs. >100-250Mn., Rs. >250-500Mn., and Rs. >500- 750Mn., which is subsequently enumerated as Income Level 1, Income Level 2, Income Level 3, and Income Level 4.

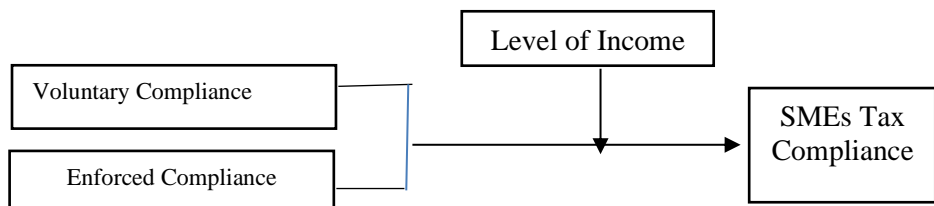


Fig 1. Conceptual Framework

Results and Discussions

The data were analyzed by using SPSS 26 software. The reliability test shows that all three variables, consisting of 18 items in total, have a Cronbach's Alpha of more than 0.6, which means all 18 items in the questionnaire are acceptable and reliable. The groups of data sets proved statistically significant. The factor analysis also confirmed the appropriateness of these groups of data sets with the Kaiser-Meyer-Olkin Measure of Sampling Adequacy value of 0.924 ($p < 0.001$ Bartlett's Test of Sphericity). The Shapiro Wilk test defined that data are reasonable, and the Scatter Plots show that the



data sets are linear and fit for further analysis. However, according to Scatter Diagrams, there are positive correlations (but weak) between power, voluntary compliance, and total compliance, while there are negative (weak) correlations between power and enforced compliance. Therefore, the study used Kendall's tau-b (τ_b) correlation coefficient and Spearman's correlation to measure the strength and direction of associations between two variables. The correlation coefficients shown in Table 1 prove that there are positive (weak) relationships between total compliance and voluntary compliance with SME taxpayers' income level. When the business community earns more income, they are willing to pay more money in taxes to the government. If taxpayers trust the tax regime and receive some sensible things as returns to their tax money, the compliance rate will increase. According to research findings, higher earnings will increase the levels of compliance. When income levels go up, the business owners invariably explore the possibilities of moving towards advantageous and better positions looking for opportunities, betterment, applying new technologies, and improving marketing strategies. A business transformation shift facilitates the companies and businesses to operate smoothly and remain in the competitive market. The high turnover and the reputation and goodwill of the company also contribute to changing the business owners' attitude to become more responsible citizens in society. Therefore, the business earners do not tend to hide the due taxes to the government when they realize that they are a part of the populace that consumes public goods and services in their day to day life.

Table 1. Correlation coefficients for income levels

Income Level	(τ_b)	Spearman's
IL1 / VC / TC	0.192	0.218
IL2 / VC / TC	0.246	0.289
IL3 / VC / TC	0.402	0.455
IL4 / VC / TC	0.412	0.427
IL1 / EC / TC	-0.096	-0.107
IL2 / EC / TC	-0.060	-0.068
IL3 / EC / TC	-0.208	-0.166
IL4 / EC / TC	-0.412	-0.466

Where, IL1=Income Level 1, IL2=Income Level 2, IL3=Income Level 3, IL4=Income Level 4, VC=Voluntary Compliance, EC=Enforced Compliance, and TC=Total Compliance



Besides, when business owners want to apply for bank loans, bid for projects, import raw materials required for production, or receive a payment from the government, they must apply for clearance from the tax regime, declaring the actual income concerning the considered period. In a trustworthy tax compliance culture, both taxpayers and tax collectors do not behave in a way that harms the existing tax system. Taxpayers attempt to contribute to the revenue collection process when the government acts reasonably, transparently, and equally treats taxpayers.

Conclusions and Recommendations

This study has examined the influence of business income on tax compliance, and the results show that there is a significant relationship between the level of income and compliance pattern of SME taxpayers in Sri Lanka. Research results imply that the level of income is a determinant of taxpayers' tax compliance pattern. Another finding is that voluntary compliance has a positive effect on tax compliance, revealing that when people earn more, they tend to pay more taxes to the government. On the other hand, enforced compliance shows a negative relationship with tax compliance. Low-income groups would undoubtedly resist being forced to pay taxes and treat them as tax dodgers. When people earn money with much effort, the authorities' enforcement strategies to have their taxes collected would have a severe negative impact. It will undoubtedly make them annoyed, and frustration will go haywire, crippling the system's effects.

Another finding that when the business profit increases, high-income earning taxpayers hire more professional auditors, tax advisors, and qualified accountants to manage their complex transactions and settle the tax-related matters. The high-income groups elicit necessary information and participate in tax awareness programs, in a bid to educate them to steer clear of controversies and go in the right direction. Hence, they do not allow the tax authority to send reminders or take enforcement actions, preferably to pay as per the advice of the professionals involved in the business. These findings will provide essential insights to the policymakers, tax practitioners, academicians, and other responsible authorities engaged in fiscal policy formulations. Notably, the policymakers should focus their attention on reviewing the existing legislation to promote a better tax compliance culture among taxpayers to enhance tax collection efficacy. The academics should measure the impact of voluntary compliance on the revenue generation. The government should fathom the SME taxpayer's psyche and the contribution they make towards revenue collection to better the citizens of the country.



This study is limited to SME taxpayers in Sri Lanka. Therefore, it is difficult to generalize the research to have a holistic view of the entire tax system. Hence, future studies should consider a larger sample size consisting of large taxpayers and self-employed taxpayers.

Acknowledgments

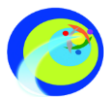
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Right issue announcements and share prices: An event study approach

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Abstract

This paper studies the effect on listed firms' share prices on the Colombo stock exchange to the right issue announcements. This study consists of 85 right issue announcements (69 companies) over the 2012-2019 periods. The analytical tool is an event study methodology in which the market model is used to calculate the abnormal return and show how the abnormal return behaviors around the right issue announcement day. The level of significance used at 5% to test whether the results are significant or not. The observational findings indicate that the average abnormal returns are statistically significant at the right issue announcement day and day before the event. The cumulative average abnormal returns are statistically significant around the right issue announcements date. The results conclude that the right issue announcements are affecting the stock prices. However, there is no such evidence that the market is in a semi-strong form efficiency as a summary of this paper.

Keywords: Colombo Stock Exchange, market model, right issue announcements and share price

Introduction

The stock market plays an essential role in the economy. Companies typically sell their rights as the decision to raise equity capital. If the stock exchange is efficient, the rational investor will react firmly and respond quickly to this newly released information. Moreover, their response will be very efficient and precise. In such situations, most scholars have tried to predict the behavior of stock prices to the right issue announcements and behavior of abnormal returns. The theoretical evidence concluded that the negative price response to the right issue announcements. There are different arguments between results when using a different method in different stock exchanges. Previous studies give the research gap to analyze share prices to the right issue announcement consisting of Colombo stock exchange in the last eight years (2012-2019). This paper's research problem is how to behave the share price to the right issue announcements of listed companies in the Colombo stock exchange. That result will help decision-makers who engage actively in the stock market to recognize the proper impact on the stock prices of listed companies.



Literature Review

AliSabri (2004) analyzed the impact of announcements of the right issue on the companies' share price traded on the Colombo stock exchange. He concluded that the negative abnormal returns and excess returns reported before the right issue announcement day. He suggests that information is released to the public before businesses officially reveal it. As mention by Edirisinghe and Nimal (2015), Bandara (1997) also generated negative results for right issue announcements, and findings have implications for investors, issuing firms, managers, and regulatory agencies when obtained the same results by them. There is a separate argument that has been done by Ramesh and Rajumesh (2014). They said that the positive significant average abnormal returns and cumulative average abnormal returns generated on the event date. They confirmed that the Colombo stock market absorbed good information on the announcement date by using different emerging markets. But the inefficient dimension of information adjusts very slowly to the public information to the decision for investors.

Methodology

The quality of the analysis findings would also rely on the techniques used to retrieve and analyze data. The 85 right issue announcements are selected as the research sample throughout 2012-2019. The secondary data used, and the daily data obtained from the collection of CSE data. The case analysis approach used to measure the impact of the right issues on a share price on the day of the incident (-40, +40), focused on the estimation window (-241, -41). In the event window, the market model's statistical model is used to measure abnormal returns by using excel tools. The market model equation for measure abnormal return is,

$$\epsilon R_{it} = \alpha_i + \beta_i R_{mt} + \epsilon_{it} \dots \dots \dots \text{Equation 01}$$

- R_{it} –the period t return on security i.
- R_{mt} –the period t return on the market portfolio.
- ϵ_{it} -the zero mean distribution model.
- α_i/ β_i –the parameters of the market model.

Results and Discussions

The table1 shows that the positive cumulative average abnormal returns in the event window period (-40, -1) and (-30,-1). Negative values are obtained for others. Cumulative average abnormal returns are statistically significant from event day through the post-event period.



Table 4. Cumulative average abnormal returns and t-statistics for event windows

Event window	(-40,-1)	(-30,-1)	(-10,-1)	(-1,0)	(0,+1)	(-1,+1)	(+1,+1)	(+1,+3)	(+1,+4)
CAAR	0.03	0.03	-0.01	-0.01	*-0.05	*-0.04	*-0.04	*-0.06	*-1.60
t-stat	0.66	0.81	-0.30	-1.52	-5.47	-4.23	-2.18	-1.94	-42.09

* represent statistically significant results at 5% significance level

Figure 1 shows that the AARs and CAAR lines for the window period (-40, +40).

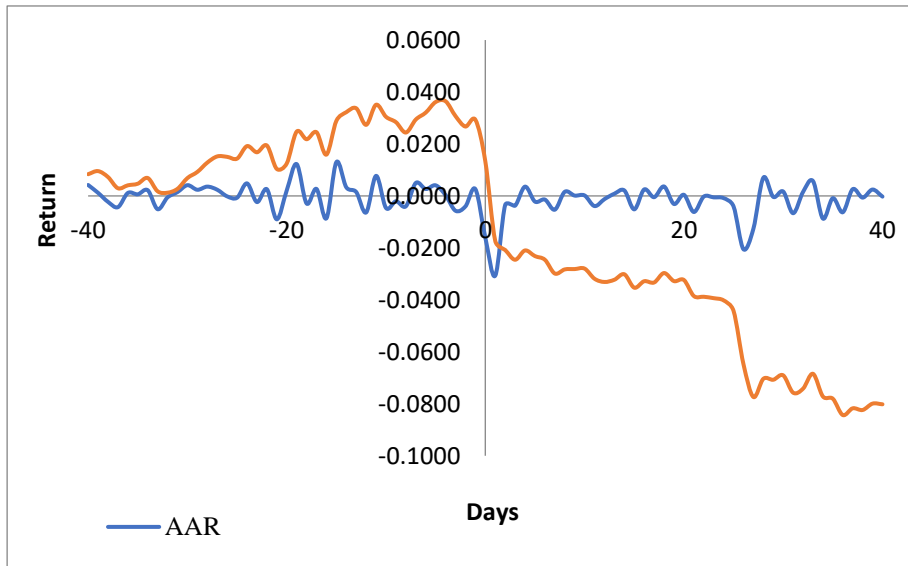


Fig 1. AARs and CAARs Values

There are both negative and positive average abnormal returns during the event window period. The results show the positive average abnormal return on the day before the announcement date but not statistically significant. The cumulative average abnormal returns show positive values until the event day and then show the negative values. The cumulative average abnormal returns are statistically significant around the right issue announcement day. The



cumulative average abnormal return line is represented the negative slop from the day before the announcement date. Further below table represents the statically significant abnormal returns.

Table 5. AARs and CAARs for (-10,+10) event window

Day	AAR	T-statistics of AAR	CAAR	T-statistics of CAAR
-				
10	-0.0036	-0.1786	0.0316	1.5835
-9	-0.0031	-0.1640	0.0285	1.4968
-8	-0.0040	-0.2206	0.0245	1.3572
-7	0.0050	0.2942	0.0295	1.7338
-6	0.0027	0.1676	0.0322	*2.0211
-5	0.0041	0.2769	0.0363	*2.4599
-4	0.0005	0.0394	0.0368	*2.7341
-3	-0.0063	-0.5220	0.0305	*2.5348
-2	-0.0034	-0.3306	0.0271	*2.5963
-1	0.0024	0.2805	0.0295	*3.4603
0	-0.0153	*-2.5417	0.0142	*2.3519
1	-0.0312	*-3.6682	-0.0171	*-2.0052
2	-0.0037	-0.3501	-0.0207	*-1.9874
3	-0.0037	-0.3077	-0.0244	*-2.0288
4	0.0036	0.2662	-0.0208	-1.5484
5	-0.0022	-0.1473	-0.0230	-1.5608
6	-0.0014	-0.0880	-0.0244	-1.5331
7	-0.0053	-0.3113	-0.0297	-1.7454
8	0.0013	0.0721	-0.0284	-1.5735
9	0.0007	0.0368	-0.0277	-1.4559
10				
	0.0003	0.0140	-0.0274	-1.3742

* represent statistically significant results at 5% significance level

Conclusions and Recommendations

This paper's main primary purpose is to examine the share price changes of an announcement of the right issues to test whether the market confirms a semi-strong version of the hypothesis of market effectiveness. The sample of right issue announcements obtains a negative price impact as previous scholars discussed. There is a positive market response to the right issue announcement throughout the pre-event period. Moreover, proceeds to do so until one day before the announcement day and starts to respond negatively consistently after the announcement date. If the stock market is in semi-strong form efficient, the market responds to the new publicly available information. Thus, new and publicly available information could be used in a semi-strong version of market efficient hypothesis in the strict sense, the valuable method



in investment decision making. However, the CAAR curve results represent the negative impact from the day before the announcement date. That means there is an information leakage before the announcement is released in public. The conclusion reached here is similar to that found by AliSabri (2004) for the right issue announcements in the Colombo stock market. He suggested that info is released to the public before businesses officially reveal it. Based on these results, there is no such evidence that the market is semi-strong from efficiency.

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The role of traditional and modern financial performance metrics in predicting shareholders' wealth

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Abstract

Shareholders are considered as one of the major key players of an organization. Present arena, stakeholders of the organizations attempt to find a timely and reliable metric to predict shareholders' wealth. The study aims to identify the relationship between traditional and modern financial metrics with shareholders' wealth. ROA and ROE were considered traditional financial performance metrics, while EVA was considered modern. Data of 24 firms based on the highest market capitalization, over five years from 2013-2017, were extracted from their annual reports. Descriptive Statistics, correlation analysis, multicollinearity, and the pooled ordinary least square methods were used to analyze data. The correlation analysis results denoted a positive relationship between ROA, ROE, and EVA with MVA. Hypotheses were tested based on the pooled regression results. The findings of the study revealed that ROA and EVA have a significant positive relationship with MVA, while the EVA is making the highest relationship towards MVA. Thus, it is recommended that the financial managers focus more on EVA in predicting shareholders' wealth.

Keywords: economic value added (EVA), market value added (MVA), return on assets (ROA), and return on equity (ROE)

Introduction

The business paradigm has been evolved from maximization of profit to maximization of shareholders' wealth at present. Any company will not exist in the market if they fail to create sufficient wealth for its shareholders. Therefore, shareholder wealth maximization is a superior objective of the businesses, as they are the firm's real owners. There are several measurement tools available, to predict shareholders' wealth. During the past decades, the linkage between performance measurement tools and shareholders' wealth has been discussed by an ample number of scholars scattered throughout the world. However, there is still a debatable concern to corporate executives to identify a proper measurement tool to predict shareholders' wealth. Such traditional measures have been criticized due to not inclusion of the cost of capital resources of the firm. To overcome such issues, economic value-based measure Economic Value Added (EVA) was proposed. (Erasmus, 2008 ;) EVA calculates shareholder wealth and is widely used by management for decision making and increasing productivity. EVA is an estimate of a business's real economic profit for the year, and it differs sharply from



accounting profit as it considers opportunity cost when calculating economic profit. The concept Market value Added (MVA) can be used to measure value added by a company to shareholder investments.

This research is conducted to analyze traditional and modern financial performance metrics' role in predicting shareholders' wealth as proxied by MVA. Data for the study has been collected from the sample of 24 companies listed in the Colombo Stock Exchange (CSE) based on the highest market capitalization. As of 31st October 2018, it has 297 listed companies with a combined market capitalization of over Rs.2793.0 billion. With the evolution of the traditional market into a globalized market, several concepts have emerged in the accounting field. In the 1990's Stern Stewart has introduced the EVA concept. It is calculated to predict shareholders' wealth. Thus, from the last decades the traditional metrics such as Return on Assets (ROA), Return on Equity (ROE), Earning per Share (EPS), and Dividend per Share (DPS) also calculate to predict shareholders' wealth. In Sri Lanka, companies registered in CSE use traditional and modern financial performance metrics to predict shareholders' wealth. Maximization of the shareholders' wealth is an important concept. Therefore, most of the accounting researchers have an interest in research on this topic. Because that research findings will help the shareholders, companies, financial managers, and future researchers. When considering the Sri Lankan context, the researchers realized that there are very little researches done on this topic. Several empirical studies have been conducted in the last two decades, first in the United States and later in the rest of the international market community, to answer whether it is better to use modern value-based performance measures. Those results were quite mixed and controversial.

Similarly, some studies argued that in reality, traditional accounting measures and economic measures have failed to reflect a company's true value due to the lack of long-term sustainability of a business and the issue of cost distortion. (Lev & Radhakrishnan, 2003; Lev & Zarowin, 1999). The efficiency of EVA is also criticized in extant studies (Biddle, Bowen & Wallace 1997). Therefore, these controversial results of the previous researches have inspired the researchers to research more on this topic. The researchers also identified that there are a few kinds of research have done for the Sri Lankan context. Therefore, the researchers identified that research gap and attempt to fill that gap by empirically analyzing the role of traditional and modern financial performance metrics in predicting shareholders' wealth. This study is directed towards answering the following research questions:

- What is the relationship between ROA and MVA?
- What is the relationship between ROE and MVA?



- What is the relationship between EVA and MVA?

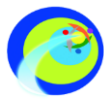
This study is directed to achieve the following objectives:

- to identify the relationship between ROA and MVA.
- to identify the relationship between ROE and MVA.
- to examine the relationship between EVA and MVA.

Literature Review

Krupasindhu (2017) studied EVA and traditional accounting measures for shareholder's wealth creation. The researcher selected Malaysian public listed construction companies listed in the main market of Bursa Malaysia to generate findings. All the financial information based on the study's variables has been sourced from Kuala Lumpur stock exchange and Thomson Reuter data-based. The risk-free rate information has been extracted from the annual reports of Bank Negara Malaysia. The study's objective is to examine which measure leads to increasing shareholders' value out of traditional and modern measures. Panel data regression model was utilized in the study to analyze the data. Finally, the researcher concluded that increasing the economic value of shares leads to increase shareholders' value.

Larojan and Thevaruban (2015) conducted a study on EVA and MVA with listed financial companies' profitability performance in Sri Lanka. The objectives are to examine the relationship among MVA, EVA, ROA, and ROE of selected listed companies and investigate the impact of MVA on EVA, ROA & ROE of selected listed companies. The study used a sample of 20 firms listed in CSE from the industry, bank, finance & insurance sector. Annual reports from years 2012-2013 have been used to generate findings. The study applied the ordinary least square regression to test the content of EVA and MVA measures. Pearson correlation and regression methods were used to analyze the data. Finally, the study concluded that there is a significant relation between EVA and ROE with MVA, but there is no significant association between ROA and MVA. The findings showed that EVA is a useful measure in describing the firm's stock market value. Thilakerathne (2015) studied the EVA disclosure practices of Sri Lankan listed companies. The study used 85 Sri Lankan companies listed in CSE as of 2013, based on market capitalization. Annual reports of each company were examined for the financial years from 2009 to 2013 to examine the degree of EVA reporting practices among selected companies. For this specific identification, he used industry affiliations, residential status, and medium (source of disclosure) and EVA applicability area as characteristics.



Further, univariate analysis was applied to analyze the difference between EVA reporting and non-reporting companies' performance. In this respect, the study used a t-test to assess the statistical significance of the difference between two independent sample means, age and residential status. The study's key findings showed that, based based on highest market capitalization, out of 85 listed companies, only 15 companies were included the EVA disclosure in their published annual reports based on business and financial performance measure. Around 82.35 percent were not reported EVA statements in their published annual reports. Around 26.67 percent of the EVA reporting listed companies likely to use EVA statements in a separate section, and another 26.67 percent of EVA reporting company willing to be included EVA statements in the sustainability report of their published annual reports. Around 46.67 percent of EVA reporting companies come under the Bank, Finance, and Insurance industry sector.

Methodology

This study examined the relationship between traditional and modern measures with shareholders' wealth. ROA, ROE, and EVA are considered independent variables, and the dependent variable is the shareholders' wealth. The concept Market Value Added measures it. The researchers calculated ROA, ROE, and MVA values based on the general equations, while EVA is extracted directly from the annual reports. The CSE had 297 companies representing 20 business sectors as at 31st October 2018. The researchers selected 24 companies as the study sample, out of 297 companies listed in CSE based on the highest market capitalization on the 10th of January 2019. The researchers collected the data by using a purposive or judgmental sampling method while collecting data from annual reports throughout 2013-2017.

Hypotheses of the study

- H₁: There is a significant relationship between ROA and MVA.
- H₂: There is a significant relationship between ROE and MVA.
- H₃: There is a significant relationship between EVA and MVA.

Results and Discussions

Descriptive Statistics

Table 1. Results of descriptive statistics

Variables	Observations	Mean	Standard Deviation	Minimum	Maximum
ROA	120	12.5670	20.0874	0.16	100.50
ROE	120	44.5703	105.5467	0.42	626.51
EVA	120	23.3814	1.3942	19.13	25.66
MVA	120	23.5365	1.8642	17.76	28.74



The statistics denote the mean value of ROA exhibits 12.5670, standard deviation 20.0874, and the minimum and maximum values discovered as 0.16 and 100.50, respectively. Further, the ROE depicts the mean value of 44.5703 with a standard deviation of 105.5467 and the minimum and maximum values as 0.42 and 626.51, respectively. EVA indicates a mean value of 23.3814, with a standard deviation of 1.3942 and the minimum and maximum values as 19.13 and 25.66. Finally the dependent variable MVA indicates the mean value of 23.5365, the standard deviation of 1.8642, and the minimum and maximum values as 17.76 and 28.74, respectively.

Correlation Analysis

Table 2. Results of the correlation matrix

Variables	ROA	ROE	EVA	MVA
ROA	1.0000			
ROE	0.9067	1.0000		
EVA	0.3375	0.3100	1.0000	
MVA	0.5955	0.5439	0.6081	1.0000

Table 2 denotes the correlation outcomes among the dependent and independent variables. According to the results, it depicts a 59.55% relationship between ROA and MVA; at the same time, it illustrates the 54.39% relationship between ROE and MVA, while the EVA depicts the relationship of 60.81% with MVA. Therefore, the results denote that all three metrics have a moderate relationship with MVA. Hence, the EVA denoted the highest relationship with MVA, than the ROA and ROE.

Pooled Linear Regression

Table 3. Results of pooled regression

Variables	Coefficient	Sta. Error	P - Value
ROA	0.0399	0.0140	0.005***
ROE	0.0002	0.0026	0.937
EVA	0.6142	0.0893	0.000***
constant	8.6647	2.0668	0.000
R-squared	0.5417		
Adj. R-Squared	0.5298		
F Value	45.70		
Prob>F	0.0000		

***p<0.01, **<0.05, *p<0.1

Table 3 presents pooled regression analysis findings with information on the impact of an independent and dependent variable. In this study, the value of Adjusted R- Square is 0.5298, which denotes that 52.98% of the variation of the dependent variable (shareholders' wealth) can be defined by the three



independent variables, namely, ROA, ROE, and EVA while remaining 47.02% of the dependent variable defined by the other variables such as EPS, DPS, ROCE, RONW, etc. which were not included in the study. Based on the F-Value statistics, 45.70 along with the P-value of 0.0000, which is lower than 0.01. Therefore, it has been proved that the model utilized in the current study is significant, even at the 1% level. The constant value denotes the value of MVA when all the other variables are remaining unchanged. In this study, the constant value depicts 8.6647. It illustrates that while ROA, ROE, and EVA are being left unchanged when the expected level of MVA is 8.6647. As referring to the results, the pooled regression equation can be illustrated as follows. $MVA = 8.6647 + 0.0399 X_1 + 0.0002 X_2 + 0.6142 X_3 + \varepsilon$

Where,

MVA = Market Value Added

X_1 = ROA

X_2 = ROE

X_3 = EVA

ε = Error term

The regression analysis outcomes indicated that all variables have a positive impact on the shareholders' wealth. Out of all three independent variables, EVA, followed by the ROA, makes the highest influence, making the highest influence on shareholders' wealth by 0.6142 and 0.0399 respectively. At the same time, ROE has the lowest influence, which denotes 0.0002 on shareholders' wealth. It is predicted to increase MVA by 0.006142 when EVA increases by 1%, increases MVA by 0.000399 when ROA increases by 1% and increases MVA by 0.000002 when ROE increases by 1%.

Table 4. Hypotheses testing based on Pooled Regression

No	Coef. Value	P-Value	Criteria	Result
H ₁	0.0399	0.005	P< 0.05	Supported
H ₂	0.0002	0.937	P> 0.1	Not Supported
H ₃	0.6142	0.000	P< 0.01	Supported

Conclusions and Recommendations

Based on the Pooled regression results, ROA and EVA denoted significant positive relationship with MVA while EVA denoted the highest relationship. ROE denoted insignificant positive relationship with MVA. Based on the results, it can be concluded that EVA helps to maximize shareholders' wealth than the ROE and ROA, as it accounts opportunity cost of equity capital. Regression results show that the companies still rely on ROA than ROE when



predicting shareholders' wealth. The research findings denoted EVA has the highest positive relationship with MVA. Based on the results, it can be recommended for companies' financial managers to focus more on EVA when predicting shareholders' wealth, as increase in the economic value of shares leads to increased shareholder wealth creation. Further, it can be recommended for the shareholders to concern more on EVA, as it helps properly take investment decisions. If Companies increase EVA and MVA, it will lead to gain higher financial performance. Finally, when designing shareholder-related policies, if financial managers and the Directors of the companies focus more on the EVA concept, they can uplift the morale and commitment from the shareholders towards their organizations.

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Firm-specific characteristics and environmental disclosure: A study of selected listed companies in Sri Lanka

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Abstract

The environment is a valuable gift for us received by nature. However, most of the activities done by people and the organizations cause damage to the environment and eventually, sustainability. To be more specific, organizations damper the environment due to their industrial works. Therefore, there is an emerging need to protect the environment. Furthermore, the concern for environmental protection is becoming high among the corporate bodies, and in the present era, organizations tend to disclose more on environmental-related activities. So, this study aims to investigate factors that determine the Environmental Disclosures (ED) and, more specifically, the relationship between Firm Characteristics and the extent of the ED of Sri Lankan listed companies. ED was measured in terms of content analysis, and environmental disclosure is quantified by referring to the guidelines (G3) laid down in Global Reporting Initiatives (GRI). Data was gathered over a period of five years from 2013-2017 from top 25 companies listed on the Colombo Stock Exchange (CSE), Sri Lanka. Company characteristics as proxied by size, profitability, and age are considered explanatory variables that may influence the extent of sampled companies' environmental disclosures. The content analysis results showed that ED within annual reports are at a moderate level, and most of the companies have disclosed ED within the annual reports. The pooled regression analysis results indicate that company size and profitability are positively related to the extent of Environmental Disclosure, whereas company age has no statistically significant relationship with the extent of disclosure.

Keywords: content analysis, environmental disclosures, firm characteristics and GRI

Introduction

Over the past few years, reporting on Sustainability and Corporate Social Responsibility (CSR) has proliferated in the private sector. Sustainability development is defined as a development that fulfills the current desires without restraining the capacity of future generation to encounter their own desires (Brundtland, 1987) as the definition states that sustainability reporting is made up of economic, social and environmental factors and the accounting professionals are keen on incorporating these three elements in their annual reports. Information disclosure can take two forms, particularly; voluntary disclosures and mandatory disclosures. Voluntary Disclosures are not



mandatory implies that are not directly required by Generally Accepted Accounting Principles (GAAP) or any other rule. Mandatory disclosure mostly concentrates on presenting financial statements and its' corresponding footnotes, which are compelled by laws and regulations. Ever since the beginning of 2010's, the interest in disclosure of most significant listed companies has greatly increased. The collapses of large companies listed on the stock exchange have put their greater attention on their disclosure procedure and standard setters for the rise in the peculiarity of Corporate Reporting. The expansion of sophisticated business formations, regulations, and ever-changing economies has led to stakeholders' demands to acquire information from organizations to figure out their future. So, corporate bodies must disclose all the essential information. As the major consumer of environmental resources, organizations must disclose their environmental activities to the shareholders and all other stakeholders. Organizations are being reviewed as socio-economic entities instead of only as economic entities in the present era. So, organizations have to bear responsibility for their activities, which may directly impact society. Therefore, there is a need to address the environmental impact in broad aspects while environmental reporting has become a prime reporting mechanism to communicate organizations' sustainability progress to stakeholders. In response to those concerns, many firms are voluntarily increasing their level of environmental disclosures through different ways in their annual reports. It is very difficult to identify the exact level of disclosures about environmental facts and what inspired to disclose environmental information in annual reports considering the above factors. This study attempts to discover the level of Environmental Disclosures in annual reports of Sri Lankan Listed companies and to explore whether the firm-specific characteristics (Company Size, Profitability, and Age) have a potential influence on the level of ED

Research Questions

- What is the actual level of Environmental Disclosures (ED) in annual reports of the listed companies in Sri Lanka?
- What would be the relationship between Firm-Specific characteristics and Environmental Disclosure of the listed companies on the Colombo Stock Exchange (CSE)?

Objectives of the study

- to examine the extent of Environmental Disclosures in the listed companies' annual reports in Sri Lanka over the years from 2013 – 2017.



- to examine the relationship between Firm-Specific characteristics and ED of the sampled firms listed on CSE.

Literature Review

Disclosure refers to a way of making new information known. Moreover, it is a way of people worldwide to get an idea and understand new things. In the contemporary era, disclosing the environment's facts becomes critical since the environmental issues are quite high. According to Berthelot, Cormier and Magnan (2003), ED is “A bunch of information associated with the firm’s past, current and future environmental management movements and performance”. Once the concern about the environment became high, revealing facts about the environment would also become high. Companies are using their annual reports as a way to transmit critical facts regarding their activities. Even if it is a financial or non-financial figure or else a company action, it’s a right of the stakeholders to get informed by the organization's top-level management. That clarity may create an ionic bond between the organization and its stakeholders. Except for the financial information, organizations tend to confess their CSR activities in annual reports. Gray, Owen and Adams (2009) defined theory as a clear cut, an origination of the association between things. Also, a theoretical framework merely defined as a collection of related concepts that may consist of a single theory or a combination of a number of theories (Collis & Hussy, 2009). Specifically, the three main theories, legitimacy theory, stakeholder theory and institutional theory which have been employed in the CSR literature, are integrated by considering theoretical predictive desires of CSR practices (Fernando & Lawrence, 2014).

Legitimacy theory is extracted from the notion of organizational legitimacy, which has been interpreted as “a state or position, which remains when an organization’s morality is compatible with the value system of the broad social structure of which the organization is a part. When there is an inequality between actual and potential, which remains between the two value systems, then it believes that there is a risk to the organizations’ legitimacy” (Gehan, Mousa & Naser, 2015). Stakeholder theory is a theory that describes the relationship between an organization and its stakeholders. The main idea of the stakeholder theory is the success of an organization hangs on the degree to which the organization is skillful of dealing with its relationships with stakeholder groups, for example, shareholders, employees, customers, financiers, and societies or communities (Van Beurden & Gossling, 2008). Pamela and Christopger (2003) applied Stakeholder theory to define the quantity and quality in the annual reports of Australian listed companies in voluntary ED by applying the three – dimensional model which contained

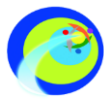


stakeholder's power, economic performance, and strategic posture of Ullmann (1985) As the results of this study show that stakeholder power and strategic posture dimensions were found to be significant in explaining ED. The results indicate that shareholders, lobby groups and regulators are the dominant stakeholder groups who can claim EI in annual reports. The approach of the strategic posture dimension recommends that organizations should disclose their CSR activities in the mission statements.

Ismail, Rahman and Hezabr (2018) investigated the factors that influence Corporate Environmental Disclosure (CED) Quality of oil and gas industry in developing countries. The results revealed that out of twelve predictors, only five variables were associated with CED quality. In particular, organization size, profitability, membership of an industry's association, foreign ownership and leverage are positively and significantly related to the degree of quality of CED. In contrast, ownership concentration, state ownership, type of company, institutional ownership, close to the market, environmental certification, and multi-nationality were insignificantly related to the level of quality of CED. Egbunike and Tarilaye (2017) examined the impact of firms' distinct characteristics on non-mandatory environmental disclosures in Nigerian listed companies. The results reveal that several companies' EI were not revealed in their annual reports, whereas some companies disclosed and detailed the information in financial terms. Subsequently, the robust regression outcome confirms all the hypotheses of the study, indicating a positive relationship between environmental disclosure, earnings per share, size, governance, and leverage of the sampled manufacturing companies listed in Nigeria. Based on that, it was suggested that administration or the governance framework of the companies should be strengthened by appointing more independent directors in the board Rainsbury and Hao (2016) did research on Disclosures of Environmental Accounting of manufacturing and mining listed companies at China and their empirical outcomes demonstrate that bigger companies are showing greater likelihood to reveal environmental accounting related information.

Methodology

This study is a quantitative study where the researcher used company annual reports to collect data from the sample selected. Furthermore, the researcher analyzed the data with the help of content analysis and expecting a clear idea of the linkage between firm-specific characteristics and Environmental Disclosure. Therefore, the target population of this study is 297 listed companies from various sectors in CSE as of 31st December 2018. The selection of the sample for this study is narrowed down to firms with the



highest market capitalization. As far as the ED measurement is concerned, GRI- G3 index has been used to calculate EDI. At the same time, the independent variables are firm-based characteristics, particularly firm size, profitability, and company age, measured by the log of total assets, the log of ROE, and the log of years since inception, respectively.

Hypotheses of the study

- H₁: Companies with a greater size disclose more on environmental information on their annual reports than companies with smaller sizes.
- H₂: Companies with higher financial profitability disclose more on environmental aspects than companies with lower profitability.
- H₃: Companies with higher age disclose more environmental information than companies with lower age.

Results and Discussions

Table 1. Results of Multiple Regression Analysis

EDI	Coefficient	Std.Error	t-Statistic	Prob.	Sig
TA	0.205	0.0206	9.95	0.000	***
ROE	0.108	0.0252	4.27	0.000	***
CA	0.0125	0.0391	0.32	0.749	
_cons	-0.595	0.2423	-2.46	0.015	
R - squared	0.5147				
AdjR - squared	0.5026				
F Value	42.78				
Prob> F	0.000				

*** p<0.01, ** p<0.05, * p<0.1

Table 1 presents the findings of multiple regression analysis for the association between firm- specific characteristics and ED as the outcome variable. In this study, the value of adjusted R square is 0.5026, which denotes that 50.26% of the variability in the outcome variable (ED) is defined by the three predictors namely firm size, profitability, and company age, while the remaining 49.74% of the variability in outcome variable is because of the factors which have not been modeled in the study. The F value is discovered to be 42.78 at P < 0.01. It is as indication that the model is robust at explaining the changes in the outcome variable. Out of all three independent variables, size of the firm followed by the Profitability is making the highest influence towards Disclosing Environmental related information by 0.205 and 0.108 respectively. At the same time company age is causing the lowest influence which is 0.0125 on ED. And it is predicted to increase ED by 0.205% when company size goes up by 1%, increase by 0.108% when profitability goes by 1%, increase 0.0125% when company age goes by 1% and is predicted to be



-0.595% when all independent variables are zero. Based on the test results of pooled OLS, the multiple regression would be of the following form;

$$EDI = -0.595 + 0.205X_1 + 0.108X_2 + 0.0125X_3$$

Where,

X_1 = Size of the firm

X_2 = Profit of the firm

X_3 = Age of the firm

Hypotheses Testing

Table 2. Testing of Hypotheses

	Coefficient	P value	Decision criteria	Supported or Not supported
H ₁	0.205	0.000	P<0.01	Supported
H ₂	0.108	0.000	P<0.01	Supported
H ₃	0.0125	0.749	P>0.1	Not supported

Conclusions and Recommendations

The findings indicate that the firm size and profitability have a significant positive relationship while it was found that the company's age had no statistically significant association with ED. Hence, it can be concluded that it is possible that the degree of ED for each of the sampled companies is not similar and which might have resulted in conflicting situations regarding the Coefficients of ED. Moreover, that is because ED is not mandatory in Sri Lanka. A proper system needs to be developed to enhance the motivational factors to disclose environmental information,. The system should be designed to change the attitude of the managers, stakeholders, and the general public to engage in environmental-related activities and consider more about the organizational disclosure of environmental-related information. The findings reveal that companies with higher age do not disclose more on environmental information than companies with lower age. So, it can encourage companies with more experience in the relevant field to disclose the environmental related information more.

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Intellectual capital and financial performance of Sri Lankan Listed manufacturing companies

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Abstract

Intellectual capital is recognized as a strategic asset which gives competitive advantages by driving organizations for superior performance in the modern-day knowledge-based economies. This study analyzes the impact of Intellectual Capital on the financial performance of Sri Lankan listed manufacturing companies. This study was based on twenty-four listed manufacturing firms at the Colombo Stock Exchange, and the data is sourced from the annual report over the period 2015 to 2019. The collected data was analyzed using Value Added of Intellectual Capital Coefficients proposed by Pulic (2004) to measure intellectual capital efficiency. The impact of intellectual capital is measured by Human Capital, Structural Capital and Relational Capital whereas; Return measures financial performance on Assets and Return on Equity. Multiple regression, correlation analysis was employed to arrive at the finding of the study using STATA. Intellectual capital components have a significant and positive impact on financial performance indexes, as characterized by the finding reveal ROA and ROE. However, Relational Capital does not significantly impact on the ROA. This paper suggests that investing in human, structural and relational capital as at most importance to increase manufacturing firms' performance.

Keywords: financial performance, intellectual capital, manufacturing firms and value-added

Introduction

Intellectual Capital (IC) is the value of an organization's employee knowledge, skills, business training, or proprietary information that may provide competitive advantages. Moreover, the IC, knowledge-related intangible assets in its existence, has become more important than physical assets during the last two decades within the growing knowledge-based economy. Measurements of financial performance are crucial for an organization because it identifies how well a company generates revenue and manages its assets, liabilities, and stakeholders' financial interests. In the Sri Lankan context, intellectual capital is increasingly becoming popular in today's knowledge economy and plays a key role in innovation, productivity, growth, and organizations' performance. The increasing importance of



intellectual capital that generates more value is beneficial to both managers and investors.

Moreover, it provides an insight into local companies about the level of disclosure of IC among Sri Lanka's leading firms and therefore, may act as a benchmark to others. The study will also help companies realize the importance of IC to enable them to adopt the best intellectual capital management and measurement methods that will help them meet their strategic goals. In developed countries like the UK, the US and Australian, companies are encouraged to adopt IC. So, the number of research conducted by the scholars concerning IC scattered throughout the developed nations. However, in emerging countries like Sri Lanka and India, the number of studies about IC is scant. Therefore, researcher tried to reveal the importance of the IC and its impact on firms' financial performance. This is the gap the present study seeks to bridge.

The porter's five forces model assists the organization's decision makers in gaining the competitive advantage by identifying resources that are uniquely available for them. The physical resources have become diminished and the nature of non-distinctive. In this regard, the intangible assets in its existence have increasingly been recognized as strategically important. Furthermore, it is identifying intangible resources as the main drive behind modern-day business organizations' success. But in the Asian context of the organizational settings it can be seen an absence in the sense of identification of important of IC. Therefore, this study examines the importance of having the recognized Intellectual capital within the organization. The objectives of this study were to examine the impact of intellectual capital on the financial performance of manufacturing companies listed in the Colombo stock exchange in Sri Lanka and to identify the relationship between intellectual capital and financial performance in manufacturing companies listed in CSE in Sri Lanka. The following research questions were formulated:

- Q1: What is the impact of intellectual capital on the financial performance of manufacturing companies in Sri Lanka?
- Q2: What is the relationship between intellectual capital and financial performance in manufacturing companies in Sri Lanka

Literature Review

According to the resource-based view, IC resources are recognized as strategic assets and also it can be considered a subset of the broad set of organizational resources. The consultation of extant IC literature shows that the availability of several definitions for IC and its components. Tatiana (2017) examined structural and human capital affecting Manufacturing



companies' performance. It was found that Relational Capital does not have a noteworthy effect on performance. Structural capital turns out to be more significant than human capital. Anuonye (2016) analyzed the effect of intellectual capital on return on insurance firms' assets in Nigeria. The results show that structural capital had a statistically insignificant impact on return on assets. Human capital and relational capital had a statistically significant impact on the companies' return on assets.

Aruppala, Wickramasinghe and Mahakalanda (2015) used Value Added Intellectual Capital (VAIC) approach to determine the level and the performance intellectual capital of the Sri Lankan Bank. Return on Equity (ROE) was used to measure financial performance. The impact of intellectual capital on financial performance is measured using multiple regression techniques. Correlation analysis is used to identify relationships with intellectual capital components and financial performance. SPSS is used to analyze data and found a significant positive relationship between intellectual capital and firm performance. Findings depict a strong positive relationship between Human capital and firm performance; and structural capital efficiency with firm performance level and the performance intellectual capital of the Sri Lankan Bank. Return on Equity (ROE) was used to measure financial performance. The impact of intellectual capital on financial performance is measured using multiple regression techniques. Correlation analysis is used to identify relationships with intellectual capital components and financial performance. SPSS is used to analyze data. Isanzu (2015) investigated the relationship between intellectual capital and the financial performance of the banks operating in Tanzania. It was discovered that financial performance (ROA) is positively related to human capital efficiency and capital employed efficiency but is negatively related to structural capital efficiency. Janosevic and Dzenopoljac (2015) investigated the interdependence between IC and its components (human, structural, and physical capital) about the financial performance of Serbian companies. The findings show that IC has a positive impact on return on equity (ROE) and a substantial impact on employee productivity (EP), but not on return on assets (ROA). The results indicate that there is a need to boost investments in human capital. Firer and Williams (2003) and Chen (2005) also concluded that firms and investors place greater importance on physical and financial capital than IC (human and structural capital) in South Africa and Hong Kong respectively. Kehelwalatenna and Gunaratne (2012) mentioned in the study conducted using data drawn from 2002 to 2006 from listed financial services and manufacturing sector firms in Sri Lanka. The Public's VAIC been employed to measure the IC and the measurements of value creation efficiencies of capital employed, human capital, and structural capital of



selected firms. The researchers use Pearson's correlation analysis and construct regression models to investigate the said relationships. The main primary analysis results show that IC is positively associated with firm performance and investor response. Also, it is found that investors' level of importance on three components of value creation efficiencies (physical capital, human capital, and structural capital) has not been uniform.

Methodology

The present study sample consists of 24 manufacturing firms and is based on secondary data collected from annual reports of the sampled firms listed under the CSE from 2015 to 2019. The random sampling method was used for selecting the sample and this technique provides an equal chance to select the sample from the target population.

Hypotheses of the study

- H₁: Intellectual capital components significantly impact on the financial performance of listed manufacturing companies in Sri Lanka.
- H₂: There is a significant relationship between intellectual capital and firms' financial performance of listed manufacturing sector companies in Sri Lanka.

Results and Discussion

Multiple Regression Analysis

Table 1. Results of pooled OLS using ROA as the outcome variable

ROA	Coef.	St.Err	t-value	p-value	Sig.
VARC	3.726	2.794	1.33	0.185	
VAHU	0.715	0.160	4.46	0.000	***
STVA	9.274	4.761	1.95	0.054	*
_cons	-1.650	3.154	-0.52	0.602	
Mean dependent var	10.606		SD dependent var		9.731
R-squared	0.347		Number of obs		120.000
F-test	20.523		Prob > F		0.000
Akaike crit. (AIC)	842.516		Bayesian crit. (BIC)		853.666

*** p<0.01, ** p<0.05, * p<0.1

As it is apparent from Table 1 that the coefficient values are revealed to be statistically significant for the association between VAHU and ROA; and STVA and ROA. Further, the association between VARC and ROA is insignificant since the p values are recognized to be immaterial at all the level. Moreover, the R- squared value for the impact of IC dimension on ROA is 0.347 which indicates that only 34.7% of the variation in ROA is defined by explanatory variables. The rest of 65.3% in ROA is simply because of the factors that have not been depicted in the model.

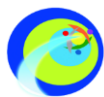


Table 2. Results of pooled OLS using ROA as the outcome variable

ROE	Coef.	St.Err	t-value	p-value	Sig.
VARC	9.054	4.308	2.10	0.038	**
VAHU	0.872	0.247	3.53	0.001	***
STVA	13.048	7.342	1.78	0.078	*
_cons	-1.976	4.864	-0.41	0.685	
Mean dependent var	16.235	SD dependent var			14.336
R-squared	0.284	Number of obs			120.000
F-test	15.356	Prob > F			0.000
Akaike crit. (AIC)	946.471	Bayesian crit. (BIC)			957.621

*** p<0.01, ** p<0.05, * p<0.1

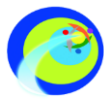
(Non-transforming data.)

By referring to Table 2, R- squared value of 0.284, which is significant (f-test=15.356, p<0.01) at the 0.01 level. It indicates that IC components impact on ROE. Furthermore, the model's coefficient explains the value of f-statistics (0.000) and its significant level indicates the correlation between the dimensions of IC and ROA at the confidential level of 99%.

Conclusions

This research investigated the impact of intellectual capital on the financial performance of 24 manufacturing firms listed on the Colombo stock exchange during the period from 2015 to 2019. In this research, capital employed, human capital and structural capital are used as components of IC and ROA and ROE indexes are used as criteria of financial performance. Despite the fact that intellectual capital is increasingly recognized as an important strategic asset for sustainable competitive advantage, the present study's results also support this statement. Based on regression analysis, structural capital and human capital have a positive and significant association with financial Performance (ROA and ROE). In addition, HU and SC have greater explanatory power in all financial performance models. At the same time, RC has an insignificant and positive association with ROA. Finally, the result reveals that manufacturing firms listed in CSE can benefit more from disclosures on IC, more financial performance. The human capital had a major impact on financial performance and structural capital is found to be the most important variable as it shows that physical and financial assets must be effective and efficient. According to the results, it is revealed that the contribution of various components of intellectual capital is crucial to business growth. The Sri Lanka manufacturing firm should put more significant efforts in increasing the contribution in elements of structural capital and relational capital.

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The level of environmental disclosures in annual reports and firm-specific attributes of Sri Lankan listed companies

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Abstract

Since this is an era of environmental degradation in the wake of continually depleting the ozone layer, climate change & global warming, environmental consciousness in entities' activities has risen in recent years, promoting environmental communication. Thus, environmental disclosures entail informing the public on how successful a firm is in minimizing its negative impacts on the environment. This study aims to examine the association between firm-specific attributes & environmental disclosures of Sri Lankan listed companies. These objectives are addressed through investigating the compliance with environmental aspects of GRI G.4.0 guidelines employing content analysis in the annual reports of 254 companies covering 20 sectors for the year 2018. Moreover, the association between firm-specific attributes and environmental disclosure level are analyzed through the Ordinary Least Square regression model. The study found that the overall level of environmental disclosures is lower in Sri Lankan listed firms. Also, of the 20 sectors analysed, the plantation sector depicts the highest level (19%), while the Investment trust sector depicts the lowest environmental disclosure level (1%). Further, regression results imply that size & ISO 14001 were found to be as significant in determining the level of environmental disclosures. At the same time, there was no significant association between shareholder power, creditor power, financial performance, firm age and environmental disclosure level. The study will add value to the existing body of literature on environmental disclosures, regulators, policymakers & stakeholders highly involved in, interested in and affected by the environmental disclosures.

Keywords: environment disclosure, firm-specific attribute and listed companies

Introduction

Sri Lanka is an emerging country that progresses to build up a “Blue-Green Era” by streamlining the communication network and empowering the public on the importance of conserving and protecting the environment. This was initiated to develop the Sri Lankan economy in making a clean and green environment. Transparency and disclosure represent one of the pillars of corporate governance. Disclosures are considered a strategic tool for a firm



due to financial scandals that happened due to the lack of improper corporate disclosures. As suggested by Owusu-Ansah (1998), disclosures are the communication of information, whether financial or non-financial quantitative, otherwise concerning a company's financial position and performance. Hence, with the increasing demand of stakeholders and various environmental catastrophes, financial reporting expanded its limited scope into incorporating environmental information on a voluntary and mandatory basis.

This study typically attempts to bridge the existing gap between stakeholder interest in the information and the extent of disclosures in annual reports in Colombo Stock Exchange (CSE) listed companies in Sri Lanka as the majority of the studies of the recent Sri Lankan studies focused on the Manufacturing sector in Sri Lanka. This study attempts to investigate the extent and determinants of environmental disclosures concerning all the sectors in CSE to give a much broader view for the decision-makers considering the relative significance of capital markets in national economies and the active role of individual investors in those markets. Moreover, international studies (e.g., Kent & Chan, 2003; Pervan & Visic, 2012) have focused on the theories that drive the environmental disclosures, but few Sri Lankan studies (e.g., Jariya, 2015; Rajapakse, 2003) have given their priority in their studies to explain the environmental disclosure practices incorporating theoretical perspectives. In vein, this study concentrates explicitly on legitimacy theory and stakeholder theory as the need for a body of literature with proper theoretical foundation remains vacant to some extent. Accordingly, to address the theoretical and methodological gap in the existing body of environmental disclosure literature in the Sri Lankan context, this study investigates the level of environmental disclosures and the association between firm-specific attributes and the level of environmental disclosures in annual reports of Sri Lankan listed companies.

Research Question

- Is there any significant association between the extent of environmental disclosure and firm-specific attributes in CSE listed companies?

Research Objective

- to investigate whether there is any significant association between the extent of environmental disclosure and firm-specific attributes in CSE listed companies.



Literature Review

Manager's perceptions regarding stakeholders' value and purpose of response related to companies' environmental disclosure have been investigated by Rajeshwaran and Ranjani (2014) using 99 companies for 2013. The questionnaire has been addressed to the executives responsible for environmental management and reporting and 84% of responses from these managers were then being contrasted with the quality of environment disclosures, measured by GRI guidelines. Descriptive statistics, correlation and regression analysis were employed to analyze the data. Results show a moderate association between manager's perception of various stakeholders and the purpose of responses. Further results indicate that the core purpose of disclosing environmental information by companies is maintaining legitimacy.

Jariya (2015) investigated the level and determinants of environmental disclosures in annual reports of 30 listed manufacturing companies for 2012/13. The level of disclosure is measured by a checklist of 18 items of information. Content analysis and statistical analysis, correlation analysis, multiple regression, and descriptive statistics analysis were used to analyze the study's data. Results indicated that 50.63% of the companies provided corporate environmental information in their annual reports. Of the determinants, the selected firm size is positively associated with the level of environmental disclosure and profitability and listing age has not significantly influenced environmental disclosure factors.

Another study by Jariya (2015) has been conducted in order to examine the extent and content of environmental information disclosure provided in the annual reports of companies listed on the Colombo Stock Exchange (CSE) in Sri Lanka to test whether the size of the company determines the level of disclosure of environmental information with a sample of 60 listed companies in 17 different sectors for the year 2011/12 employing the content analysis. The study's findings reveal that 41 companies (68.33%) provided environmental information in their annual reports and the level of disclosure varies across the industries. It is identified that the highest level of environmental disclosure items is reported under sustainability reporting. Also, findings show that maximum disclosures across all the industries can be seen for the theme "Green product" while the lowest disclosed theme is "Spills." Further it is indicated from the study findings that the relationship between the amount of environmental disclosure and the size of the firms is significantly negative.



Extent and determinants of Sri Lankan listed companies' social and environmental disclosures are examined by Rajeshwaran and Sujenthini (2016) by selecting 100 companies representing 20 different sectors. A checklist based on the Global Reporting Initiative (GRI) guideline (version 3) has been developed to score data into the study. Data were analyzed using descriptive statistics and bi-variant test. Results indicate that there exists a low social and environmental disclosure practice in Sri Lankan listed companies. Moreover, further correlation results indicate that the firm's age is negatively correlated with social and environmental disclosure. Firm size, profitability and leverage are being positively related to social and environmental disclosures. The studies in the Sri Lankan context have also provided mixed results regarding the factors affecting the environmental disclosures in annual reports.

Methodology

The population under consideration of this study is all quoted companies representing 20 business sectors in the CSE. Currently, 296 companies are listed on the CSE. All companies CSE were selected for this research due to the lack of attention on all sectors regarding the environmental disclosures of annual reports in Sri Lanka and the majority of the studies were confined only on examining the environmental disclosure on of manufacturing sector companies in Sri Lanka. Hence it emphasized the need for a broader view on environmental disclosure, which can generalize the findings to all companies to assist decision-makers. The sample of this study consists of 254 firms representing every 20 sectors for 2017/2018.

The sample represents about 85.81% of the population under consideration. The overall study is based on 254 observations. The sample is determined based on the convenient sampling technique that relies on collecting data from the population that is conveniently, readily available for the researcher to reach. Prior researchers have also adopted this sampling technique for the purpose of selecting a sample in their study. Data were collected mainly through the secondary data sources. The researcher widely utilized the company annual reports in collecting data on the disclosures of environmental aspects by companies for the year 2017/2018, representing the latest annual report data to make the study more contemporary and up to date. Annual reports have been widely used to analyze corporate social reporting analysis by various authors for their credibility (Jariya, 2015). Further details were obtained from company websites and the Colombo Stock Exchange website.



Results and Discussions

Table 1. Model Summary

R	R Square	Adj. R Square	SE of the Estimate	Durbin-Watson
.426 ^a	.182	.162	.16823	1.778

As per table 1, the R Square value of 18.2% implies that 18.2% variation in the environmental disclosure level is jointly explained by the explanatory variables employed in the study. The remaining 81.8% of variation is explained by other factors were excluded from the model. Also, the model goodness of fit was 18.2% as indicated by R Square value. As suggested by the adjusted R Square value of 0.162 near zero, the goodness of the model is further justified, indicating a lower level of errors. The Durbin Watson value of 1.77, which is lower than 2.5, signifies that variables used for the model matched for the study and there no autocorrelation between the variables.

Table 2. ANOVA Test

Variable	Sum of Squares	df	Mean Square	F	Sig.
Regression	1.552	6	.259	9.138	.000 ^b
Residual	6.990	247	.028		
Total	8.542	253			

The above ANOVA table tests the acceptability of the model from a statistical perspective. The ANOVA test F ratio results are 9.138 with the p-value of 0.000 indicates that the model is accepted statistically.

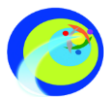
Table 3. Regression Coefficients

Variables	Unstandardized Coefficients		t	Sig.	
	Beta	Std. Error			
Constant		-.314	.116	-2.701	.007
SP	.000		.001	-.563	.574
CP	.000		.000	.736	.462
ROA	.000		.000	-.146	.884
AGE	.000		.000	-.792	.429
SIZE	.028		.007	4.002	.000
ISO	.133		.033	3.987	.000

According to the regression results above, the regression model of the study can be redefined as follows. Accordingly, size & ISO 14001 certification is considered as the significant variables of the study.

$$Y = -0.314 + 0.028 \text{ SIZE} + 0.133 \text{ ISO} + e$$

Since the B value is 0.000 and the p-value is lower than 0.05, there was no relationship between shareholder power and environmental disclosures and is



insignificant. The coefficient between creditor power and environmental disclosures is 0.000. The p p-value is greater than 0.05. It implies that there is no relationship between environmental disclosures and creditor power is not a significant factor in determining firms' environmental disclosure level. Results show a negative and insignificant relationship between environmental disclosures and firm financial performance ($B=-0.00$, $P<0.05$). The coefficient value of 0.000 and p-value of 0.429 suggests that firm age is not significant in determining the environmental disclosure level and there is no relationship between firm age and environmental disclosure level.

Further results indicate a significant positive relationship ($B=0.028$, $P<0.05$) between environmental disclosures and firm size. Moreover, firm size is considered to be an attribute in determining the environmental disclosure level. ISO 14001 certification is considered significant in determining the level of environmental disclosures since p value is 0.000 and B value of 0.133 shows a positive relationship between ISO 14001 and environmental disclosure level.

Table 5. Summary of results of hypothesis

Hypothesis	Statistical Tool	P-Value	Validation
Ha ₁ : There is a significant association between shareholders' power and the extent of environmental disclosures.	Regression analysis	.574	Not Supported
Ha ₂ : There is a significant association between creditors' power and the extent of environmental disclosures.	Regression analysis	.462	Not Supported
Ha ₃ : There is a significant association between firm financial performance and the extent of environmental disclosures.	Regression analysis	.884	Not Supported
Ha ₄ : There is a significant association between firm age and extent of environmental disclosures.	Regression analysis	.429	Not Supported
Ha ₅ : There is a significant association between firm size and the extent of environmental disclosures.	Regression analysis	.000	Supported
Ha ₆ : There is a significant association between ISO 14001 certification and the extent of environmental disclosures.	Regression analysis	.000	Supported



Conclusions and Recommendations

In an area where environmental concerns are highly debated, this study investigates the association between firm-specific attributes & environmental disclosure of 254 sample companies across 20 sectors listed in the CSE for the year 2018. Firm-specific attributes considered in this study are shareholder power, creditor power, financial performance, firm age, and firm size & ISO 14001 certification. The researcher found that shareholder power, creditor power, financial performance, firm age is not significantly associated with environmental disclosure level where H_{a1} , H_{a2} , H_{a3} , H_{a4} are rejected accordingly. However, firm size & ISO 14001 certification were found as significant firm-specific attributes in determining the level of environmental disclosures of listed firms & they are positively associated with environmental disclosure level. Hence H_{a5} & H_{a6} are accepted accordingly. Furthermore, researcher found that the Plantation sector companies have recorded highest level of compliance with environmental aspects of GRI guidelines. In contrast, Investment Trust companies recorded the lowest level of compliance with GRI guidelines. Overall, the researcher concludes that the level of environmental disclosure of firms in Sri Lanka according to environmental aspects of GRI guidelines is at a very lower level in year 2018.

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Track 2: Finance



Easter attack 2019 and Hotel and Travel sector in Sri Lanka: An event study approach

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Abstract

In this paper, the impact of the Easter Sunday Attack on the Hotel and Travel Sector in Sri Lanka has been investigated by using the Event Study Methodology following the Efficient Market Hypothesis (EMH). The Market Model is used in analyzing the Abnormal Returns of stocks by using daily stock prices on thirty-three (33) companies belong to Hotel and Travel Sector in CSE and for the Market Return data, daily ASPI is considered. This empirical study's major objective is to measure and quantify the effects of the Easter Sunday attack on the Hotel and Travel Sector with the Market Efficiency by using Graphical presentation of Average Abnormal Return and Cumulative Average Abnormal Return and t - Statistics Analysis. Consistent with the observed findings, the market has been identified as an efficient and negatively responded market regarding Easter Sunday Attack's event since the quick drop on the event day. Practically, the investors of Hotel and Travel Sector Companies will be able to trade securities in a market where the possibility of beating was eliminated.

Keywords: easter Sunday attack 2019, efficient market hypothesis, event study methodology, hotel and travel sector and Sri Lanka

Introduction

Sri Lanka is considered an extremely persecuted country by the thirty years of brutal war since the 19th century, causing the loss of thousands of lives. On 21st April 2019, Sri Lanka experienced great destruction caused by terrorism again ten years after the Civil war ended. Eight (8) suicide bombs in different places all over Sri Lanka; (3) took place in most famous hotels in Colombo, another (3) has blasted in Catholic Churches in which Catholics were attending the Easter service. Other than that, the last two (2) bombings had been exploded in a Housing Complex and a Guest House. The attack was capable of killing about 250 civilians and damaging the physical property in which bombings occurred.

In this study, the Event Study methodology is used as the analyzing tool of the event of Easter Sunday Attack to solve the research problem states that the Stock Prices of Hotel and Travel Sector's Informational Efficiency regarding a Civil Disturbance event. Accordingly, the main research objective of this study is to find out whether the Sri Lankan Hotel and Travel Sector



has been affected by the Easter Attack as well as check whether a significant impact has happened on Stock prices just after the Event and it will be achieved by following Research Objectives, (1) Has the Easter Sunday Attack affected the stock prices of the listed companies belong to the Hotel and Travel Sector in Colombo Stock Exchange? if so, in which degree? (2) How did the Easter Sunday Attack affect the listed companies' stock prices belong to the Hotel and Travel Sector in Colombo Stock Exchange on Event Day?

Literature Review

Fama (1970) has observed the concept of the Efficient Market Hypothesis (EMH) to check whether stock prices have responded efficiently for the new information. In the Sri Lankan context, Abeysekera (2001) has concluded that CSE does not provide evidence for Weak Form Efficiency. Jayakodi (2017) argued that different industries in CSE experienced the impact of terrorist attacks in a heterogeneous manner, depending on the nature of the attack. Simultaneously, Mackinlay (1997) has practically pointed out the Event Study methodology.

Methodology

The study focuses on the Easter Attack on 21st April 2019 in order to test the event's impact on the Hotel and Travel Sector in which listed 33 companies. The Event Study Methodology is the method which considers the 23rd April 2019 as the Event Day because 21st April was a Sunday and on 22nd April, the government has imposed a whole country curfew. Figure 1 shows the Event Timeline showing the Event day, Event Window, and the Estimation Window. Accordingly, the Daily closing Stock Prices are used for Stock returns of Selected companies, and for calculating the Market Return, daily ASPI is considered. Stock price data and Market Index (ASPI) data are extracted from CSE Data Library, while the source for the news related to Easter Attack is BBC News and Daily News. Although there are two expected methods for Normal Return, Mean Adjusted Return Model and Market Model and the results from both techniques are somewhat similar, the market model is mostly preferred because it does not impose any restrictions. The Market Model is shown by equation 1, which is used in obtaining the Actual Return of i^{th} security and it provides the base in calculating the Abnormal Return (AR_i) for each day shown by Equation 2.

$$\widehat{R}_{i_T} = \alpha_i + \beta_i R_{m_T} + \varepsilon_{i_T} \quad (1)$$

Where,



\widehat{R}_{i_T} = Normal Return of Security i for period t
 R_{m_T} = Return of Market Portfolio for the period of t
 ε_{i_T} = Zero Mean Disturbance Term
 $AR_{i_T} = R_{i_T} - \widehat{R}_{i_T}$ (2)

Where,

\widehat{R}_{i_T} = Normal Daily Stock Return on T
 R_{i_T} = Actual Daily Stock Return on T
 AR_{i_T} = Abnormal Return on T

To perform an analysis for Hotel and Travel Sector, the Average Abnormal Returns (AAR_i) for each day can be calculated as equation 3.

$$AAR_{i_T} = \frac{1}{N} \sum_{i=1}^N AR_{i_T} \quad (3)$$

Where,

AAR_{i_T} = Average Abnormal Return on T
 N = Number of Shares / Companies
 AR_{i_T} = Abnormal Return on T

The Cumulative Average Abnormal Returns (CAAR_i) for each day are calculated by aggregating AAR_i s through the time as equation 4.

$$CAAR_{i_T} = \sum_{T=T_0}^{T_2} AAR_{i_T} \quad (4)$$

Where,

AAR_{i_T} = Average Abnormal Return on T
 $CAAR_{i_T}$ = Cumulative Average Abnormal Return on T

To test whether CAAR_s are significant during the event period, Schimmer and Muller, 2015, introduced a formula for t-statistic as equation 5.

$$t - \text{statistic } (t) = \frac{CAAR_{i_T}}{\sigma_{AAR_T} / \sqrt{T}} \quad (5)$$

Where,

$CAAR_{i_T}$ = Cumulative Average Abnormal Return on T



σ_{AAR_T} = Standard Deviation of Daily Average Abnormal Return on T
 \sqrt{T} = Square Root of the total number of days from T₀ to T₂

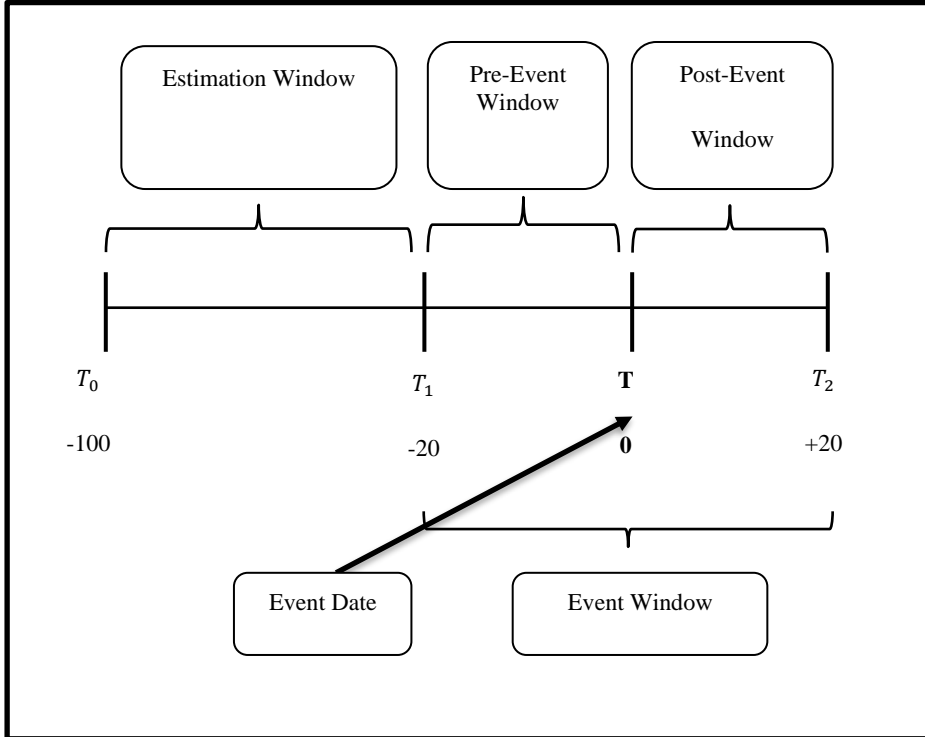


Fig 1. Event Timeline

Results and Discussions

Drakos (2004) has concluded that the Travel and Tourism Sector are more sensitive to the terrorist attacks. Figure 1 shows that CAAR declined from day -58 to -19 with negative -0.008, although CAAR was rising during -81, -58 window, caused by AAR was continuously getting negative. In accordance with figure 2, a sudden drop has happened on -1 day, and after that, CAAR was declining in the rest of the Event Window. CAAR had a significant quick drop at a 5% level by the event day, but CAARs show significant and continuous declining rest of the event window.

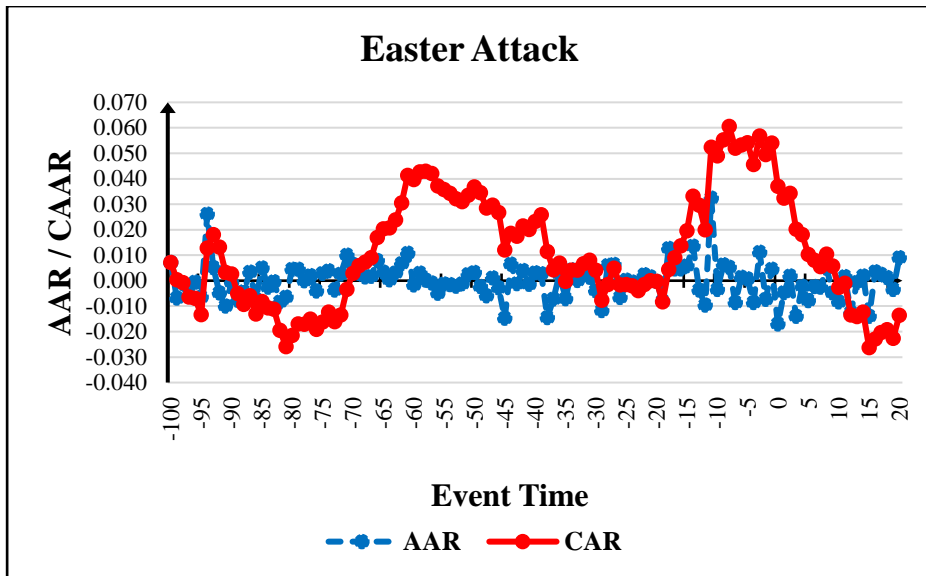


Fig 2. 80 days Estimation Window (-100, -20) and 41 days Event Window (-20, +20)

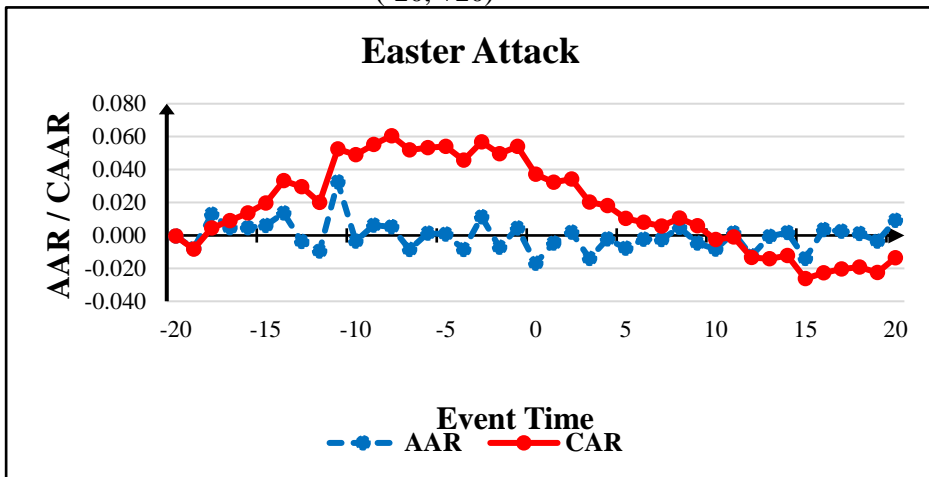


Fig 3. 41 days Event Window (-20, +20)

According to table 1, the quick drop in CAAR on Event Day was significant at 5%, but the significance has remained until day +5. Although the stock price was absorbed the information quickly, continuously price has been changing even after the event day.



Table 1. t - test results for -10, +10 window

Event Time	CAAR	t-test	Significance/Not Significant at 5%	Event Time	CAAR	t-test	Significance/Not Significant at 5%
-10	0.0490	11.4065***	Significant	1	0.0324	4.9888***	Significant
-9	0.0552	9.1473***	Significant	2	0.0343	4.3483***	Significant
-8	0.0605	30.5689***	Significant	3	0.0203	3.6249***	Significant
-7	0.0520	5.8462***	Significant	4	0.0181	2.4748**	Significant
-6	0.0533	34.3492***	Significant	5	0.0103	2.3975**	Significant
-5	0.0541	13.7743***	Significant	6	0.0081	1.1379*	Not Significant
-4	0.0456	7.5905***	Significant	7	0.0056	1.6679*	Not Significant
-3	0.0568	8.8450***	Significant	8	0.0105	1.3831*	Not Significant
-2	0.0495	15.9546***	Significant	9	0.0057	1.1539*	Not Significant
-1	0.0540	7.5474***	Significant	10	-0.0026	-0.3379	Not Significant
0	0.0371	3.4702***	Significant				

*** Significance at 1%, ** Significance at 5% *Significance at 10%

Conclusions and Recommendations

This paper concludes although the results show that the significant quick drop in CAAR (0.054-0.037) by event day, the continuous declining trend in CAAR does not provide evidence for semi-strong form efficiency in Hotel and Travel Sector since the post-event window CAARs are significant at 5%. That means, if considerable time is taken for adjusting stock prices, the stock market will not be a semi-strong efficient market. However, it is crystal clear that the Hotel and Travel Sector has been affected by Easter Attack negatively as per the behavior of CAAR. Further studies can be recommended to find the exact impact of an attack by keeping control of the news other than terrorist attacks possible to release.

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Stock market liquidity and firm performance: Evidence from a Frontier Market

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Abstract

This paper examined the relationship of stock market liquidity on Sri Lankan Non-Financial firms' performance incorporated in the Colombo Stock Exchange (CSE) from 2015 to 2019. The ordinary least squares regression model was used to evaluate the relationship. Empirical findings endorse the stock market liquidity consequences of firm performance: stronger stock liquidity results in the firm's higher performance. The empirical findings showed a positive relationship between stock market liquidity as measured by the Amivest measure and the firm output as measured by Tobin's Q. *Keywords: Amivest measure, Colombo Stock Exchange, firm performance, stock market liquidity and Tobin's q*

Introduction

One of the cornerstones of consumer microstructure is stock market liquidity and was considered as a financial literature issue of interest. The high risk of illiquidity in both developed and new markets results in higher premium levels. Liquidity on the stock exchange plays a key role in assessing demand growth and productivity (Singh et al., 2015). There is a strong theoretical basis for inferring that market liquidity will positively affect firm performance because stock shares are the currency that controls both cash flow and control rights. Tradability of this currency plays a key role in corporate governance, assessment, and efficiency (Fang et al., 2009). A positive relationship between liquidity and performance is, therefore, a priori quite conceivable. Perceive whether there is any relation between liquidity and firm performance and symptoms of this correlation is the main objective of this study. Furthermore, there are no previous investigations in Sri Lanka regarding this subject. Therefore, the present study endeavors to fill out this gap in the literature by investigating the impact of liquidity on the firm's performance.

Literature Review

Liquidity is a primary predictor of global financial markets. There is an increasing body of literature on the effect of liquidity on firm performance. Singh and Gupta (2015) state that a positive relationship between liquidity



and firm performance, while Batten et al., (2017) found a negative impact of liquidity on firm performance in recent literature.

Methodology

Sample Selection

Daily and monthly stock return data, Firm financial data, and other relevant data were collected from the Colombo Stock Exchange in Sri Lanka (CSE). Fifty companies for five years from 2015 to 2019 have been selected through a stratified random sampling method by considering industries as the strata for this investigation and the Ordinary least squares (OLS) method has been used to regress the regression. The sample has been arrived at by omitting companies from the financial services industry.

Definition of variables

Table 1. Variable Definitions

Variables	Definition	Equation
Q	Tobin's Q	$Q_{it} = \frac{\text{Market value of Assets}}{\text{Book value of Assets}}$
OIP	Operating Income-to-Price ratio	$OIP = \frac{OI \text{ after depreciation}}{\text{Market Value of Euty}}$ (Fang et al., 2009)
LEVERAGE	Financial Leverage ratio	$LEVERAGE = \frac{\text{Market Value of Equity}}{\text{Market Value of Assets}}$ (Fang et al., 2009)
OIOA	Operating income-to-assets ratio	$OIOA = \frac{OI \text{ after depreciation}}{\text{Book Value of Assets}}$ (Fang et al., 2009)
LR	Amivest Liquidity measure	$LR_i = \frac{\sum_y VK_{id}}{\sum_y R_{id} } = \frac{\sum_{n=1}^{Nt} P_n V_n}{\sum_y \left(\left(\frac{P_{id}}{P_{i(d-1)}} - 1 \right) \cdot 100 \right)}$ (Goyenko et al., 2009)
DUM_SP SL 20	S&P SL20 Index	
LOG_AGE	Natural logarithm of firm age	(Gompers et al., 2003)
LOG_BVTA	Natural logarithm of book value of assets	(Gompers et al., 2003)

Liquidity Measures

The primary liquidity measure used in this investigation is the Amivest measure (LR), introduced by (Goyenko et al., 2009).

$$LR_i = \frac{\sum_y VK_{id}}{\sum_y |R_{id}|} = \frac{\sum_{n=1}^{Nt} P_n V_n}{\sum_y \left(\left(\frac{P_{id}}{P_{i(d-1)}} - 1 \right) \cdot 100 \right)}$$

(1) Where,

VK_{id} = Daily share volume

R_{id} = Return of stock i on day d



Firm Performance

A proxy for Tobin’s Q will be used as the key indicator of firm performance in analyzing the relationship between stock market liquidity and firm performance. Q is measured as the market value of assets divided by the book value of assets measured at the end of the company's fiscal year.

$$Q_{it} = \frac{\text{MarketvalueofAssets}}{\text{BookvalueofAssets}} = \frac{1}{OIP_{IT}} \times \frac{1}{LEVERAGE_{it}} \times OIOA_{it} \text{ (2)}$$

Research Models

$$Q_{it} = a + bLOG_LR_{it} + cDUM_SPSL20_{it} + dLOG_AGE_{it} + eLOG_BVTA_{it} + error_{it} \text{ (3)}$$

$$OIP_{it} \text{ Or } LEVERAGE_{it} \text{ or } OIOA_{it} = a + bLOG_LR_{it} + cDUM_SPSL20_{it} + dLOG_AGE_{it} + eLOG_BVTA_{it} + error_{it} \text{ (4)}$$

Control Variables

Natural logarithms of total assets (LOG_BVTA), dummy variables indicating the inclusion in the S&P SL20, the natural logarithm of firm age (LOG_AGE) are the control variables.

Results and Discussions

Eq. (3) is first examined using pooled OLS. Table 2 contains the OLS regression estimates of the model. The report that LOG_LR has a positive relationship with Tobin’s Q with a coefficient of 0.104 significant at one percent level. These results support Hypothesis H₁: there is a significant relationship between stock market liquidity and firm performance. Liquid stocks have a higher firm performance as measured by Q. The results appear economically significant as well and this outcome is indistinguishable to the findings of (Singh & Gupta, 2015). The pooled specification's marginal effects indicate that an improvement in the liquidity of one standard deviation contributes to an improvement in Q of 0.104. S&P SL20 companies have low firm performance than non-S&P SL20 companies, as DUM_SP SL20 has a negative coefficient, although it is not significant. Older firms tend to have higher firm performance as the coefficient on LOG_AGE in the pooled regression is positive. LOG_BVTA has a significant negative coefficient, which implies that small companies have a higher firm performance on average.

Table 2. Regression results of Impact of Stock Market Liquidity on Firm Performance

Explanatory Variable	Model
INTERCEPT	4.066***



LOG_LR	0.104***
DUM_SP_SL20	-0.006
LOG_AGE	0.058
LOG_BVTA	-0.207***
Adj. R-squared	0.14
Prob(F-statistic)	0.000

Pooled ordinary least squares (OLS) regression results for the model $Q_{it} = a + bLOG_LR_{it} + cDUM_SP_SL20_{it} + dLOG_AGE_{it} + eLOG_BVTA_{it} + error_{it}$ (3), are shown in table 2. Definitions of variables are in Table 1. Coefficient estimates are shown in bold. *** (**) (*) indicates significance at 1% (5%) (10%) two-tailed level.

Research model- component of Q

To gain more perspective into the source of higher firm performance for high liquidity stocks, Q is divided into three components: operating income-to-price ratio, financial leverage ratio, and operating income-to-asset ratio. It was in Eq. (3); each of its components replaces q. For each of the three dependent variables, pooled OLS results are shown in Table 3.

First thing, Q is replaced by the operating income-price ratio, OIP, in Eq. (3) in that case. This ratio captures investor perceptions of future growth and the risk of operating earnings. Estimated coefficients are shown in column 1 of Table 3. As shown by the panel, the liquidity of the stock market does not significantly affect OIP. Next, LEVERAGE is used as a dependent variable in Eq. (3). LEVERAGE measures the fraction of equity in the capital structure of a company. Stocks with high stock market liquidity tend to have a higher share of equity in their capital structure or a lower share of financial leverage. The coefficient estimates for this specification are shown in column 2 of Table 3. Finally, the operating income-to-assets variable, OIOA, is used in Eq. (3) as a response variable. Coefficient estimates are shown in column 3 of Table 3. High stock market liquidity leads to higher operating profitability

Table 3. Research model with OIP, LEVERAGE, and OIOA as dependent variables

Dependent variable	OIP	LEVERAGE	OIOA
	1	2	3
INTERCEPT	-0.123	1.791***	0.006
LOG_LR	0.000	0.016**	0.011***
DUM_SP_SL20	-0.024	0.134*	-0.058**
LOG_AGE	0.012	0.057**	0.003
LOG_BVTA	0.009	-0.072***	-0.005
Adj. R-square	-0.01	0.11	0.05

Pooled ordinary least squares (OLS) regression results for the research model OIP_{it} or $LEVERAGE_{it}$ or $OIOA_{it} = a + bLOG_LR_{it} + cDUM_SP_SL20_{it} +$



$dLOG_AGE_{it} + eLOG_BVTA_{it} + error_{it}$ (4), are shown in Table 3. Definitions of variables are in Table 1. Coefficient estimates are shown in bold. *** (***) (*) indicates significance at 1% (5%) (10%) two-tailed level.

Conclusions and Recommendations

This paper investigates the impact of stock market liquidity on firm performance. To provide supporting evidence, the Ordinary Least Squares regression model is employed. The study shows that a positive relationship exists between stock market liquidity and firm performance as measured by Tobin's q indicating that increment in stock market liquidity enhances the firm's performance, thus leading to the acceptance of H1: there is a significant relationship between stock market liquidity and firm performance. Furthermore, empirical results reveal that Older and, Small firms excluded in S&P SL 20 firms have high firm performance. The findings of this paper are similar to the findings of (Fang et al. 2009), (Liu et al., 2009), and (Singh et al. 2015). Besides, stock market liquidity has a significantly positive impact on the Financial Leverage ratio and Operating income-to-assets ratio. These findings suggest to the firm's managers that they should highly consider about the stock market liquidity when improving the firm's performance. Furthermore, there are no prior investigations regarding this area in Sri Lanka. Therefore, beneficial intelligence can be earned to the interested parties regarding the relation between stock market liquidity and firm performance through this study.

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Asset pricing with liquidity risk: Evidence from a Frontier Market

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Abstract

This study aims to analyze the relationship between stock returns and liquidity risk while taking into account the time-varying characteristics of illiquidity on the Colombo Stock Exchange from 2015-2019 and taking into account the effect of liquidity level, using the Generalized Method of Movements (GMM) framework model to assess the persistence of illiquidity stocks. The updated version of Amihud Illiquidity (Amihud, 1986) is a contribution that represents illiquidity and research across the time-series relationship between liquidity and return. The price of liquidity risk and its effect on expected returns are tested empirically using the conditional liquidity adjusted capital asset pricing model (LCAPM), where stock returns are cross-sectionally dependent on market risk and three additional betas ($\beta^1, \beta^2, \beta^3$) that capture different aspects of illiquidity and its risk. The results show some support for the conditional capital asset pricing model (CAPM), but the results are not robust to alternative requirements and estimation methods. The total effect of liquidity risk is 0.11%, and illiquidity is 2.5% per year. The total annualized illiquidity premium is therefore found that 2.61% in the Colombo stock exchange.

Keywords: asset pricing, Colombo Stock Exchange, generalized method of movements and liquidity risk

Introduction

Liquidity has a significant role in financial markets by improving the sharing of risk and improving trade efficiency. Early literature on the impact on asset prices of liquidity rates indicates that illiquid stocks attract a price premium. A more recent section of the literature examines the connection between liquidity risk and returns of assets. This study aims to examine how liquidity risks and common liquidity are influenced by the liquidity adjusted asset pricing model (LCAPM), with special illiquidity proxies, in which the market effects are also correlated to the probabilities of variations in individual securities liquidity. Based on the background, the current study aims to fill a

¹In this study, it will use liquidity and illiquidity interchangeably. Both terms infer that an investor should receive a premium for the associated risk of holding assets with illiquidity cost and risk.



gap in the existing literature by addressing the following research problem as, "How asset prices are affected by liquidity risk and commonality in liquidity". If liquidity is persistent, an investor can estimate tomorrow's liquidity level with the data of today. Therefore, it is crucial to estimate if the liquidity level is persistent instead of assuming that persistence exists. According to the objective of the study, research questions are as follows:

- Is there any relationship between liquidity risk and asset pricing?
- How does liquidity risk affect asset prices in equilibrium?
- How do the effects of liquidity risk vary in different market states?

Literature Review

It is estimated in the literature that the level of liquidity is priced. Acharya and Pedersen (2005) found that the liquidity risk was positively priced using the Amihud liquidity measure (ALM) and the liquidity-based asset pricing model. Amihud and Mendelson, (1986) were the first to examine the relationship between liquidity, asset prices, and how this is interlinked with investors holding period, and found that investors trading more often would prefer to hold assets with lower transaction costs. Brennan et al., (1998) examine the relationship between the illiquidity premium and returns while measuring the alternative liquidity proxy that measures price impact and market depth. Jones (2001) finds evidence that the expected returns are the same when the spread is large. While using the turnover ratio as a measure of liquidity, he finds that a high turnover ratio leads to lower returns on stocks. Using daily data Hasbrouck and Seppi (2001) get mixed results. He finds that the relationship between returns and liquidity significantly varies in scope and direction. Kumar and Misra (2019) results suggest that liquidity forms part of the systematic and idiosyncratic risk.

Therefore, failure to incorporate it into portfolio formulation strategies may lead investors on the National Stock Exchange (NSE) to make erroneous investment decisions. Liquidity is a multidimensional concept. Hence, the studies on liquidity usually consider multiple liquidity measures in research. Using Amihud's illiquidity measure as the only measure in modelling asset pricing is one of this study's limitations.

Methodology

The data used in this study are collected from several sources—daily frequency data on all common stocks available on CSE. The data set used in the study covers the period from 2015 to 2019 and in the population of this study includes all the companies listed in the Colombo stock exchange in Sri Lanka, which does not include investments, financial intermediaries, banks,



insurance companies, private equity, real states. Fifty companies were selected under a stratified random sampling method. The data set includes information on the return on the market and firms, market capitalization, turnover, and the risk-free rate. Only ordinary shares are included in the selection, and these are adjusted for dividends—the empirical work on an equal-weighted market portfolio.

Portfolio Construction

It is formed illiquidity portfolios during the period 2015-2019 for each year. Firstly, at the beginning of each year, build ten illiquidity portfolios based on daily illiquidity calculations by employed daily return and volume data from previous years. The primary test is defined in terms of equally-weighted returns and illiquidity for the portfolio of markets.

Illiquidity measure

There are several liquidity measures and proxies; this research uses the (Amihud, 2002) illiquidity factor. The ALM is a measure of illiquidity because it measures the price impact of trading in percentage; a higher outcome hints at a higher level of illiquidity. The formula for the ALM is presented as follows:

$$ILLIQ_t^i = \frac{1}{Days_t^i} \sum_{d=1}^{Days_t^i} \frac{R_{td}^i}{V_{td}^i} \dots\dots\dots$$

...Equation 1

Source: Amihud and Mendelson (1986)

Unconditional LCAPM

The researcher calculates an unconditional model to estimate the liquidity-adjusted CAPM. For example, under the conditions of independence over time of dividends and liquidity costs, and the unconditional outcome is obtained. Nonetheless, it is empirically continuous. The researcher is, therefore, based on the assumption that developments in illiquidity and returns are constantly conditional. This assumption yields the unconditional result that,

$$E(r_t^p - r_t^f) = E(C_t^p) + \lambda \beta^{1p} + \lambda \beta^{2p} - \lambda \beta^{3p} - \lambda \beta^{4p} \dots\dots\dots \text{Equation 2}$$

Where,

$$\lambda = E(\lambda_t) = E(r_t^M - c_t^M - r_t^f)$$



$$\beta^{1p} = \frac{cov(r_t^i, r_t^M - E_{t-1}(r_t^M))}{var((r_t^M - E_{t-1}(r_t^M)) - [c_t^M - E_{t-1}(c_t^M)])}$$

.....Equation 3

$$\beta^{2p} = \frac{cov((c_t^i - E_{t-1}(c_t^i)), c_t^M - E_{t-1}(c_t^M))}{var((r_t^M - E_{t-1}(r_t^M)) - [c_t^M - E_{t-1}(c_t^M)])}$$

.....Equation 4

$$\beta^{3p} = \frac{cov((r_t^i, c_t^M - E_{t-1}(c_t^M))}{var((r_t^M - E_{t-1}(r_t^M)) - [c_t^M - E_{t-1}(c_t^M)])}$$

.....Equation 5

$$\beta^{4p} = \frac{cov((c_t^i - E_{t-1}(c_t^i)), r_t^M - E_{t-1}(r_t^M))}{var((r_t^M - E_{t-1}(r_t^M)) - [c_t^M - E_{t-1}(c_t^M)])}$$

..... Equation 6

Source: Amihud, Y., & Mendelson, H. (1986).

β^{1p} - covariance between the return of a security and the market return.

β^{2p} - covariance between asset's illiquidity of a stock and the market illiquidity.

β^{3p} - covariance between a security's return and market liquidity.

β^{4p} - covariance between a security's illiquidity and the market return.

Results and Discussions

Table 1. Summary Statistics - Properties of illiquidity portfolios

Portfolio	β^{1p} (.100)	β^{2p} (.100)	β^{3p} (.100)	β^{4p} (.100)	$\beta^{Net.p}$ (.100)
1	50.03	0.62	-0.24	-0.05	50.95
2	40.25	0.07	-0.26	-0.24	40.82
3	88.04	0.02	-0.36	-0.26	88.68
4	85.72	0.09	-0.52	-0.24	86.57
5	74.02	0.02	-0.54	-0.43	75.01
6	69.52	0.84	-0.67	-0.59	71.62
7	81.94	0.29	-1.18	-0.44	83.86
8	44.49	0.06	-1.45	-0.68	46.68
9	82.12	0.74	-1.48	-0.82	85.16
10	57.14	1.51	-1.78	-0.95	61.38

Looking at the market beta β^{1p} denotes the covariance between the return of a security and the market return. The market betas have a positive value linear with the required security return and have positive with the liquidity stocks, and its value is large. And also, liquidity betas, β^{2p} have different values in illiquidity, while β^{3p} start- off with a small negative value and the sign of β^{3p} varies from small negative values to large negative values in portfolios of each security and has an obscure pattern in the test portfolios. And also, there are no positive values these all testing portfolios β^{3p} value got negative



values. If the researcher interprets β^{3p} in an economic sense, the investors expect returns of the stocks in the liquid companies to remain stable in times of illiquidity in the market. Said differently, negative values of β^{3p} for portfolio 1 to 10 means that the returns of the portfolios react too much to market illiquidity, i.e., high sensitivity of returns to market liquidity. The liquid stock (portfolio 10) seems to have a higher sensitivity of returns to market illiquidity. Conclusion this is interesting on its own, but since the most illiquid portfolios are not supported in terms of statistical significance, they should be careful in this consideration. And also, β^{4p} is negative for all liquid securities, though this value is small and has an obscure pattern. β^{4p} seem to be increasing slowly between portfolio 1 and 10. And these portfolios are most sensitive to market returns.

A few assumptions are needed to study the relationship between liquidity risk and expected returns, and some model constraints are set. To test this relation using the General Method of Moments (GMM) framework by carrying out a cross-sectional regression of portfolios. Running GMM generates similar estimates as the traditional cross-sectional regression or using pooled OLS, but GMM also enables serial correlation and takes into account the pre-estimation of betas. The application of GMM in empirical asset pricing is provided in Cochrane (2001).

According to that firstly, set a constraint that the risk premium for the betas is the same, defined as,

$$\beta^{net.p} = \beta^{1p} + \beta^{2p} - \beta^{3p} - \beta^{4p}$$

..... Equation 7

Which makes liquidity adjusted CAPM:

$$E\left(r_t^p - r_t^f\right) = \alpha + kE(c_t^p) + \beta^{net.p}$$

.....Equation 8

Where the researcher allows a nonzero intercept, α , even though Acharya and Pedersen (2005) claim that this intercept should zero.

Table 2. Asset Pricing: Model Testing for Illiquidity Sorted Portfolios

	Constant	$E(c^p)$	β^{1p}	β^{2p}	β^{3p}	β^{4p}	$\beta^{net.p}$	R^2
1	-0.201*** (-2.774)	0.025 (-)					0.250** (1.270)	0.122 (0.115)
2	-0.123 (-1.155)	-0.01 (-0.534)					0.702 (0.853)	0.225 (0.223)
3	-0.144** (-2.201)		0.164 (0.155)					0.123 (0.121)



4	-0.203*** (-2.279)	0.025 (-)	0.520 (0.138)				0.717* (1.184)	0.223 (0.222)
5	0.148* (1.182)	0.04 (0.128)	-0.260 (-0.482)				0.382** (1.192)	0.308 (0.307)
6	0.175** (2.232)		-0.375 (-0.106)				0.548** (1.142)	0.210 (0.208)
7	0.122* (1.175)	0.025 (-)	0.207 (0.165)	0.079 (0.105)	-0.805* (-1.121)	-0.349* (-1.724)		0.381 (0.379)
8	-1.325* (-1.191)	0.017 (0.947)	0.274 (0.198)	0.026 (0.217)	-0.694* (-1.182)	-0.161* (-1.120)		0.441 (0.439)

For specific configurations, the average holding period k for illiquidity sorted portfolios is calibrated to 0.025. This implies that it takes $1/0.025 \cong 40$ months for all stocks to be turned over once, which corresponds to investors holding, and this value is obtained by the averaging turnover of test portfolios.

To isolate the effect of liquidity risk, β^{2p} , β^{3p} and β^{4p} over traditional market risk, β^{1p} , and liquidity level, $E(c^p)$, consider the following model,

$$E(r_t^p - r_t^f) = \alpha + kE(c_t^p) + \lambda^1 \beta^{1p} + \lambda \beta^{net.p} \dots \dots \dots \text{Equation 9}$$

This relation is estimated with k at its calibrated value. In this specification, $\beta^{net.p}$ is still significant (at 5% and 1%), but β^{1p} seem to produce relatively small values while being significant. Equation (2), (5) and (8) produce quite different results when allowing k to be free parameter and $\beta^{net.p}$ has different in value, while getting a small positive value of β^{1p} and small increased value of $E(c^p)$. In equation (6), set $k = 0$, which leads to support for $\beta^{net.p}$. It is also worthy of note that the negative value of β^{1p} in equation (5) and (6) does not mean a negative risk premium λ^M in the market. Since it has included β^{1p} as a part of $\beta^{net.p}$, simply need to add the coefficient of $\beta^{net.p}$ to get the correct value. For instance, in Equation (5) in Table 2 means that,

$$E(r_t^p - r_t^f) = 0.148 + 0.04E(c_t^p) - 0.260\beta^{1p} + 0.382\beta^{net.p}$$

$$E(r_t^p - r_t^f) = 0.148 + 0.04E(c_t^p) + 0.122\beta^{1p} + 0.382(\beta^{2p} - \beta^{3p} - \beta^{4p})$$

To test the full model, the researcher allows the betas to have different risk premiums and λ and a fixed k , and run the unrestricted model obtained in equation (7). Equation (8) runs the same model with k as a free value. Here is the generalized relation,

$$E(r_t^p - r_t^f) = \alpha + kE(c_t^p) + \lambda^1 \beta^{1p} + \lambda^2 \beta^{2p} + \lambda^3 \beta^{3p} + \lambda^4 \beta^{4p}$$



If there is no model restriction, $\lambda^1 = \lambda^2 = -\lambda^3 = -\lambda^4$. Also, see that all betas' produce moderate results, both significant and insignificant, except for the average illiquidity portfolio, $E(c_t^p)$.

Since there is a significant collinearity problem, however, this evidence should be interpreted with caution. Eventually, it wants to emphasize that the intercept α fluctuates between being significant and insignificant of some specification, while the model implies a zero-constant value.

Then, the results' economic significance and the overall liquidity risk is probably more important to research. The annual market risk premium should be measured to show the size of the results, λ^M , and the market risk premium for different liquidity betas (i.e. $\lambda^1, \lambda^2, \lambda^3, \lambda^4$) required to hold illiquid stocks. This calculates by the market risk premium product and the difference in empirical literature between liquidity risk for most liquid and least portfolio. The different annualized expected returns between portfolio 1 and 10 that can be attributed to a difference in β^{2p} .

Hence using the calibrate value k and the common market risk premium, λ^M , of 0.250 from Equation 1 get the following results, the commonality of portfolio illiquidity and market illiquidity is,

$$\lambda^M(\beta_2^{p10} - \beta_2^{p1})12 = 0.026\%$$

Similarly, the effect of β^{3p} , the sensitivity of returns to market illiquidity, on yearly returns is,

$$-\lambda^M(\beta_3^{p10} - \beta_3^{p1})12 = 0.05\%$$

And similarly, the effect of β^{4p} , the sensitivity of portfolio illiquidity to the overall market return is

$$-\lambda^M(\beta_4^{p10} - \beta_4^{p1})12 = 0.03\%$$

which makes the overall effect of liquidity risk of 0.11% per year.

Annualized expected rates of return between portfolio 1 and 10 are 2.5% difference based on the calibrate coefficient, attributed to an expected illiquidity difference, $E(c_t^p)$. The cumulative impact of the expected probability of illiquidity and liquidity is 2.61% per year.



In the restricted model, the overall liquidity risk defined as the liquidity beta with a single market risk premium is relatively low and barely significant. Innovations in liquidity are interpretable as liquidity shocks as economic crises. Figure 1 shows the standardized, normalized innovations in illiquidity; the innovations standardized by their standard deviation.

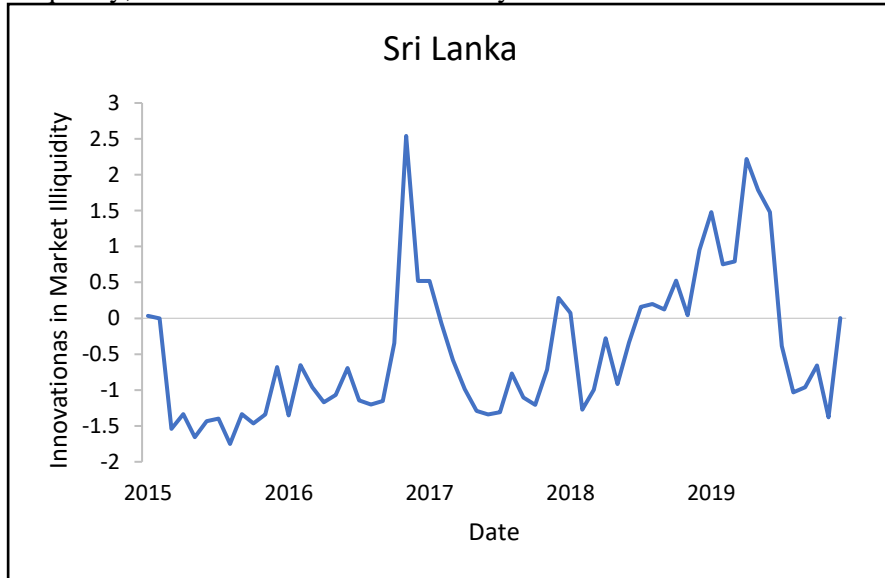


Fig 2. Standardized innovation in market illiquidity from 2015-2019

Conclusions and Recommendations

Finally, this empirical analysis suggests that the effects of liquidity and liquidity risk are separate. The traditional asset pricing model has been adjusted to reflect the cost of illiquidity and its respective risks over time. It is found that investors are interested in securities returns and illiquidity, especially in the downstream market. Investors' returns are positively affected by this liquidity and increase the co-variance between securities illiquidity and market-wide illiquidity. Returns are increasing if the stock performance is highly sensitive to market-wide illiquidity, and the co-variance between illiquidity and gross market returns is declining. Returns are also rising for most illiquidity stocks, characterized by small firm size and low turnover. The volatility of returns, however, appears to be the highest for the most liquid companies.

The findings are important for all market participants and require more research on diversifying the liquidity risk internationally. Investors should



also reconsider their liquidity investment strategy if they focus on achieving an above normal excess return by investing in assets with a high illiquidity level. Further research should determine whether the international version of the LCAPM yields a better result because of the international relationship in liquidity risk or the international commonality between stock return and market return. This thesis's results are based on an unconditional model, which implies that the risk aversion and the liquidity risk of investors are constant. This implies that the risk premiums are constant.

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Stock market liquidity and firm dividend policy: Evidence from a Frontier Market

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Abstract

Scholars have been studying dividend policy since the days of Modigliani and Miller (1958). However, until quite recently, the idea of liquidity has rarely been mentioned. The study examined whether there was a relationship between the firm dividend policy and any share liquidity criteria in the Sri Lankan context. This study represents 50 companies listed on the Colombo Stock Exchange (CSE) and performance throughout 2015-2019. It has been used Amivest liquidity, turnover liquidity, and Gopalan liquidity as the liquidity measures. Combined linear regression was used to examine the relationship between variables. Using some statistical tests the study has determined that there was no meaningful relationship between dividend policy and liquidity measures of Amivest liquidity and turnover liquidity. However, the study detected a significant reverse relationship between dividend policy and Gopalan liquidity. It emphasizes that firm dividend policy is affected by the firm liquidity but not by the stock market liquidity in the Sri Lankan context.

Keywords: Colombo Stock Exchange, dividend policy and stock market liquidity

Introduction

In financial management, dividend policy has been recognized as a "dividend puzzle" due to its problematic situation for decades. A company's dividend policy determines the amount to be paid to the shareholders as dividends on the company's net income and is a crucial decision in every business organization. And also, it is necessary to give major concern about liquidity as it plays a major influence on any financial market. Stock market liquidity applies to the degree to which a market, such as the stock market of a country or the real estate market of a region, enables buying and selling at stable, clear rates or low-cost trading shares without impacting the price as soon as possible. Moreover, there are less published empirical studies regarding stock market liquidity and firm dividend policy in Sri Lanka. Moreover, different researchers have reported different conclusions regarding this relationship. Based on the background, the current study aims to fill a gap in the existing literature by addressing the research problem as to examine the critical question of whether there is any kind of a relationship between stock market liquidity and firm dividend policy and to identify the nature or direction of the relationship if any exists. Furthermore, sub-objectives identify whether



there is any relationship between firm dividend policy and liquidity measures of Amivest liquidity, turnover liquidity and Gopalan liquidity.

Literature Review

In a sense, the dividend is a reward for investors who have taken a risk by investing in a particular company's shares. As per Modigliani and Miller (1958), investors should be indifferent about whether or not they earn dividends now or future capital appreciation, a concept known as the irrelevance theory of dividends. Illiquidity affects smaller firms' stocks more strongly, explaining the "small firm effect" changes over time (Amihud Yakov, Brennan, Gruber & Roll, 2000). Banerjee, Gatchev and Spindt (2005) suggested a significant negative relationship between the liquidity of a firm's stock market and its likelihood of paying dividends. Ghodrati et al., (2014) investigated stock market liquidity and firm dividend policy using four liquidity measures and found no significant correlation between dividend policy and Amivest Liquidity while there was a significant and negative relationship between dividend policy and turnover Liquidity. There was also a significant and direct relationship between dividend policy and liquidity measures of Gopalan liquidity and flow liquidity. It has found an inverse relationship between stock market liquidity and dividend amounts paid (Griffin, 2014). Nadia Sawitri and Sulistyowati (2018) examined stock liquidity and dividend policy using Indonesia's public financial firms. Asset liquidity, driven by the Amihud illiquidity ratio, has an insignificant negative effect on dividend policy as liquidity does not have a quantitative effect on dividend policy. Market liquidity, which is proxied by share turnover, has a significant negative impact on dividend policy as dividends serve as insurance for investment in illiquid stocks. There is a negative association between stock market liquidity and firm dividend policy in countries with sound political institutions (Lai, Saffar, Zhu & Liu, 2020).

Methodology

The population of this research includes all the companies listed on the Colombo Stock Exchange (CSE) in Sri Lanka, which are not of investment, intermediary financial entities, banks, insurance companies, mutual funds, and leasing companies. Fifty companies were selected under a stratified random sampling method. The performance of these companies was subject to study based on performance data over the period 2015-2019. This study used secondary data and required data mainly obtained from the CSE data library and annual reports of particular selected companies. Descriptive statistical methods such as mean estimation, variance, standard deviation, and categorized and simplified tables and graphs are used. Combined linear regression was used to analyze the relationship between variables, and t-test



and f-test were used to generalize parameters and estimate relationships. Excel has prepared the data for the analysis has been performed both with Eviews 08 and Excel.

Research Model

The dependent variable is the dividend policy, while the explanatory variables are the Amivest liquidity, turnover liquidity, and Gopalan liquidity.

$$DIV_{it} = \alpha + \beta_1 AMI_{it} + \beta_2 TL_{it} + \beta_3 GP_{it} \dots \dots \dots \text{Equation (01)}$$

Definitions of Variables

Table 1. Definitions of Variables

Variables	Measurement	Source
Dividend Policy (DIV)	$\frac{\text{DividendPayment}}{\text{NetProfit}}$	Ghodrati and Ghazi Fini (2014)
Amivest Liquidity (AMI)	$\frac{\sum_y VK_{id}}{\sum_y R_{id} }$ Where, VK _{id} = Daily share volume R _{id} = Return of stock i on day d	Goyenko, Holden, and Trzcinka (2009)
Turnover Liquidity (TL)	$\frac{\text{NumberofTradedSharesOveraPeriod}}{\text{CompanySharesVolume}}$	Ghodrati and Ghazi Fini (2014)
Gopalan Liquidity (GP)	$\frac{\text{TotalCash}}{\text{BookValueofCompanyAssets}}$	Gopalan, Kadan, and Pevzner (2012)

Research Hypothesis

Main hypothesis: There is a relationship between dividend policy and measures of liquidity criteria.

Sub-Hypotheses:

1. There is a relationship between dividend policy and Amivest liquidity.
2. There is a relationship between dividend policy and Turnover liquidity.
3. There is a relationship between dividend policy and Gopalan liquidity.

Results and Discussions

First, assumptions of the combined linear regression method were analyzed. Then the correlation study was carried out, and the relationship between variables has been examined by the combined linear regression method.

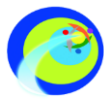


Table 2. Correlation Analysis

Variables	Without Classification	Small Sized	Large Sized
	DIV	DIV	DIV
AMI	0.00386	0.03179	-0.04119
t-Statistic	0.06080	0.35282	-0.45719
Probability	0.95160	0.72480	0.64830
TL	0.07665	0.12817	0.04109
t-Statistic	1.21076	1.43326	0.45612
Probability	0.22710	0.15430	0.64910
GP	-0.115415*	-0.02482	-0.23807**
t-Statistic	-1.82978	-0.27529	-2.71843
Probability	0.06850	0.78360	0.00750

(***), (**) and (*) Indicate significance at (1%), (5%) and (10%) respectively.

According to correlation analysis, it has been found that Gopalan liquidity has a significant correlation with the dividend policy of the firm (before classified). Furthermore, this analysis was carried out under two firm categories: small and large, based on book value for market value. It reported no significant correlation between any of the liquidity criteria with the dividend policy of small firms. On the other hand, it has a clear association between the Gopalan liquidity in large-sized companies and the dividend policy.

Table 3. Regression estimation for the relationship between dividend policy and Amivest liquidity

Variables	Symbol	Coefficient	T-Statistics	P-value	R-squared	F-Statistic Sig.Level	Durbin-Watson
Constant Coefficient	β_0	-0.751069	-1.134921	0.2575	0.000015	0.003697	0.8685
Amivest Liquidity	LNAMI	0.002569	0.0608	0.9516		0.951567	

$$LNDIV_{it} = -0.751 + 0.0026LNAMI_{it} \dots \dots \dots \text{Equation (02)}$$

As shown in the above-mentioned regression model, there is an insignificant positive correlation between dividend policy and Amivest liquidity.

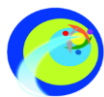


Table 4. Regression estimation for the relationship between dividend policy and turnover liquidity

Variables	Symbol	Coefficient	T-Statistics	P-value	R-squared	F-Statistic Sig.Level	Durbin-Watson
Constant Coefficient	β_0	-0.45538	-1.97308	0.0496	0.005876	1.465937	0.87581
Turnover Liquidity	LNTL	0.07129	1.210759	0.2271		0.22714	

$$LNDIV_{it} = -0.455 + 0.0721LNTL_{it} \dots\dots\dots\text{Equation (03)}$$

As shown in the above-mentioned regression model, there is an insignificant positive correlation between dividend policy and turnover liquidity.

Table 5. Regression estimation for the relationship between dividend policy and Gopalan liquidity

Variables	Symbol	Coefficient	T-Statistics	P-value	R-squared	F-Statistic Sig.Level	Durbin-Watson
Constant Coefficient	β_0	-1.05927	-5.00884	0.0000	0.013321	3.34809	0.89763
Gopalan Liquidity	LNGP	-0.08007	-1.82978	0.0685		0.068483	

$$LNDIV_{it} = -1.059 - 0.080LNGP_{it} \dots\dots\dots\text{Equation (04)}$$

As shown in the above-mentioned regression model, there is a significant negative correlation between dividend policy and Gopalan liquidity under 0.1 error level.

Table 6. Regression estimation for the relationship between dividend policy and liquidity criteria

Variables	Symbol	Coefficient	T-Statistics	P-value
Constant Coefficient	β_0	-0.504226	-0.550552	0.5824
Amivest Liquidity	LNAMI	-0.01607	-0.337995	0.7357
Turnover Liquidity	LNTL	0.085814	1.300342	0.1947
Gopalan Liquidity	LNGP	-0.080556	-1.825872	0.0691

$$LNDIV_{it} = -0.504 - 0.016AMI_{it} + 0.086LNTL_{it} - 0.081LNGP_{it} \dots\dots\dots\text{Equation (05)}$$

According to regression results, there is an insignificant positive correlation between dividend policy and Amivest liquidity (Table 3). Similarly, there is an insignificant positive correlation between dividend policy and Turnover



liquidity (Table 4). In contrast, there is a significant negative correlation between dividend policy and Gopalan liquidity, as presents in Table 5. Finally, a regression was run with all the liquidity criteria (Table 6), and it proved that only the Gopalan liquidity has a significant relationship with firm dividend policy.

After the research hypotheses were put forward and tested, the following results were detected.

Table 7. Summary of Findings

Variables	R ²	D.Watson	F-statistic	t-statistics	Sig.level	Result
Amivest Liquidity with dividend policy	0	0.8685	0.0037	0.0608	0.1	Rejected
Turnover liquidity with dividend policy	0.00588	0.87581	1.46594	1.21076	0.1	Rejected
Gopalan liquidity with dividend policy	0.01332	0.89763	3.34809	-1.8298	0.1	Accepted

Conclusions and Recommendations

Based on the results, only the Gopalan liquidity was significant. It is a firm liquidity indicator, whereas the other two liquidity criteria of Amivest liquidity and turnover liquidity are stock market liquidity measures. Therefore, it can be concluded that, although there is no significant correlation between stock market liquidity and firm dividend policy, there is a significant relationship between firm dividend policy and firm liquidity in the Sri Lankan context. Based on the significant negative correlation between the dividend policy and the Gopalan liquidity, it can be suggested that owners who have invested in high liquid companies are less likely to receive dividends. Then management can omit the dividend or reduce it and invest more because of the lower tendency to pay.

On the other hand, if their business is low in liquid, the dividends anticipated are higher than the capital gains. Furthermore, in the case of a company's liquidity, management may have an idea of whether investors want dividends or capital gains. Liquid markets and illiquid markets may differ from each other's, and their dividend policy may also differ according to their liquidity nature of the market and the liquidity of the firm. Therefore, investors can make better investment decisions if they concern firm liquidity in the Sri Lankan context and may have better rewards as they prefer.

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Role of heuristic on individual investment performance

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Abstract

This study's main objective is to investigate the role of heuristic behaviour on the investment performance of individual investors at Colombo Stock Exchange (CSE). Investment needs for effective use of accumulated money and, in return receiving the optimal return. Therefore, the stock market plays a backbone to the economy's development by extending the country's investments, especially for Sri Lanka as a developing country. This study begins with the heuristic theory in behavioural finance, based on which a hypothesis is proposed. Then, these hypotheses are tested through the questionnaires distributed to individual investors. The sample size is 100 individual investors, those respondents were selected under the Proportionate stratified random sampling method. The collected data are analyzed by using SPSS. Statistical techniques include Correlation Analysis and Regression Analysis. The result shows that, overall Heuristic factors have a positive significant influence on investment performance. In addition to this, while individual factors wise analysis, Representativeness and Anchoring variables have significant influence, whereas other factors namely Availability bias, Gambler's fallacy and Overconfidence, which do not have a significant influence on investment performance.

Keywords: behavioural finance, Colombo Stock Exchange, investors' heuristic behaviour and investment performance

Introduction

Nowadays, investors' behaviour and investment performance are vary in nature due to changes in investors' mindset time to time. This study's main objective is to investigate the role of heuristic behaviour on the investment performance of individual investors at Colombo Stock Exchange (CSE). Sewell (2001) defined behavioural finance as the study of the influence of psychology on financial practitioners' behavior. Behavioral finance theories present an opposing view to traditional finance and assume that investors are not entirely rational when making investment decisions (Subramaniam & Velnamby, 2017). Behavioural finance theories include Heuristic Theory, Prospect Theory, Herding and Market effect. In this study, the Researcher has selected the Heuristic theory to investigate its influence on investment performance. Heuristics are defined as the rules of thumb, making decision-making easier, especially in complex and uncertain environments (Ritter,



2003). People raised in Asian cultures are trapped by behavioral biases more than in Western cultures (Yates et al., 1989). After the civil war, in Sri Lanka, opening the CSE branch in Jaffna is a good mile stone to Northern people to improve their financial strength by investing their money at the stock market.

Research Problem

Behavioral finance is still a new topic for study. Asian investors usually suffer from cognitive biases more than people from other cultures (Kim & Nofsinger, 2008). There are only few studies about Asian countries that can be found; some of them belong to Kim and Nofsinger (2008), Yates, Lee and Bush (1997). Kengatharan and Kengatharan (2014) studied that the behavior factors influence individual investors' decisions and performance at the CSE in Sri Lanka. Conclusion this study concluded that overconfidence and Anchoring from heuristics factors have a positive influence on investment performance. Subramaniyam and Velnampy (2017) studied the Role of behavioral factors in household investors' investment decisions in the Northern Province of Sri Lanka. That study concluded that Representativeness bias, Overconfidence bias, Availability Bias, Loss Aversion bias, Regret Aversion bias, and Herding play a significant role in household investors' investment decisions.

As there are limited studies about behavioral finance in Sri Lanka, this study is expected to contribute significantly to the development of this field in Sri Lanka to enhance the development in Northern Province. The research question for the study is as follows,

- to what extent the Heuristic factors influence on the investment performance?

Objective of the study

- to investigate the role of heuristic factors on investment performance.

Literature Review

Being different from Efficient Markets Hypothesis (EMH) theory, behavioral finance believes that financial markets sometimes do not have informational efficiency. Heuristics are defined as the rules of thumb, making decision-making easier, especially in complex and uncertain environments (Ritter, 2003) by reducing the complexity of assessing probabilities and predicting values to simpler judgments. Heuristics theory, as three factors namely representativeness, availability bias, and anchoring (Kahneman & Tversky, 1974). Then Waweru et al. (2008) also listed two factors named Gambler's fallacy and Overconfidence into heuristic theory.



Representativeness refers to the degree of similarity that an event has with its parent population (DeBondt & Thaler, 1995). Gamblers' fallacy arises when people predict inaccurately the reverse points considered the end of good (or poor) market returns (Waweru et al., 2008). Anchoring is a phenomenon used when people use some initial values to make estimation, which are biased toward the initial ones as different starting points yield different estimates (Kahneman & Tversky, 1974). When people overestimate their knowledge and skills' reliability, it is the manifestation of overconfidence (DeBondt & Thaler, 1995). In the stock trading area, this bias manifests itself through the preference of investing in local companies that investors are familiar with or easily obtain information, despite the fundamental principles (Waweru et al., 2003). Oberlechner and Osler (2004) identified the level of impacts of overconfidence on investment performance measured by investment return rate and trading experience.

In this research, five components of heuristics, namely Overconfidence, Gambler's fallacy, Availability bias, Anchoring, and Representativeness, are used to measure their impact levels on individual investors' investment performance CSE.

Methodology

The population of the study was active individual investors at CSE in Northern Province. One hundred individual investors (They belong to Jaffna (78), Vavuniya (18) and Mannar (4)) are selected as the sample size from 900 active investors.

The researcher used the primary data collection method for this study. Therefore, Questionnaires are sent to respondents using stratified random sampling. Sample selected by stratifying the population by a criterion of the number of investors in each Districts and based on individual investors' monthly income. The number of questionnaires sent to each security company such as Asha Phillip Securities Ltd, BartleetReligare Securities (Pvt) Ltd, Capital Alliance Limited and Softlogic Stockbrokers (Pvt) Ltd through the branch manager of CSE – Jaffna Branch.



Conceptual Framework

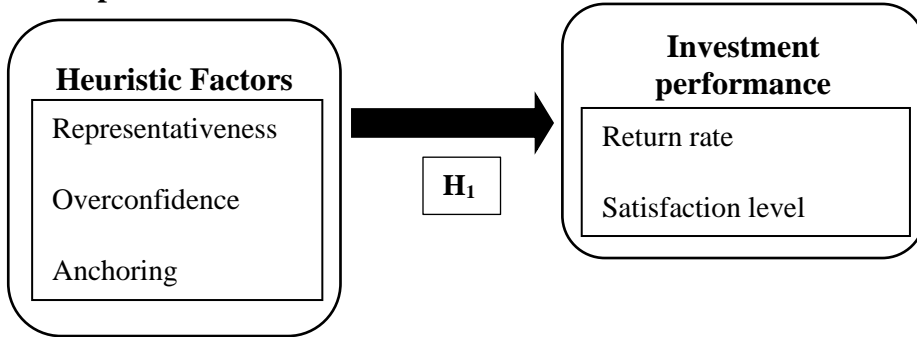


Fig 1. Conceptual Framework

Hypotheses of the study

H₁: The heuristic factors have influence on the investment performance of individual investors at the CSE in Northern Province.

In order to test the influence of heuristic factors on the individual investment performance hypothesis has been divided into four parts as follows:

H_{1A}: Representativeness factor has an influence on investment performance.

H_{1B}: Overconfidence factor has an influence on investment performance.

H_{1C}: Anchoring factor has an influence on investment performance.

H_{1D}: Gamblers' fallacy factor has an influence on investment performance.

H_{1E}: Availability bias factor has an influence on investment performance.

Results and Discussions

The Cronbach's alpha was used to measure of random reliability errors. The reliability coefficient of all indicators of investment performance was 0.744, which indicated acceptable reliability. The data analysis has done through SPSS. Then, statistical techniques include Regression Analysis and Correlation Analysis.

Table 1. Summary of regression analysis

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	SE	Beta		
1 (Constant)	1.904	.593		3.211	.002
Representativeness	.176	.078	.222	2.239	.027



Overconfidence	.075	.054	.139	1.378	.171
Anchoring	.165	.072	.228	2.301	.024
Gambler's fallacy	.013	.073	.019	.182	.852
Availability bias	.183	.102	.179	1.794	.076
<hr/>					
$R^2 = 0.112$	$F = 2.351$	$P = 0.047^b$			

According to the Regression Analysis, the value of R- square for the model is 0.112. This means that 11.2 percent of the variation in CSE's investment performance (dependent variable) can be explained from the five independent variables, namely Representativeness, Overconfidence, Anchoring, Gambler's fallacy Availability bias. The model is statistically significant (F ratio = 2.351, probability level (p) = 0.047) because the probability level is less than 0.05.

The following model was used to investigate the relationship between independent and dependent variables:

$$Y = a + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \epsilon$$

$$Y = 1.904 + 0.222X_1 + 0.139X_2 - 0.228X_3 - 0.019X_4 + 0.179X_5 + \epsilon$$

According to the Correlation Analysis (Ref. Table 2), there is a statistically positive weak relationship between Representativeness & Anchoring and investment performance. There is statistically no relationship between the Overconfidence, Gambler's fallacy and Availability bias and investment performance of investors.

Table 2. Summary of Hypotheses Testing

H1	Hypothesis	Hypothesis result
H1A	Representativeness factor has an influence on investment performance.	F ratio = 2.239 p = 0.027 r = 0.222 Accepted.
H1B	Overconfidence factor has an influence on investment performance.	F ratio = 1.378 p = 0.171 r = 0.139 Rejected.
H1C	Anchoring factor has an influence on investment performance.	F ratio = 2.301 p = 0.024 r = 0.228 Accepted.



H1D	Gambler's fallacy factor has an influence on investment performance.	F ratio = 0.182 p = 0.852 r = 0.019 Rejected.
H1E	Availability bias factor has an influence on investment performance	F ratio = 1.794 p = 0.076 r = 0.179 Rejected.

Therefore, the overall statistical analysis result shows that the Heuristic factor has a significant positive influence on investment performance. In addition to this, while individual factors wise analysis, Representativeness and Anchoring variables have significant influence, whereas other factors, namely Availability bias, Gambler's fallacy and Overconfidence, which do not have a significant influence on investment performance. This result conforms of the results of Kengatharan and Kengatharan (2014).

Conclusions and Recommendations

This study has attempted to investigate the role of influence of heuristic behaviour on the investment performance of investors. Therefore, the study has been successfully completed by achieving the research objectives and answering the research question. The researcher concluded that overall, Heuristic factors have a significant positive influence on investment performance while Representativeness and Anchoring variables have significant influence and other variables do not have a significant influence on investment performance. These findings support the investors in enhancing their investment's performance by managing their heuristic behaviour due to significant influence on investment performance. This study expects to provide a good background about behavioral finance concepts to the security organizations for the prediction of future stock-market trend and give reliable information to the investors because concepts of behavioral finance are relatively new compared to other financial theories.

It is suggested that CSE investors should consider their skills and abilities to improve their investment outcomes. Therefore, investors should carefully make their investment decisions as rational investors and plan their structured portfolio through diversification mechanism by getting guidance from financial experts and stock brokers. Investors should use effective information sources to obtain the information such as CSE's online trading and communicate through the phone calls with brokerage companies. It will minimize their operational cost of investment and save their money for future investments. Investors should select good partners and create a coalition or association with them as an investment source. In addition to these efforts,



Government authorities should also conduct investment training and awareness programmes to the region's investors.

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Corporate financial distress prediction: An application of Multiple Discriminant analysis

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Abstract

Recent failures of large corporations at the international level and instability of securities in Sri Lanka have emphasized the importance of evaluating the companies' financial distress. One of the methods of evaluating financial distress is bankruptcy prediction models. They are the tools for measuring the financial healthiness of companies in the future. This research aims to bring out the theoretical foundations and make a deep study about the results of Altman's model (1968) in the Colombo Stock Exchange through statistical techniques of Multiple Discriminant Analysis and Logistic Regression Model. The data was gathered from 2013 to 2018. The results obtained from the Multiple Discriminant Analysis identified that Altman's model could predict bankruptcy within one year before with an accuracy rate of 72.10%. According to the logistic regression analysis, Altman's model has a higher predictability power. This research's findings can be applied by potential investors when designing their investment strategies in healthy financial companies.

Keywords: bankruptcy prediction models, financial distress and multiple discriminant analysis

Introduction

A distressed financial situation means that a company cannot settle its obligations and trade liabilities from the operating cash flows or the value of the total assets is lower than the aggregate value of the total liabilities and equity. Predicting corporate distress or bankruptcy has become essential for reducing its' harmful effects like huge bankruptcy costs. The stakeholders always try to find an appropriate method to forecast bankruptcy. Up to now, various types of bankruptcy prediction models were generated. Examples: Beaver Model, Altman's model, Zmijewski model, Springate model, Fulmer model, etc. Among them, Altman's Z score model is the popular model. Most researches have been done on the accuracy of those models within a different context. In this research, the selected sample of the Colombo Stock Exchange's financial data will be evaluated to do a study regarding the applicability of financial distress prediction models by using Multivariate Discriminant Analysis. The reason for selecting the Colombo Stock Exchange is there are many bankruptcy and de-listing cases recently. E.g.: Ceylon Leather Products PLC, Kalpitiya Beach Resort PLC, Chilaw Finance PLC etc. Therefore, the research is is how can accounting-based bankruptcy



prediction models of Altman (1968) apply to Public Listed Companies of Colombo Stock Exchange during 2013-2018 and compare the results with actual financial healthiness of them to prevent those bankruptcy and de-listing cases? Other research questions are as follows.

- Are the existing models of predicting bankruptcy applicable in Listed Companies of Sri Lanka?
- Which prediction models of financial distress are the most reliable in predicting financial distress in companies in the Sri Lankan context.?

The main research objective is to examine the applicability of selected financial distress prediction models and identify the most accurate model within the Sri Lankan Context.

Literature Review

The most popular model used for forecasting financial distress in the world is Altman's Z score model (1968). Altman introduced multivariate Discriminant Analysis in 1968 by extending the Beavers Univariate Analysis. Altman used a mix of accounting ratios to find the most suitable financial ratio which can forecast the bankruptcy level at the best level. After finding the essential ratios, Altman used various types of tests to ensure that the Z score model can accurately categorize companies as bankrupt or not (Altman, 1968). Many researchers have been involved in analyzing the efficiency of Altman's models to forecast financial distress by comparing results of other models like the Springate model and Grover model etc. But most of the time, other models' accuracy is lower than Altman's model. Altman's Z score model can accurately forecast bankruptcy three years before bankruptcy (Gerantonis, 2009). Gunathilake (2014) expressed that Altman's and Springate's Z core models have similar predictive ability. Altman's Z core model has a higher discriminant power to identify distressed firms at least 1 year before (Gunathilaka, 2014). In the international context, Altman's model can predict distress in terms of percentage for four years before the bankruptcy (Mahalakshmi, 2015). In this case, Altman's model gives moderate support to predict the financial distress of the selected sample of sick and non-sick companies in India. The research findings suggested that recent studies that have used Altman's model to estimate the financial distress of sample firms should be interpreted cautiously because the results are largely affected by the economic characteristics of the selected country.



Methodology

In the quantitative research study, research variables are categorized into two parts, which are independent and dependent variables. The companies' financial healthiness is the dependent variable and has two aspects that are distressed or non-distressed. The predictors of Altman's model (1968) are identified as independent variables.

Altman's Z Score model (1968)

$$Z = 1.2X_1 + 1.4X_2 + 3.3X_3 + 0.6X_4 + 1.0X_5 \quad \dots\dots \text{Equation 01}$$

Where,

X_1 = Working Capital / Total Assets

X_2 = Retained Earnings / Total Assets

X_3 = Earnings before Interest and Taxes / Total Assets

X_4 = Market value equity / Book value of Total debt

X_5 = Sales / Total Assets

The cut-off mark is 2.99. If the value Z is greater than 2.99, that firm is treated as a non-distressed firm, and if the Z value is smaller than 1.8, they are treated as distressed firms and among the area of .2.99 and 1.8, treated as a grey area. In identifying the sample, Banking, Finance, and Insurance industry have to be neglected since it has different characteristics and different capital structures from the 20 industries of CSE. Finally, this research study uses a sample of 122 companies listed in CSE, 61 distressed 61 non-distressed as the matched sample through the non -random sampling technique. Here corporate distress is decided on the companies that are suffering losses continuously for three years or more, having a negative cash flow position continuously for three years or more or having a negative net worth continuously for three years or more. The data are collected from the Colombo Stock Exchange. The accounting ratios are collected from the annual reports of the firms. Since the bankruptcy process might take several years to happen, the data collection period was identified as the period of 2015 to 2019. Multivariate Discriminant Analysis is used in this research study via the Mini Tab 2019 software. Multivariate discriminant analysis (MDA) is a technique used by financial predictors to evaluate potential investment opportunities when several variables must be considered. It is the primary method of analysis of this study. To confirm the validity of Altman's model, regression analysis is performed. Since there are three possible outcomes, the ordinal logistic regression model is used. The ordinal logistic regression model is used to analyze the relationship of the selected ratios as independent variables and the selected sample's financial status as the dependent variable. The general logistic regression model is as follows.

$$(p) = \alpha_k + \beta_1x_1 + \beta_2x_2 + \dots + \beta_nx_n \quad \dots\dots \text{Equation 02}$$

Where,



p = Financial Status
Coefficient

β =

x = Independent variables
Constatnt

α =

Results and Discussions

The findings and analysis of this research study bring the following results.

Table 1. Prediction Accuracy

Status	Non -distressed sample	Distressed sample
Non-Distress	75.54%	24.59%
Distress	2.29%	48.52%
Grey	21.97%	26.89%

Table 2. Predictability Power

	Within 1 Year	Within 2 Years	Within 3 Years
Altman's Model	72.10%	69.30%	64.80%

The Altman's Z Score model can accurately categorize 75.74% of the observed non-distress listed companies, 2.29% were classified in the distress Zone while 21.97 were classified in the grey zone. It can be highlighted that 48.52% of the observed distressed corporations were accurately classified while 24.59% were classified as non-distressed, and 26.89% were challenging to analyze.

Coming to the overall measures of Multivariate Discriminant Analysis, the estimation model 1 (within 1 year) performs with an accuracy rate of 72.10%. The estimation model 2 (within 2 years) reveals that Altman's model can forecast bankruptcy before two years to bankruptcy with an accuracy rate of 69.30%. The estimation model 3 reveals that Altman's model can forecast bankruptcy three years before with a 64.80% accuracy rate. It means that Altman's model can give a higher prediction ability within one year before to the bankrupt. The result of regression analysis is as follows:

Table 3. Regression Results

Predictor	Coefficient	SE	Z	P	Ratio	95% CI	
						Lower	Upper
Constant (1)	-3.00	0.24	-12.72	0.00			
Constant (2)	-0.95	0.19	-4.90	0.00			
X1	0.50	0.46	1.08	0.04	1.64	0.67	4.06
X2	0.42	0.36	-1.19	0.04	0.66	0.33	1.32
X3	0.41	0.68	1.61	0.04	1.51	0.40	5.71



X4	0.67	0.07	10.23	0.00	1.96	1.72	2.23
X5	1.51	0.21	7.05	0.00	4.52	2.97	6.87

$$(p_1) = -3.00 + 0.49X_1 + 0.42X_2 + 0.41X_3 + 0.67X_4 + 1.50X_5$$

..... Equation 03

$$(p_2) = -0.95 + 0.49X_1 + 0.42X_2 + 0.41X_3 + 0.67X_4 + 1.50X_5$$

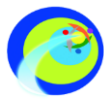
..... Equation 04

The coefficients reflect that the probability of an outcome changes when the independent variables change. All independent variables have positive coefficients. It means that it makes the non-distress and Grey status are more likely as those variables are increased. It means that it makes the non-distress and Grey status are more likely as those variables are increased.

The standard error of coefficients measures the variability among coefficient estimations obtained from the samples from the same population again and again. The standard error of coefficients for all predictors are less than 1. It reveals that the estimations are precise. Z value, which is away from 0, highlights that the coefficient estimate is both large and precise and statistically different from 0. Z-value that is near to 0 represents that coefficient estimates are too small and imprecise, and that term has an effect on the response. The Z values for all predictors are far from 0, which indicates that the coefficient estimates are both large and precise. The relationships among the dependent and independent variables are statistically significant since the p-value is less than the significant level of 0.05. The odds ratio implies that a company is more likely to go for a non-distress situation when all predictors increase. Under the 95% confidence level, it can be concluded that the confidence interval includes all the values of the odds ratio for the population. The results are similar to the findings of the research done by Gunathilake (2014), which mentioned as Altman's Z score model has a higher degree of discriminant power in forecasting financial distress at least one year before. The reason for this similarity is the nature of the financial characteristics of Sri Lanka Listed companies.

Conclusions and Recommendations

The study analyses Altman's Z score model (1968) on bankruptcy prediction within the Sri Lankan Context with the use of data obtained from the Colombo Stock Exchange. The results show that this model has a higher degree of accuracy in forecasting distress using the selected independent variables within one year before the bankruptcy. The overall accuracy rate is 72.1%. Therefore, as the sample evidence proves, Altman's Z score model seems to have a better ability in forecasting financial distress in Listed Companies in



Sri Lanka. The results may be necessary for both investment managers and company management. Even though the companies can develop their position during improving periods of capital markets, it may not happen in the long run. Altman's model can be useful in such situations to decide whether they want to go for a merger or another solution to prevent bankruptcy by forecasting the distress of the companies as well as potential investors can rationally choose their investment decision by using this model. On the other hand, Prediction models may not forecast distress at 100% since it will be affected by economic failure, management failure and weaknesses in strategies. Highly developed methods through these prediction models should be wanted to face those situations efficiently.

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Corporate risk management and firm performance: Sri Lankan perspective

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Abstract

Risk management and firm performance in organizations became crucial when it involves research over a previous couple of decades and remains widely discussed globally. The tendency is to take a holistic overview of risk management instead of considering risk management from a silo-based view. This holistic approach to risk management is usually mentioned as Corporate Risk Management (CRM). There are so many shreds of evidence for the statement that organizations will enhance their performance by using the CRM concept. The main objective instigated during this study is that the proper match between corporate risk management (CRM) and, therefore, the firm factors: namely, Industry competition (CI), firm size (FS), firm complexity (FC), and monitoring by the board of directors (MBD) and the relationship among CRM and firm performance (P). Supported a sampling of 60 firms in CSE, reflecting the maintaining of their CRM operations in their annual reports, empirical evidence supports the main argument instigated above. These findings mean that firms should implement the CRM in aggregation with the appropriate variables adjoining the firm.

Keywords: contingency theory, corporate risk management index, firm performance and Sri Lanka

Introduction

In today's world, risk management is an important matter. In late years, there has been a standard change within the manner the risk management is considered. Instead of viewing risk management from a silo-based approach, the tendency is to require a holistic view of risk management. This approach used to manage the risk of a firm is usually mentioned as corporate risk management (CRM). The study will empower the banks, diversified financials, insurance, energy, and retailing firms in Sri Lanka to reinforce their risk management system and embrace better methodologies to reinforce firms' performance through the risk management strategies. Decades ago, there is no evidence that Risk Management practice leads to better performance. Therefore, further research is needed to examine the link between corporate risk management implementation and firm performance. The main objective instigated during this study is that the relationship among corporate risk management (CRM) and firm performance (P) depends on the



proper match between CRM. Therefore, the firm factors: namely, industry competition, firm complexity, firm size, and monitoring by the board of directors.

Literature Review

There are debates and controversies on the effect of risk management on the performance of firms. Comprehensive studies on this substance are administrated by scholars and produced mixed results;. At the same time, some found that risk management had a positive impact on firm performance, some found negative relationships, and others suggested that other factors, aside from risk management, affected firm performance. Consistent with Hoyt and Liebenberg, 2009; Stulz, 1996; Barton et al., 2002; Nocco and Stulz, 2006; Lam, 2003, provide empirical shreds of evidence that the risk management system of a firm will enhance the performance of that firm eventually. The findings by Gates and Hexter, 2005, present that a lot of firms have adopted risk management, which has a positive impact on firms' performance.

Methodology

The sample for this study is taken from the CSE database. This study is implemented because companies indicate they were operating the CRM concept and presented it in their annual reports in the year of 2018. There are 86 companies in banks, diversified financials, insurance, energy, and retailing sectors. Thus, a final sample of 60 companies is used in this study for the analysis. This study's main objective can be tested by using Eq. (1), and Eq. (3) stated below. The high-performing firms are used to derive the coefficients for Eq. (1), and it describes the proper match between CRM and firm factors, as mentioned above. The connection among firm performance (P) and proper match between firm factors are considered in Eq. (3);, to obtain values for this Eq. (3), the absolute values of residuals (ARES) are regressed on firm performance (P) from Eq. (1).

$$CRM = \beta_0 + \beta_1 CI + \beta_2 FS + \beta_3 FC + \beta_4 MBD + \varepsilon$$

Eq. (1)

Table 1. Measuring the variables

Variables	Acronym	Measurement of variables
Firm Performance	P	Firm performance is calculated by the shareholders' one-year excess stock market return for 2018, $P_i = R_i - (R_f + \beta_i(R_m - R_f))$ Where, P_i =Firm performance, R_i = Firm i return, R_m =Market return, R_f = Risk-free rate of return, β_i = Beta for firm i .



Industry Competition	<i>CI</i>	(1 – <i>HHI</i>), One minus the Herfindahl – Hirschman Index is used to measure the industry competition. The total of the squared market shares of all companies in the same industry is used to derive <i>HHI</i> .
Firm Complexity	<i>FC</i>	This is measured by the number of operating segments for each firm.
Firm Size	<i>FS</i>	Firm size is measured as the natural logarithm of average total assets.
Monitoring by Board of Directors	<i>MBD</i>	Board of directors monitoring is measured by dividing the number of directors for each company by the natural logarithm of sales.

$$CRMI = \sum_{k=1}^2 Strategy_k + \sum_{k=1}^2 Operation_k + \sum_{k=1}^2 Reporting_k + \sum_{k=1}^2 Compliance_k \text{ Eq. (2)}$$

Table 2. Measuring the independent variable CRMI

Variables	Measurement of variable
Strategy 1	$Strategy_1 = \frac{Sales_i - \mu_{Sales}}{\sigma_{Sales}}$ <p>Where, $Sales_i$= Sales of firm i in 2018, μ_{Sales}= Average industry sales in 2018, σ_{Sales}= Standard deviation of sales of all firms in the same industry.</p>
Strategy 2	$Strategy_2 = \frac{\Delta\beta_i - \mu_{\Delta\beta}}{\sigma_{\Delta\beta}}$ <p>Where, $\Delta\beta_i$=(β_i in 2018 - β_i in 2017), β_i= Firm i's beta (Data from CSE), $\mu_{\Delta\beta}$= Average industry $\Delta\beta$ in 2018, $\sigma_{\Delta\beta}$= Standard deviation of $\Delta\beta$'s of all firms in the same industry.</p>
Operation 1	$Operation_1 = \frac{Sales}{TotalAssets}$
Operation 2	$Operation_2 = \frac{Sales}{NumberofEmployees}$
Reporting 1	$Reporting_1 = \frac{(MaterialWeaknesses) + (AuditorOpinion) + (Restatement)}{ NormalAccruals }$
Reporting 2	$Reporting_2 = \frac{ NormalAccruals + AbnormalAccruals }{AuditorFees}$
Compliance 1	$Compliance_1 = \frac{TotalAssets}{SettlementNetGain (Loss)}$
Compliance 2	$Compliance_2 = \frac{SettlementNetGain (Loss)}{TotalAssets}$

$$P = \beta_0 + \beta_1 ARES + \varepsilon \text{ Eq. (3)}$$

Where, P = Firm performance, $ARES$ = The Absolute value of residual from Eq. (1), β_i = various parameters, $i=0$ to 3, ε = error term.

The residuals are derived from Eq. (1), underlines the basic concept that the residual analysis model shows the ‘lack of fit’ within the corporate risk management and proper match among firm factors.

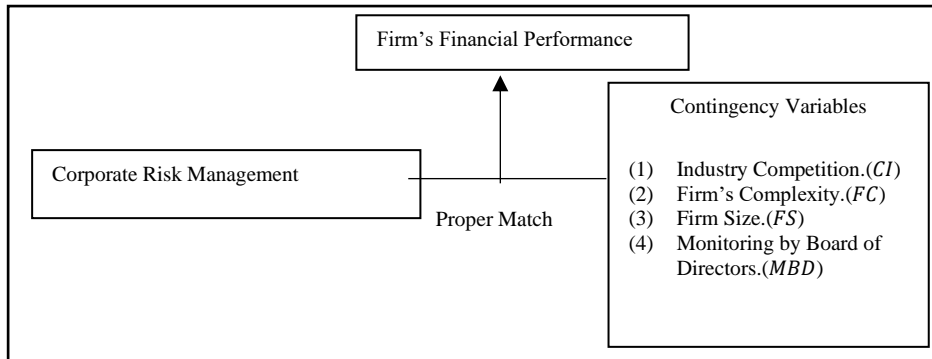


Fig 1. Conceptual Framework

Results and Discussions

Descriptive statistics are provided for the entire sample, and the high performing firms and therefore, the other firms. There are 26 high performing firms and 34 the other firms according to the cutoff of 2% one-year excess return. However, the average *CRMI* of high performing firms are greater than the other firms. In the correlation analysis, *FC* is highly correlated with the *FS*. This strong correlation suggests the likelihood of multicollinearity within the results of the analysis. For this purpose, the researcher also measures the Variance Inflation Factor (VIF) and Tolerance, in consort with the analysis.

Table 3, Panel A shows the results from the regression analysis for the entire sample and high-performing firms and other firms. Industry competition, firm complexity, and firm size significantly affect the effectiveness of the *CRMI* in high performing firms. The board of directors monitoring is the only firm factor that is not causing a significant effect on the *CRMI*. Since contextual factors are usually exogenous variables, the outcomes indicate that the firms with high performing highly concern the firm mentioned above factors than the firms which are not the high performers in maintaining their CRM practices. The other finding as per Table 3, Panel A, is that the VIFs and tolerances are very low and high respectively for all repressors. Thus, multicollinearity does not cause any problem in the regression analysis.

According to Panel A of Table 3, from the high-performing firms representing the proper match between *CRM* and, therefore the firm factors used to derive the coefficients for Eq. (1). As per Table 3, Panel B, the *ARES* is negative and



not significant. To put it another way, *ARES* and firm performance are negatively related. In conclusion, Panel B of Table 3 provides the shreds of evidence to fulfill the basic argument that the proper match between CRM and the firm factors are key drivers for firm performance. According to Hexter, Gates, 2005, it represents confirming earlier empirical evidence, the firms that have adopted CRM will improve the firm performance.

Table 3. Regression Analysis

No. of observations	Total Sample 60		High performing firms (excess return >2%) 26		The other firms (excess return ≤ 2%) 34	
	Coe(p-value)	VIF (Tolerance)	Coe(p-value)	VIF (Tolerance)	Coe(p-value)	VIF (Tolerance)
<i>Panel A. Regression of CRMI on contingent variables: $CRMI_i = \beta_0 + \beta_1 CI_i + \beta_2 FC_i + \beta_3 FS_i + \beta_4 MBD_i + \varepsilon_i$</i>						
β_0 (Intercept)	11.490 (0.357)	N/A (N/A)	6.739 (0.756)	N/A (N/A)	-7.779 (0.325)	N/A (N/A)
β_1 (CI)	-30.697 (0.001)	1.013 (0.987)	-36.251 (0.001)	1.025 (0.975)	-9.686 (0.034)	1.081 (0.925)
β_2 (FC)	-0.490 (0.213)	1.324 (0.755)	-1.488 (0.097)	1.265 (0.791)	0.104 (0.565)	1.591 (0.628)
β_3 (FS)	1.034 (0.048)	1.299 (0.770)	1.808 (0.080)	1.531 (0.653)	0.789 (0.019)	1.448 (0.690)
β_4 (MBD)	-13.156 (0.157)	1.131 (0.884)	-32.099 (0.149)	1.310 (0.763)	-1.276 (0.758)	1.142 (0.876)
F-Statistic (p-value)	9.421 (<0.001)		5.602 (0.003)		4.212 (0.008)	
R^2	0.407		0.516		0.367	
Variable						Coe(p-value)
<i>Panel B. Residual analysis (all 60 CRM firms): $P_i = \beta_0 + \beta_1 ARES_i + \varepsilon_i$</i>						
Intercept						0.010 (0.361)
<i>ARES</i>						-0.001 (0.701)
F-Statistic (p-value)						0.149 (0.701)
R^2						0.003

P is measured by the one-year excess stock market return at the year-end of 2018 as $P_i = R_i - (R_f + \beta_i(R_m - R_f))$. CI is calculated as $(1 - HHI)$, HHI denotes the sum of squared market shares of all firms in the market. FC is measure by the number of operating segments for each firm. FS is measure as the natural logarithm of average total assets. MBD is measure by the numbers of directors for each firm divided by the natural logarithm of sales, where the number of directors was collected from the 2018 annual reports of



firms.
$$\widehat{CRMI}_i = 6.739 - 36.251CI_i - 1.488FC_i + 1.808FS_i - 32.099MBD_i.ARES_i = |CRMI_i - \widehat{CRMI}_i|$$

Conclusions and Recommendations

With a sample of 60 firms, focusing that the firms may use corporate risk management practices in their 2018 annual reports, this study examines whether firms' CRM and performance depend upon the proper match between CRM and above mentioned four firm factors. The findings from this study can be used to confirm the main argument that the relationship between CRM and firm performance depends on the proper match between CRM and four firm factors, and also the findings from the analyses advocate that the CRM Index (*CRMI*) is a sound measure of the effectiveness of CRM.

Future research can be conducted by expanding the research to be more representative sectors that are not presented in the sample. Furthermore, this study was conducted in a developing country where corporate risk management is not mandatory. Therefore, this study can be done in a developed country where corporate risk management is mandatory. Finally, this study can be further enhanced by incorporating the firm performance indicators as independent variables into the regression model used.

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Financial performance on share price: A study of listed Banks in Sri Lanka

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Abstract

The main aim of the study is to examine the financial performance on share price, a study of listed banks in Sri Lanka over 2015 to 2019. The share Price of the bank was used as the dependent variable for the study while bank's Financial performance as the independent variable which was measured through Return on Assets (ROA), Earning per share (EPS), Dividend per share (DPS) and Price earnings ratio (P/E ratio). Data was collected from 50 annual reports related to 10 Banks listed in the Colombo Stock Exchange for five years from 2015 to 2019. The researcher uses Descriptive and inferential analysis with the help of STATA's latest version. According to the correlation analysis, there is a positive relationship between the financial performance and the banks' share price. The findings of this study indicate that the Significant impact of Return on Assets, Earning per share, Dividend per share on share price, conversely insignificant impact Price-earnings ratio on the Share price in Banks in Sri Lanka.

Keywords: dividend per share, earning per share, price-earnings ratio and return on assets

Introduction

As a financial instrument, Shares hold a significant role in a country's economy. The shares can generate cash by the issuers, investors, or third parties (Dahmmas, 2012). The companies actively look for financing sources that can provide funds with a more considerable amount to expand its business activities or purposes by issuing ownership by selling it to the general public through the capital market. Capital market activity may reflect the absence of a country's economic doldrums. To succeed in the emerging market (Samarakoon, 2016), Sri Lanka has to analyze what extent financial success impacts share price. At the same time, there is a lack of investment among the share market due to a lack of knowledge about capital market. To generate returns and minimizing risks, investors are advised to diversify by combining a wide selection of stocks in investment. As a result, this study tries to find the impact of financial performance on the Sri Lankan banking industry's share price from 2015 to 2019. For this study, the researcher also aims to provide a possible answer to specific questions.



- What is the empirical relationship between the financial performance and share price within the banking sector Sri Lanka?
- What is the impact of financial performance on the share price of the banking sector in Sri Lanka?

Research objectives can be outlined as follows:

- to examine the relationship between financial performance and share price in the Sri Lankan banking sector.
- to examine the impact of financial performance on the share price.

Literature Review

The financial performance analysis can reflect the health of the business within the company. Based on research (Puspitha, 2008) showed that only a Price Earnings ratio (P/E ratio) that significantly determine the market price of the company's stock.

Methodology

Research Design

The population is Listed Banks on the Colombo Stock Exchange from 2015 to 2019. The sampling method is the risk of missing data was minimized by excluding firms that were not listed throughout the sample period. After eliminations, this study relies on 10 Sri Lankan banks. This study used a quantitative research approach because numerical and secondary data are used. The data utilized for this study was extracted from the annual reports of listed banks from 2015 to 2019.

Hypotheses of the study

- H₁: There is a significant relationship between financial performance and the share price.
- H_{1a}: There is a significant relationship between Return on Assets and the share price.
- H_{1b}: There is a significant relationship between EPS and the share price.
- H_{1c}: There is a significant relationship between DPS and the share price.
- H_{1d}: There is a significant relationship between the P/E ratio and share price.
- H₂: There is a significant impact of financial performance on the share price.
- H_{2a}: There is a significant impact of Return on Assets on the share price
- H_{2b}: There is a significant impact of EPS on the share price.
- H_{2c}: There is a significant impact of DPS on the share price.
- H_{2d}: There is a significant impact of the P/R ratio on the share price.



Results and Discussions

Table 1 shows that the Share price level does not vary between the banks as the maximum is 68.15 and the minimum is 12.5.

Table 1. Descriptive Analysis

Variables	Observation	Mean	Max	Min	Std. Devi
Share price	50	102.35	250	12.5	68.15
ROA	50	0.0123569	0.0085107	0.005	0.0424
EPS	50	11.749	46.96	0.0011	10.05
DPS	50	5.15	15	0.04	4.27
P/E ratio	50	18.57	253	0.001	37.99

According to correlation analysis (Table 2), there is a significant positive relationship between ROA, EPS, DPS and Share Price. It could be noted that earnings are very significant in the life of the firms' growths. And a significant negative relationship between P/E ratio and Share Price.

Table 2. Correlation Analysis

Variable	ROA	EPS	DPS	P/E ratio
Share Price	01.3377*	0.6988**	0.7382**	-0.21414**

Table 3 shows findings of regression analysis with information on the impact of an independent on the dependent variable. In banking industry results R^2 value of three performance proxies indicates that 80% of observed variability in firm performance can be explained by the share price. The F-statistics and significance levels show that the model generates statistically significant outcomes. It illustrates the adjusted r^2 value of 0.6941 with the P-value of 0.000, and this model indicates there are significant variations of financial performance on the share price at $p < 0.05$. It means that 69 percent of influence is created by EPS, DPS, and P/E ratio. Whereas the remaining 24 percent (approximately) of impact is made by other proxies that are not depicted in the model recommendation.

Table 3. Regression Model Summary

Number of observations	50
F(3,46)	55.00
Prob>f	0.0000
R-squared	0.8014
Adj r-squared	0.6941
Root MSE	32.842



Table 4 displays the results of the coefficient estimation for each performance measure studied. The impact of ROA ($t=3.8$ and $p=0.002$), EPS ($t=3.05$ and $p=0.004$), DPS ($t=5.45$ and $p=0.000$), and the share price of these firms are significant at the 1 percent level. EPS and DPS increase, leading to a higher share price (i.e., when the EPS increases, the demand for equity will increase too). In contrast, there is an insignificant outcome between the P/E ratio and share price ($t=-.15$ and $p=0.880$).

Table 4. Relationship between the financial performance and share prices

	Coef.	Std.Err	T	P>(t)	95% conf. Interval	
ROA	7.5	1.8	3.8	0.002	0.89	12.55
EPS	2.26	0.74	3.05	0.004	0.77	3.75
DPS	9.50	1.74	5.45	0.000	5.99	13.01
P/E ratio	-.02	.13	-.15	0.880	-.28	0.24
Cons	27.15	3.09	3.09	3.09	9.44	44.85

Conclusions and Recommendations

There is a significant relationship between ROA, EPS, DPS, and share price, which implies that ROA, EPS, DPS decides the share price of these firms. That there is a significant relationship between P/E ratio and share price but in negative sign. Therefore, it could be concluded that financial performance proxies have a significant role in deciding its share price in the capital market. The impact of ROA, EPS, DPS, and these firms' share prices significant at the 1 percent level. EPS and DPS increase, which leads to a higher share price. In contrast, there is an insignificant outcome between P/E ratio and share price. Therefore, it could be concluded that financial performance proxies have a significant role in deciding its share price in the capital market.

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Beta and returns: Evidence from Colombo Stock Exchange

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Abstract

Capital Asset Pricing Model (CAPM) is utilized to determine a theoretically suitable required rate of return of an asset and values the asset's sensitivity to non-diversifiable risk. This paper investigates the conditional relation between beta and returns in individual stock returns between January 2011 and December 2019 on the stocks listed in the Colombo Stock Exchange (CSE) using the approaches suggested by Fama & MacBeth (1973) and Pettengill et al., (1995). The population of this research includes all the companies listed in CSE and the top 50 stocks with a large market capitalization have been selected as the sample. The unconditional test procedure results show that there is no statistically significant risk-return relationship found in any test period in individual stock returns. Thus, this result is similar to the previous literature findings. The conditional tests results show that there is no significant positive (negative) risk-return relationship in individual stock returns in CSE during up (down) market months. But findings indicate a significant positive risk-return relationship in individual stock returns in upmarket periods; whereas, a significant inverse risk-return relationship is not provided in down market periods.

Keywords: capital asset pricing model, Colombo Stock Exchange, conditional relation and unconditional relation

Introduction

Capital Asset Pricing Model (CAPM) is one of the most essential models in the finance literature, which assumes a positive linear relationship between the required rate of return and systematic risk on stocks. CAPM is frequently used in the business world, but the model's validity in its unconditional form is repeatedly rejected by empirical tests. Pettengill et al has developed an alternative conditional CAPM approach where the unconditional test procedure developed by Fama and MacBeth (1973) is improved by taking up and down market conditions into consideration. this conditional beta return relationship in portfolio stock returns has been supported in different markets, but very few studies have tested the conditional relationship on individual stock returns. Therefore, this study will examine the conditional and unconditional relations between beta and returns on individual stocks listed in CSE.



Literature Review

The Sharpe-Lintner-Black (SLB) model that is predicated based on the assumption of a positive risk-return tradeoff, the expected return on any asset, is a positive function of three variables: the beta (covariance of asset return and market return), the risk-free rate, and the expected market return. Fama and MacBeth (1973) in the New York Stock Exchange (NYSE) tested the relationship between average return and risk for common stocks. To check the SLB model, they followed a three-stage process. In the first step, portfolios were formed for individual firms, based on the estimated beta. They tested three research implications: (1) the beta return relationship on the stock in any portfolio is linear, (2) systematic risk of a stock is a full measure of the risk of that individual stock in the efficient portfolio, (3) higher the risk higher the return. They stated that there was a positive flat relationship between systematic risk and return. However, could not dismiss the linearity hypothesis between security portfolio risk and its expected return, as suggested by the two-parameter model. At the same time, they tested the additional risk, which cannot be calculated by beta, and found that no risk assessment, besides portfolio risk, systematically affects average returns. A considerable number of researchers tested the empirical relationship between risk and return, following Fama and MacBeth (1973).

Pettengill et al., (1995) suggested that the conflicting results of the beta-average-return equation may have contributed to the convergence of returns through up and down-market periods. They argued that the relationship between beta-return should be favorable in up markets and negative in down markets. In line with this statement, the relationship between beta and expected return during up (down) markets is significant and favorable (negative). In other words, this study, unlike previous studies, found a clear and highly significant relationship between beta and cross-sectional portfolio returns. The critical distinction between this experiment and previous studies is the understanding that the SLB model's projected optimistic return-to-beta relationship is based on expected instead of realized returns. On the stocks listed in Tokyo Stock Exchange (TSE), Nimal (2006) investigated the conditional relationship between beta and return suggested by Pettengill et al., (1995) and proved that the conditional relationship between beta and return could even be seen in individual stock returns. The conditional cross-sectional CAPM relationship between portfolio beta and return on the Colombo Stock Exchange (CSE) has been evaluated by Sriyalatha (2010) using the approach of Pettengill et al., (1995). The results show that the conditional CAPM is a dominant method for measuring a relationship between risk and return. Statistically significant results can be seen in risks and returns between up and down markets; however, there is a steeper



negative slope in down markets. This steeper negative relationship seems to have played a major role in the negative relationship in CSE's average portfolio returns. Therefore, Sriyalatha (2010) concluded that the conditional relationship is generally a better match than the unconditional CSE test. The results from the study indicate that market beta still has a legitimate role to play as a market risk indicator. Anuradha (2011) has examined the unconditional and conditional relationship between beta, size, B/M, E/P and returns in the CSE from 1995 to 2006 and found that there is a positive(negative) relationship between beta and individual stock returns in up(down) market periods.

Methodology

The population of this research includes all the companies listed on CSE in Sri Lanka. Top 50 stocks with large market capitalization with a complete relative price history in the test period, have been selected as the sample. The monthly return data are adjusted for dividends and stock splits. Theriou et al., (2010) The 91 days of Treasury bill rate has been taken as the risk-free rate, and the value-weighted market return index (All Share Price Index-ASPI) has been considered as the proxy for the market return. Excel has prepared the data for the analysis, and analysis has been performed both with E-views 08 and Excel. Most of the empirical tests on the CAPM's positive beta return relationship have been carried out by using a two-pass regression approach. The first pass excess return market model that is used for the estimation of the beta coefficient of stocks is as follows:

$$E(R_{it}) - R_{ft} = \alpha_i + \beta_i(E(R_{mt}) - R_{ft}) + e_{it} \quad (1)$$

Where, $E(R_{it})$ is the expected return for stock i , R_{ft} is the risk-free rate, β_i is the beta coefficient and $E(R_{mt})$ is the expected return of the market. Equation (2) has been used to calculate γ_{1t}

$$(R_{it} - R_{ft}) = \gamma_{0t} + \gamma_{1t}\hat{\beta}_i + u_{it} \quad (2)$$

Following conditional relationships has been used to test the conditional relationships during up and down markets.

$$(R_{it} - R_{ft}) = \gamma_{0ut} + \gamma_{1ut}\hat{\beta}_i + u_{iut} \quad (3)$$

$$(R_{it} - R_{ft}) = \gamma_{0Dt} + \gamma_{1Dt}\hat{\beta}_i + u_{iDt} \quad (4)$$

where, γ_{1u} is the upmarket excess returns and γ_{1D} is the downmarket excess returns. If the mean value of the coefficient, γ_{1U} is greater than zero, there is a positive relationship during up markets and if the mean value of the



coefficient γ_{1D} is less than zero; there is a negative relationship between beta and returns during down markets. To estimate stock betas and calculate stock returns, a two-step approach has been employed, and FM cross-sectional regression test has been employed to evaluate the relationship between individual stock beta return. Stock betas are estimated by regressing the first three years' monthly excess return of stocks (from January of year t-3 to December of year t-1 (t=2014-2019)) on the monthly value-weighted excess return of the market index. Equation (1). Those stock betas are constant throughout the next one year test period, from January to December of year t. To evaluate the relationship between stock beta and stock return, monthly excess returns for each security has been taken for each month of the test period. (i.e., from January to December of year t.). As the final stage, stock betas have been recalculated at the end of December of each test period and continued procedure, as mentioned earlier until the end of 2014. Data from January 2011 to December 2019 has been taken for this test. The nine years of the sample period has been divided into six 4-year periods, as reported in Table 1.

Table 1. Separation of sample period - Stock Beta and Stock Return

Estimation period (Beta calculation)	Test Period
01/2011-12/2013	1/2014-12/2014
01/2012-12/2014	1/2015-12/2015
01/2013-12/2015	1/2016-12/2016
01/2014-12/2016	1/2017-12/2017
01/2015-12/2017	1/2018-12/2018
01/2016-12/2018	1/2019-12/2019

Every 4-year period is subdivided into a 3-year beta calculation period and a 1-year test period. The securities can be included in the 4-year sample period only if they have been traded during the sample period. That means no missing values and no suspensions and have a complete relative price history in the test period. According to the above table, the first stock beta estimation period is from January 2011 to December 2013. Then stock returns for each stock for each month are taken for a one-year holding period, from January to December of 2014. The second beta estimation period is from January 2012 to December 2014, and the one-year test period is from January to December 2015, and so on. In such a way, stock returns and stock betas have been taken for each month from January 2014 to December 2019 for each security. Therefore have 72 observations for monthly individual stock betas and individual stock returns.



Results and Discussions

Table 2. FM Cross-Sectional Regression result

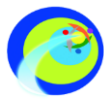
Period	Mean	Std.	t	P-Value	Months
<i>Unconditional Test-All months (Equation 02)</i>					
Total period (2014-2019)	0.006644625	0.035026957	1.6096	0.1119	72
Period 01 (2014-2016)	0.009992484	0.040660614	1.4745	0.1492	36
Period 02 (2017-2019)	0.003296766	0.028504159	0.6939	0.4923	36
Period	Mean	Std.	t	P-Value	Months
<i>Conditional Test-Panel A: Up Markets (Equation 03)</i>					
Total period (2014-2019)	0.027225791	0.035884043	3.4768	0.0023	21
Period 01 (2014-2016)	0.025956400	0.041542060	2.3378	0.0360	14
Period 02 (2017-2019)	0.029764573	0.023277164	3.3831	0.0148	7
<i>Conditional Test-Panel B: Down Markets (Equation 04)</i>					
Total period (2014-2019)	-0.001829973	0.031240265	-0.4183	0.6777	51
Period 01 (2014-2016)	-0.000166372	0.037538573	-0.0207	0.9842	22
Period 02 (2017-2019)	-0.003092015	0.026116906	-0.6375	0.5293	29

(Mean is the average of γ_{1t} , Std. is the standard deviation of γ_{1t} , and t has been calculated by dividing the mean by its standard error. The number of months in each test has been presented in the last column.)

As reported in Table 2, the results show that the mean slope in all months are not significantly positive in any period suggesting that beta and average return are not positively related. According to Panel A and B of Table 2, a positive relationship between stock beta and stock returns can be observed during up markets, and a negative relationship can be observed during down markets, respectively. Mean slopes of up markets are statistically significant in total period and two sub-periods. Nevertheless, mean slopes of down markets are not significant in the total period and two sub-periods. In other words, there is an insignificant negative relationship between beta and returns in down markets. Therefore, it is suggested that a conditional relationship between beta and return is not seen in CSE's individual stock returns.

Conclusions

This paper examined the conditional relationship between the beta and returns in individual stock returns on the stocks listed in CSE using the approach suggested by Pettengill et al., (1995). Tests on individual stock returns have found no positive (negative) relationship between beta and returns during up (down) markets. This result is not consistent with Sriyalatha (2010) and Anuradha, N. (2011). Thus the aggregation of positive and negative



relationships during up and down markets has not contributed that beta as a useful measure of market risk.

By examining the relationship between beta and returns in individual stock returns, it has greater importance to academics, researchers, and investors. Beta is one of the important factors that mainly affects the returns of stocks though there are noticeable arguments with empirical evidence. This study will give guidelines to investors to improve their understanding of markets. The companies will be able to make sound decisions on the returns of their portfolios. The information on the beta return relationship would be useful to future researchers who want to advance the knowledge and literature in CAPM.

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Credit risk management and financial performance: A study of listed Banks in Sri Lanka

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Abstract

This study tends to explore the credit risk management and financial performance of listed banks in Sri Lanka over the period from 2015 to 2019 by using Non-Performing Loan Ratio (NPLR) and Equity to Total Assets Ratio (ETAR) as credit risk management indicators and Return on Assets (ROA) and Return on Equity (ROE) as indicators of financial performance. This study considers all 13 banks listed in Sri Lanka, and the secondary data is collected via annual reports of respective banks. For empirical analysis, this study uses descriptive analysis, correlation, and multiple regression analysis. The results from regression analysis confirmed that credit risk management has a significant impact on banks' financial performance. While correlation analysis revealed that equity to total assets ratio is significantly positively correlated with return on asset and significantly negatively correlated with return on equity while non-performing loan ratio reveals an insignificant relationship. These insights are helpful for academic understanding and policy formulation by the decision-makers of the bank.

Keywords: credit risk management, financial performance, listed banks, Sri Lanka

Introduction

Banks are the largest financial institutions and play a vital role in the economy. They are in the business of safeguarding money and other valuables for their clients who provide loans, credit, and payment services such as checking accounts, money orders, and cashier's checks. Banks also may offer investment and insurance products and a wide range of other financial services (according to the 1999 Financial services modernization act by the US Congress). Adequately managing credit risk in financial institutions (FIs) is critical for the survival and growth of the FIs. In the case of banks, the issue of credit risk is of even of greater concern because of the higher levels of perceived risks resulting from some of the characteristics of clients and business conditions that they find themselves in.

Credit creation is the primary income generating activity for the banks. Credit risk is one of great concern to most bank authorities and banking regulators, as the higher levels of non-performing loans and advances due to some of the



characteristics of their clients and business conditions that they find in themselves. Since this risk carries the potential of wiping out enough of a bank's capital to force it into bankruptcy, managing this kind of risk has always been one of the major challenges in running a bank (Broll, paush & Welzel, 2002) The appropriate credit risk management of banks is essential for prolonged survival and development. Credit risk management is a structured approach to managing uncertainties through risk assessment and developing strategies to control and mitigate risk using managerial resources (Greuning & Iqbal, 2007). The strategies include transferring to another party, avoiding the risk, reducing the risk's negative effects and accepting some or all of the consequences of a particular risk (Afriyie & Akotey, 2013). The Sri Lankan banking act provides the necessary directions and monitors the functions towards managing the credit risk. The act focuses on the credit limitation to accommodate the new credit facilities as to minimize the risk. Hence, credit risk management focuses on maintaining optimum financial performances. Even though various studies have been conducted in this area, but the results are inconclusive. So, the researcher prompted finding out what extent the credit risk management influences the financial performance of listed banks in Sri Lanka.

Literature Review

Credit risk has been defined from different perspectives by different researchers and organizations, and it is the most critical risk all financial institutions are exposed to (Gray, Cassidy & RBA, 1997) The indicators of credit risk include the level of non- performing loans, problematic loans, or provision for loan losses (Jimenez & Saurina, 2006) Various researchers have studied the impact of credit risk management on bank profitability and pointed out a statistically significant relationship between credit risk management and bank profitability. (Poudel, 2012) in his study of the impact of credit risk management on commercial banks' financial performance in Nepal, it has assessed various parameters related to credit risk management and concluded that all studied parameters have a negative impact on banks' financial performance. (Charles & Kenneth, 2013) examined the impact of credit risk management and capital adequacy on commercial banks' financial performance and showed that sound credit risk management and capital adequacy positively affect the bank's financial performance. (Li, Zou & Lions, 2014) found that there is a significant positive relationship between credit risk management and bank profitability in Europe. (Kodithuwakku, 2015) investigated the impact of credit risk management on the commercial banks' performance in Sri Lanka and revealed that non-performing loans and provisions have an adverse impact on profitability. These research findings on credit risk and financial performance related to both developed and



developing countries are contradictory. Hence, this study tends to explore the credit risk management and financial performance of listed banks in Sri Lanka over the period from 2015 to 2019.

Methodology

The research was based on a quantitative research approach. The data used for this study were secondary data derived from the bank's annual reports over the period from 2015 to 2019. The population of the study includes listed banks in CSE Sri Lanka. The whole bank sector is selected as a sample where it consists of thirteen banks. For empirical analysis, this study employs descriptive analysis, correlation and multiple regression analysis using STATA 12 computer software. Accordingly, following hypotheses are developed:

- H₁: There is a significant impact of credit risk management on the financial performance of listed banks in Sri Lanka.
- H₂: There is a significant relationship between credit risk management and the financial performance of listed banks in Sri Lanka.

Results and Discussions

Table 1 represents the collected variables' descriptive statistics, namely NPLR, ETAR, ROA, and ROE. Based on the results, the NPLR represents an average of 0.029 with a standard deviation of 0.025 and the minimum & maximum of NPLR are 0 and 0.13, respectively. ETAR shows an average value of 0.179, with a standard deviation of 0.168. Firms reported a maximum of 0.747 ETAR while its minimum is 0.032. As well as ROA shows the maximum value of 8.74 with an average of 2.05 and its minimum value is -1.3. Moreover, ROE changes averagely at 14.552 and it varies significantly among firms with a minimum of -6.2 to 44.69.

Table 1. Descriptive Analysis

Variables	Observation	Mean	SD	Min	Max
NPLR	65	0.02	0.02	0	0.13
ETAR	65	0.179	0.1679	0.0328285	0.7470651
ROA	65	2.050	1.663	-1.3	8.74
ROE	65	14.55	9.186	-6.2	44.69

According to table 2 of the results from the correlation analysis, there is a significant positive relationship between ETAR and ROA ($r=0.4058$; $p<0.05$), and ETAR is significantly negatively associated with ROE ($r=-0.5188$; $p<0.05$). Moreover, NPLR is insignificantly correlated with both ROA and ROE.



Table 2. Correlation Analysis

Variables	NPLR	ETAR
ROA	-0.1027	0.4058*
ROE	0.0519	-0.5188*

* indicates a correlation significant at 95%

Table 3 implies that the p -value is 0.0005, which is lower than 0.05, shows that there is a significant impact of credit risk management on ROA. The adjusted R^2 value is 0.1476, which means that 14.76% impact is created by credit risk management on ROA. Coefficient estimation shows that the impact of NPLR on ROA is insignificant as its p -value is greater than 0.05. On the other hand, ETAR's impact on ROA is significant as its p -value is lower than 0.05. This means that a 1% increase in ETAR will increase ROA by 3.96%.

Table 3. Multiple Regression Analysis

ROA	Coefficient	Std. Err	T	P > t
NPLR	-3.857817	6.86769	-0.56	0.576
ETAR	3.956082	1.004629	3.94	0.000
CONS	1.451801	0.328009	4.43	0.000
Observation	65	R-square		0.1679
F(2,62)	8.27	AdjustedR-square		0.1476
Prob>F	0.0005	Root MSE		1.5359

Table 4 represents that the p -value is 0.0000, which is lower than 0.05,, indicating a significant impact of credit risk management on ROE. The adjusted R^2 value is 0.2514, which means that a 25.14% impact is created by credit risk management on ROE. Coefficient estimation shows that the impact of NPLR on ROE is insignificant as its p -value is greater than 0.05. On the other hand, ETAR's impact on ROE is significant as its p -value is lower than 0.05. This means that 1% increase in ETAR will lead to a reduction in ROE by 28.43%.

Table 4. Multiple Regression Analysis

ROE	Coefficient	Std. Err	T	P > t
NPLR	-2.835072	35.54071	-0.08	0.937
ETAR	-28.42904	5.199015	-5.47	0.000
CONS	19.73408	1.697466	11.63	0.000
Observation	65	R-squared		0.2692
F(2,62)	15.10	Adjusted R-squared		0.2514
Prob>F	0.0000	Root MSE		7.9486

Conclusions and Recommendations

The study results provide evidence that the credit risk management has a significant impact on banks' financial performance. The researcher able to



find that selected variables can make an impact on the financial performance of banks. Thus, it recommends that the bank managers put more efforts to the credit risk management, especially to control the loans and advances to lending. Moreover, when considering the relationship, equity to total assets ratio is significantly positively correlated with return on asset and significantly negatively correlated with return on equity, while the non-performing loan ratio reveals an insignificant relationship. Based on the findings, the researcher may further conclude that these results can be further strengthened if the firms manage their credit risk more efficiently. Further, a more aggressive policy towards credit risk management may not be able to improve financial performance. : The researcher suggests that the banks should design and formulate efficient credit risk management strategies to enhance their bank performance.

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Factors influencing the financial satisfaction of CSE investors in Jaffna district

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Abstract

Financial satisfaction results from a form of one's behavior that relates to how these individuals manage their income to meet their financial needs. Financial demand is said to be successful if it can meet individual consumption's short-term and long-term needs without any shortcomings. This study aims to find out the relationship between Financial Behavior, Financial Knowledge, Financial Attitude, with Financial Satisfaction. Colombo Stock Exchange investors living in Jaffna district have been considered for this study, and convenient sampling was used to select the participants of this study. Primary data were collected using a questionnaire and which were collected from 55 individual investors. Cronbach's Alpha was used to measure the reliability of the variables. Correlation and regression analysis were used for the data analysis. The study's outcome revealed that there was a significant positive relationship of financial behavior, financial knowledge, and financial attitude with financial satisfaction. Future researchers are expected to consider more variables that may affect the financial satisfaction and accommodate more respondents to generalize the findings.

Keywords: financial attitude on financial satisfaction, financial behavior and financial knowledge

Introduction

Satisfaction is one form of happiness obtained from the result of an effort that has been carried out by someone. The happiness of life is the crowning achievement of any result. One form of happiness is through the achievement of financial satisfaction. Financial satisfaction derived from a form of someone's behavior associated with how these people manage their revenues to meet their financial needs. Financial needs are said to be successful if the individual can meet short-term needs for consumption and long-term needs without the slightest deficiency.

Financial satisfaction as a subjective perception that sufficient for financial resources. Individuals worldwide and living in different economic, financial and social environments have to take more responsibility for their future



financial satisfaction and protection. In most countries, the ongoing challenging economic situations and unstable job market mean that individuals and their families must plan for their immediate and long-term future, and particularly for unexpected life events. To increase life expectancy and life quality in developed and developing economies, it leads employees to take more responsibility day by day. It has been aggregated financial satisfaction in the years. The objective of this study is to determine factors influencing CSE investors' financial satisfaction in Jaffna district.

Literature Review

The intention is influenced by one's attitude based on how important the behavior of the individual. Normative properties influence behavior intention of someone. Hira and Mugenda (1998) stated that financial satisfaction is an evaluation of individual satisfaction towards the personal financial condition. Hira and Mugenda (1998) suggest that life satisfaction can be pursued through the way in managing money. The accuracy in managing money will trigger financial satisfaction which is one of the triggers of life satisfaction. Financial behavior is suspected to affect financial satisfaction. Individuals who can manage their finances well, such as paying bills on time condition compared to people who cannot manage their finances well (Xiao, 2006).

The belief that generate satisfaction can strengthen by attitude on behavior. Attitude will strengthen against one's way of thinking about something. Attitude associated with the way of thinking about one's finances termed as financial attitude. Halim and Astuti (2015) defines financial attitude as a state of mind, opinions and judgments about financial. If the individual's thoughts on finances are good, then he will have the desire to save, invest and plan finances for a better future. If a person's thought treats money as valuable and must be accounted for, then the attitude will make the individual has a healthy financial to improve the quality of life and will Improve financial satisfaction. Financial satisfaction may also result from the good financial decision process for good financial knowledge. Xiao (2008) stated that financial behavior can be defined as human behavior associated with financial management, which is associated with a person's behavior regarding managing finance. Worthy. (2010) stated that if positive financial behavior development since the school term, it lets people obtain a better quality of life later on. Hilgert and Hogart (2003) declared that good financial behavior can be demonstrated by good planning, management and financial control activities. To develop financial behavior, one must have financial knowledge. Bowen (2002) stated that financial knowledge is key to financial understanding and the necessary ideas useful for society. Financial knowledge in question is the banking and



savings, insurance, use of credit, tax, and investment. Every individual has financial knowledge, depending on how in-depth knowledge has been owned.

Financial attitudes have an essential role in determining the success or failure of a person's financial behavior. Financial attitudes by Eagly and Chaiken (1993) defined as a psychological tendency, the easiest to be disclosed by showing the preferred or not preferred attitude. Financial attitudes show the level of intelligence in the term of agree or disagree that assist individual in managing their finance.

Methodology

The population of the present study is the individual investors who receive services from the CSE. A convenience sampling method was adopted to select respondents. There were 55 individuals considered for the survey to collect data to examine the relationship of Financial Behaviour, Financial Knowledge, Financial Attitude with Financial Satisfaction. Primary data were collected using questionnaire. Questionnaires were distributed by the researcher individually. Each completed questionnaire was checked immediately, and was entered for data analysis.

Hypotheses of the study

- H₁: There is a significant relationship among the Financial Behaviour, Financial Knowledge, Financial Attitude, and Financial Satisfaction.
- H₂: There is a significant impact of Financial Behaviour, Financial Knowledge Financial Attitude on Financial Satisfaction.

Results and Discussions

The data analysis strategy in this study consists of descriptive statistical analysis and inferential statistical analysis and test of reliability of the measurement scales. The Statistical Packages for Social Science (SPSS) version 21 was used for data analysis. Firstly, all variables were assigned with names and coded for computer entry. Secondly, all the responses were coded to facilitate computer data input.

Table 1. Personal Information

Personal Information	Frequency	Percent	
Gender	Male	47	85.5
	Female	8	14.5
Age	20 - 30	28	50.9
	31 - 40	19	34.5
	41 - 50	8	14.5
Marital Status	Single	24	43.6
	Married	31	56.4



Education	Graduate	37	67.3
	Professional	15	27.3
	Any others	3	5.5
Income	Below 50,000	27	49.1
	50,001 - 99,999	28	50.9
Employment	Government	13	23.6
	Private	39	70.9
	Others	3	5.5
Investment	Below 25,000	3	5.5
	25,001 - 49,999	8	14.5
	50,000 - 74,999	5	9.1
	75,000 - 99,999	3	5.5
	100,000 - 149,999	11	20.0
	150,000 - 199,999	3	5.5
	200,000 - 299,999	6	10.9
	300,000 - 399,999	3	5.5
	Above 400,000	13	23.6

Table 2. Reliability Statistics

Cronbach's Alpha	Number of Items
0.727	39

Cronbach alpha is the most widely used method for checking the reliability of scale. It may be mentioned that its value varies from 0 to 1, but, satisfactory value is required to be more than 0.6 for the scale to be reliable (Malhotra, 2002). The present study satisfies the reliability measures requirement (0.727) in this study.

Table 3. Correlations

		Financial Behavior	Financial Knowledge	Financial Attitude	Financial Satisfaction
Financial Behavior	Pearson Correlation	1	.422**	.080	.433**
	Sig. (2-tailed)		.001	.559	.001
Financial Knowledge	Pearson Correlation			-.027	.388**
	Sig. (2-tailed)			.844	.003
Financial Attitude	Pearson Correlation				.316*
	Sig. (2-tailed)				.019

** . Correlation is significant at the 0.01 level (2-tailed).* . Correlation is significant at the 0.05 level (2-tailed).



Correlation analysis was carried out to find out association among the variable based on the value of correlation. The table indicates that Financial Behavior, Financial Knowledge, Financial Attitude and Financial Satisfaction are significantly correlated at the 0.05 significance level. H_1 is accepted.

Table 4. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.572 ^a	.327	.288	.41044

a. Predictors: (Constant), Financial Behaviour, Financial Knowledge, Financial Attitude

Table 5. ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	4.184	3	1.395	8.278	.000 ^b
Residual	8.592	51	.168		
Total	12.775	54			

a. Dependent Variable: Financial Satisfaction

b. Predictors: (Constant), Financial Behaviour, Financial Knowledge, Financial Attitude

Table 6. Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	-1.240	.975		-1.272	.209
Financial Behaviour	.353	.153	.294	2.309	.025
Financial Knowledge	.182	.085	.272	2.144	.037
Financial Attitude	.697	.269	.299	2.593	.012

a. Dependent Variable: Financial Satisfaction

Regression analysis was carried out to test the impact of Financial Behaviour, Financial Knowledge, Financial Attitude on Financial Satisfaction. Here Financial Behaviour, Financial Knowledge and Financial Attitude are the independent variables and Financial Satisfaction is the dependent variable. The model summary table indicates, we can observe that Financial Satisfaction influences financial Behaviour, Financial Knowledge and Financial Attitude by 32.7%, which is significant at 0.01 levels. Further, we can explain that there is a significant positive impact of financial behaviour ($B = 0.353$, $P < 0.05$), Financial Knowledge ($B = 0.182$, $P < 0.037$), and Financial Attitude ($B = 0.697$, $P < 0.05$) on Financial Satisfaction. H_2 is accepted.



Conclusions and Recommendations

This is so important to maintain financial confidence and financial satisfaction under complex and unstable financial conditions. 55 individuals were considered for the survey to collect data to examine the relationship of Financial Behaviour, Financial Knowledge, Financial Attitude with Financial Satisfaction. The data analysis strategy in this study consists of descriptive statistical analysis and inferential statistical analysis and test of reliability of the measurement scales. Financial Behaviour, Financial Knowledge, Financial Attitude and Financial Satisfaction are significantly correlated at 0.05 significance level. A moderate level positive relationship is between Financial Behaviour and Financial Satisfaction in this study. These professionals are in the best position to strengthen financial knowledge and corresponding desirable financial behaviors of individuals. Targeted and proactive educational efforts may lead to an advancement of individuals' interests that fundamentally increase in financial satisfaction.

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Capital structure and investment growth: A case study of listed manufacturing companies in Sri Lanka

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Abstract

The study aims to investigate the impact of firm capital structure on the investment growth of listed manufacturing firms in Sri Lanka. The data was gathered by using secondary sources and the sample is confined to the manufacturing sector consists of 27 firms listed in the Colombo Stock Exchange using a random sampling method, whereas Pearson's correlation and multiple regression analysis were employed to analyse the data for the period of 2012 to 2018. The independent variable, capital structure, is measured by short-term debt, long-term debt and total debt, whereas the dependent variable is investment growth. The results reveal that firm capital structure has a strong and significant influence on listed manufacturing firms' investment growth in Sri Lanka. Further, it shows that short-term debt and long-term debt were found to have a significant and positive impact on investment growth while control variables of profitability and firm size have no significant impact on the investment growth of listed manufacturing firms in Sri Lanka. The study recommends that the management of listed manufacturing firms increase the level at which the organization uses long-term debt or short-term debt to finance its business activities. This may increase the investment opportunity potentials of the organizations. Few studies have addressed this area in the Sri Lankan economy.

Keywords: investment growth, long term debt, short term debt and total debt

Introduction

Capital structure is the mixture of debt and equity that a firm uses to fund its operations and expansions (Abor, 2005). It has a significant part in the firm's financial operations. Every business can combine debt and equity in various ways to maximize ordinary shareholder capital. There are many forms of debt and equity, including common shares, preferential securities, derivatives, preferred shares. Therefore, in various configurations, the companies collect the debt and equity financing as they need to consider the right mix to reduce the weighted average cost of capital and meet the management goal to increase the business value. Then businesses will seek to establish the optimum capital structure that allows the company's profitability to be maximized. However, no strict theory to decide the exact optimal capital structure has yet been established (Safeena & Hassan, 2015). So, it is about managers recognizing those variables affecting capital structure decisions



from which they will profit from having an optimum balance of debt and equity to increase the business's value. Capital structure theorists assume that the company's management with appropriate investment prospects will prefer lower leverage because if they raise their external obligations, they cannot take advantage of the gains of their investment opportunities. A negative relationship is thereby established between future growth and leverage since lower leverage would be preferred by managers of businesses with strong growth prospects (Noraversh & Yazdani, 2010).

With the past studies related to capital structure and investment growth, the results are inconclusive. Under the capital structure and investment growth Mcconnel (1995), Lang, Ofek and Stulz (1996), Rajan and Zingales (1995), Barclay and Smith (1999), and Graham (2000) have found negative relationship. Also Degryse, Goeji and Kappert (2012), Bearse, Carol and De Jong (2008), De Bie and De Haan (2007) have found a positive relationship while Jong and Dijk (2007) stated that there is no relationship between capital structure and investment growth. As a developing country, Sri Lanka has become an emerging market with many investment opportunities that draw interest from investors and managers to think about the factors driving of debt use and its level of control on firms. This study helps firms to understand how capital structure influences the investment growth opportunities in the context of Sri Lanka. The study's objective is to investigate the impact of capital structure on investment growth opportunities of the listed manufacturing companies in Sri Lanka.

Literature Review

Over the past century, the problem of capital structure and the firm leverage was frequently debated in finance. Beginning with Modigliani and Miller's (MM's) theory on the irrelevance of capital structure, researchers introduced numerous models and hypotheses defining ideal capital structures and discussing companies' choices capital structure and its importance and impact on the investment growth opportunities. Vijayakumarn (2019) noticed a negative connection between the opportunities for growth and leverage. Furthermore, the proportion of short-term debt mitigates the adverse impact of growth opportunities on leverage affecting the leverage adversely. Lupi, Myint and Tsomocos (2017) found that the company's leverage impacts its capacity to capture investment prospects in an environment where those opportunities are rare. Companies with too high leverage, have limited ability to spend. Reducing cash flow uncertainty through hedging typically strengthens investment capacity.



Hassan and Aitimon (2017) revealed that short-term debt and total debt have a significant negative correlation with Listed Pharmaceutical firms' investment growth in Nigeria and long-term debt has no relationship on investment growth opportunities. Wagenvoort (2016) claimed that a company's growth prospects would decide how capital is organized. The Trade-off theory argues that high growth firms are subject to increasing bankruptcy costs, which suggests a negative association (Baskin, 1989). Preferring debt over equity in the power of the Pecking Order system would rise with opportunities for development suggesting a favourable connection. Dasgupta and Sengupta (2002) show that companies with strong external investment prospects appear to spend more on maintaining their debt potential and financial slackness or liquidity with these firms holding low leverage. Myers (1977) states that more equity can be used to fund businesses that are seeing strong growth. Rajan and Zingales (1995) notice that businesses with a more excellent market-to-book ratio face higher financial risk costs, which contributes to a negative leverage relationship. In view of the negative association between growth opportunities and leverage, Fama and French (2002) make the same claim that businesses with strong investment prospects do not consider debt as a concern while pursuing fund to invest such plans.

Billett, King and Mauer (2007) conclude that while growth opportunities directly negatively impact the leverage, there is a positive relationship between leverage and growth opportunities due to protection by the covenant. Lucas and McDonald (1990) suggest that managers prefer to postpone equity problems optimally until they have an investment opportunity that allows their stock price to increase or surpass its true worth. Since executives have internal knowledge regarding the importance of their product, they may do so.

Methodology

This study's sample is confined to the manufacturing sector consists of 27 manufacturing companies out of 41 listed in the Colombo Stock Exchange (CSE) using a random sampling method. The secondary data is collected from audited financial statements of listed manufacturing companies in CSE and the study covers seven years between 2012 and 2018. Information extracted from financial statements is fully audited and therefore, data are considered reliable. The following measurements of the variables in this study are as follows.

- Investment Growth = Market value of equity / Book value of equity
- Short term debt = Short term debt / Total assets
- Long term debt = Long term debt / Total assets
- Total debt = Total debt / Total assets



- Profitability (ROA) = Profit after tax / Total assets
- Firm size = Log of total assets.

Conceptual Model

The following conceptual model was developed to represent the relationship between firm capital structure and investment growth. The firm capital structure, consists of short-term debt, long-term debt and total debt.

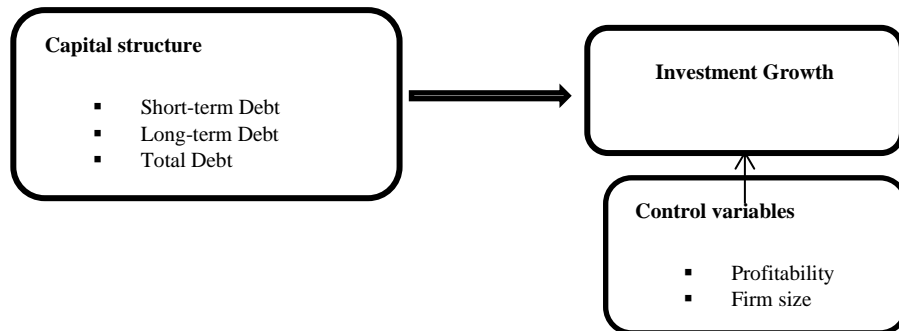


Fig 1. Conceptual Framework

To examine the extent to which capital structure impacts on investment growth, the study estimates the following panel data regression model that links capital structure with investment growth.

$$IGO_{it} = \beta_0 + \beta_1SD_{it} + \beta_2LD_{it} + \beta_3TD_{it} + \beta_4PRFT_{it} + \beta_5FSZ_{it} + \varepsilon_{it}$$

Where, IGO – Investment Growth; SD –Short term Debt; LD – Long term Debt; TD – Total Debt; PRFT – Profitability; FSZ –Firm size; ε – Error; i - Firms; t Years

Hypotheses of the study

- H₁: Short term debt significantly impacts the investment growth.
- H₂: Long term debt significantly impacts the investment growth.
- H₃: Total debt significantly impacts the investment growth

Results and Discussions

Table 1. Descriptive statistics

	Short term debt	Long term debt	Total debt	Profitability	Firm size	Investment growth
Mean	0.301	0.103	0.404	0.065	9.425	48.393
Median	0.274	0.065	0.407	0.059	9.299	4.092
Maximum	0.758	0.804	0.933	0.565	11.564	1599.900
Minimum	0.001	0.002	0.033	-0.244	8.273	0.087
Std. Dev.	0.162	0.116	0.176	0.097	0.620	234.872

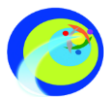


Table 1 presents descriptive statistics for the variables used in this study. The pooled mean and median of investment growth are 48.393 and 4.092 respectively. The pooled mean and median of short-term debt are 0.301 and 0.274 respectively whereas the average of long-term debt is 0.103 with the median of 0.065. The average of total debt is 0.404 (the median is 0.407). With respect to the control variables included in the model, the firms' average profitability is given by 0.065 and average firm size is 9.425.

Table 2. Correlation Matrix

Probability	Short term debt	Long term debt	Total debt	Profitability	Firm size	Investment growth
Short termdebt	1.000					
Long term debt	-0.2305	1.000				
	0.0014	----				
Total debt	0.7684	0.4455	1.000			
	0.0000	0.0000	----			
Profitability	-0.2672	-0.0052	-0.2493	1.000		
	0.0002	0.9427	0.0005	----		
Firm size	-0.1521	0.1215	-0.0600	-0.1618	1.000	
	0.0366	0.0957	0.4118	0.0260	----	
Investment growth	0.3779	-0.0561	0.310808	-0.1405	-0.1272	1.000
	0.0000	0.4429	0.0000	0.0538	0.0810	----

Table 2 reports the Pearson correlation coefficients between the variables. To find out the relationship among the variables, correlation analysis was carried out. The short-term debt ($r=0.3779$) and the total debt ($r=0.310808$) show a significant positive relationship with investment growth opportunities at 0.01 significant level while there is no significant relationship between the long term debt and investment growth opportunities. In the case of control variables, both the profitability and firm size are not significantly correlated with the investment growth opportunities at 0.05 levels.

Table 3. Regression

Variables	Coefficient	Std. Error	t-Statistic	Prob.
Constant	-324.5176	302.4634	-1.072915	0.2847
Total debt	-562.0519	171.6670	-3.274083	0.0013
Short term debt	1252.970	247.4280	5.063980	0.0000
Long term debt	782.0858	256.9101	3.044200	0.0027
Firm size	-34.67169	26.01156	-1.332934	0.1842
Profitability	-158.8076	170.9798	-0.928809	0.3542
R-squared	0.199267		Mean dependent var	48.39273
Adjusted R-squared	0.177389		S.D. dependent var	234.8722
F-statistic	9.108116		Durbin-Watson stat	0.468745
Prob(F-statistic)	0.000000			



As observed in table 3, the R-squared value implies that 19.92 % of total variations of investment growth can be explained by firm capital structure and control variables such as profitability and firm size and the remaining 80.08 % of the variation is not explained in this model. The table shows that the F-statistics indicates the value of 9.108116 ($p < 0.05$), which indicates that the model perfectly fits for the study. Further the results show that total debt has a coefficient of -562.0519 with t statistics of -3.274083 and a p-value of 0.0013. Thus, it can be stated that there is a significant negative impact of total debt on investment growth opportunities. Hence H_3 is accepted. This finding collaborates with previous studies such as Vijayakumarn (2019), Hassan and Aitimon (2017), Myers (1977) Rajan and Zingales (1995) Short term debt has a coefficient of 1252.970 with t-statics of 5.063980 and a p-value of 0.0000. Short term debt has a significant positive impact on investment growth. So H_1 is accepted. Long term debt has a coefficient of 782.0858 with t statistics of 3.044200 and p-value of 0.0027. Long term debt has a significant positive impact on investment growth. Therefore, H_2 is accepted.

Conclusions

Short-term debt was found to have a significant, positive and strong effect on the investment growth of listed manufacturing firms in Sri Lanka. Therefore, it is concluded that any firm with a short-term debt is likely to increase investment growth. Long-term debt also has significant positive influence on the investment growth of listed manufacturing firms. Therefore, it is concluded that any highly levered firm is likely to have positive significant changes in their investment growth. Because higher financial leverage, businesses adjust their investment decisions. Companies with more massive growth opportunities are spending more than other businesses. Besides, total debt has a significant negative impact on listed manufacturing firms' investment growth in Sri Lanka because a bigger leveraged company may have a higher risk of missing attractive investment prospects. The study's findings indicate that capital structure has a strong and significant influence on the investment growth of listed manufacturing firms in Sri Lanka. The study contributes to the literature on investment growth and capital structure by the authors providing evidence from Sri Lanka, a developing country that has not been explored. It shows how Sri Lankan firms' conservative capital structure, which have been reported to be rising, is impacting investment growth.



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Track 3: Human Resource Management



Training and development and employees' performance: A study based on state banks in Jaffna

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Abstract

The present study aims to identify the impact of Training and Development on employees' performance in state Banks in Jaffna. Training and development were analyzed based on three variables: knowledge, skill and attitude and employees' performance were measured based on quality of the work, handling the problems, positive behavior of employees, and teamwork. The state banks covered in the study include Bank of Ceylon, People's Bank and National Savings Bank. 107 employees participated in the study and a simple random sampling method was used to select the samples. Data were collected using questionnaires. The study's findings show that Training and Development have a positive Impact on employees' performance in State Banks in Jaffna. Further, it was found that the number of training attended does not moderate the impact of Training and development on employees' performance. Findings of the study will help top management plan the training and development activities efficiently in the future.

Keywords: banking sector, employee performance and training and development

Introduction

Banking in Sri Lanka is transforming, year by year. Due to the increasing competition, rapid technology advancement, and severe viability norms, it becomes inevitable for the banks to use all of their employees' abilities to face future challenges. For this, banks are introducing various training and development techniques. The dynamic process of training and development in banks bridges the gap between the competitive environment's demands and the supplies that the bank could afford. Training improves the knowledge, skill and attitude of employees. Knowledge may be job knowledge and knowledge related to other fields like legal aspects. Skill includes technical skills, leadership skills, decision-making skills, computer literacy and communication skill. Likewise, attitude means positive thinking, behavior and loyalty to the work or organization.

There are licensed commercial banks, licensed specialized banks, licensed financial companies, and other financial institutions in Sri Lankan financial



system. Among these banking institutions, Bank of Ceylon, Peoples Bank and National Savings Bank are spending more money on training and development than other private banks. In 2016, Hatton National Bank spent Rs.30 million; Commercial Bank spent Rs.107 million rupees while Bank of Ceylon spent Rs.298.8 million rupees for their employees. (Annual reports of Bank of Ceylon, Hatton National Bank and Commercial bank). Therefore, it is important to analyze if the investment made on training and development results in increased employees' performance. Effective training programs are contributing to increase in employees' performance. However, some ineffective programmes may not contribute much for employees' performance and those training programmes may waste the time of employees and increase the cost of organizations. Sometimes sending employees for training may cause problems or disturbances to the managers and the continuity of the customer service and banking process. Some employees also feel that it is a waste of time. To find out the actual outcomes of training and development, many researchers did several studies on this issue. There are mixed findings about the impact of training and development on employees' performance. Therefore, the researchers are interested in doing a study on this issue. Do Training and Development positively affect the employees' performance in the State Banks in Jaffna? The research's main objective is to identify the impact of training and development on employees' performance in state banks in Jaffna. Sub objectives include identifying the impact of skills, knowledge, and attitudes provided through training and development on employees' performance and identifying the moderating effect of the number of training attended on the impact of training and development on employees' performance.

Literature Review

According to Flippo (1980), training is increasing an employee's skills for doing a particular job. Training provides employees with skills that improve their performance. As human performance increases, the business performance also improves. Garavan (1997) emphasizes through his study that without any pre-training employees cannot perform efficiently. The recognition of the importance of training in recent years has been heavily influenced by the intensification of competition and organizations' relative success where investment in employee development is considerably emphasized (Sultana, Irum, Ahmed & Mehmood, 2012). Training is necessary to ensure an adequate supply of technically and socially competent staff and capable of career development into specialist departments or management positions. Therefore, there is a continuous need for staff development, and training fulfills a vital part of this process (Sultana et al., 2012).



Despite the strong assumptions that workplace training influences employee outcomes (e.g. motivation, commitment, withdrawal behaviour and work performance), a limited number of studies in field settings address these issues empirically (Dysvik & Kuvaas, 2008). These sentiments are supported by Burgard and Görlitz (2011), who argued that non-monetary returns to training are less often examined in the empirical literature. Sahinidis and Bouris (2008) note that the role of training programs is seen as a measure of improving employee capabilities and organizational capabilities, i.e. when the organization invests in improving its employees' knowledge and skills investment is returned in the form of more productive and effective employees. While indirectly, they highlight that as companies train their employees to enable them to handle both current and future issues. In Kenya, Wachira (2013) linked employee training and development activities to business growth in Barclays Bank. She posits that the bank's training and development activities have been used to ensure that it had well-grounded staff to support the growth agenda and as a result, many of the employees got opportunities to take on higher responsibilities. This was supported by a study by Otuko, Chege and Douglas (2013) looking at the effect of training dimensions on employees' work performance, focusing on Mumias Sugar Company. The study indicated that there was a positive and significant effect between training needs assessment, training contents and employee performance in Mumias Sugar Company Limited.

Methodology

This research attempts to find the impact of training and development on employee performance. Training and development can be analyzed based on three variables: knowledge, skill and attitude. It means training and development activities should improve employees' knowledge and skill and change their attitude in a better way. These improvements and changes could increase the performance of employees. Based on this, the conceptual model is developed.

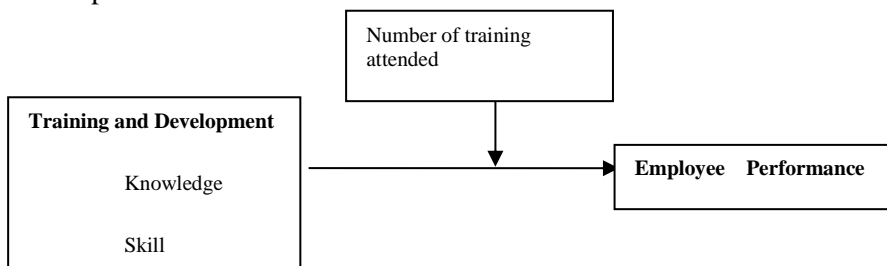


Fig 1. Conceptual Framework



Hypotheses of the study

- H₁: Training and Development are positively related to employee performance
- H_{1a}: Knowledge is positively related to employee performance
- H_{1b}: Skills are positively related to employee performance
- H_{1c}: Attitude is positively related to employee performance
- H₂: Training and development has a positive impact on employee performance
- H_{2a}: Knowledge has a positive impact on employee performance
- H_{2b}: Skills have a positive impact on employee performance
- H_{2c}: Attitude has a positive impact on employee performance
- H₃: The number of training attended has a moderating effect on the impact of training and development on employees' performance.

Sample and data collection

In this research, researchers have taken the population of state bank employees in the Jaffna region. Thus, Bank of Ceylon, Peoples Bank and National Savings Bank were selected in the Jaffna region and 20% of employees were selected as samples using a simple random sampling method. 150 employees were selected as samples and questionnaires were distributed and, 107 usable questionnaires were returned. The response rate was 73%. The data were collected through questionnaires. Training and development were measured using the questionnaire. A pilot study was conducted by issuing fifteen questionnaires to respondents and modifications were made based on the respondents' feedback.

Results and Discussions

SPSS 20.0 version was used to analyze the data to test the hypothesis. Correlation and regression were used in the data analysis. A reliability test was done to check the inter-item consistency of the measures. The Cronbach's alpha coefficients of the variables range from 0.687 to 0.828. These coefficients show that the measures are reliable.

Table 1. Correlations

	1	2	3	4	5
1.Knowledge	1.000				
2.Skill	.638**	1.000			
3.Attitude	.601**	.539**	1.000		
4.Training& Development	.821**	.686**	.656**	1.000	
5.Performance	.505**	.487**	.481**	.433**	1.000

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



Table 1 shows the correlation matrix of training and development, knowledge, skills, attitude and employees’ performance. According to Table 1, the Pearson correlation between training and development and employees’ performance is 0.433 ($r = 0.433$). This means a significant positive relationship between them and correlation is significant at the level of 0.01 ($P < 0.01$). Therefore, the hypothesis “H₁: Training and Development positively related to employee performance” is supported. Table 1 also depicts that knowledge, skills and attitudes are significantly and positively related to Employees’ Performance. Therefore, the following hypotheses are supported:

- H_{1a}: Knowledge is positively related to employee performance. ($r = 0.505$, $p < 0.01$)
- H_{1b}: Skills are positively related with employee performance ($r = 0.487$, $p < 0.01$)
- H_{2c}: Attitudes are positively related with employee performance ($r = 0.481$, $p < 0.01$)

Impact of Training and Development on employees’ performance

Table 2a. Model summary of Training & Development and Employees’ performance

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	T	Sig.
1	.433 ^a	.187	.180	9.22176	4.922	.000

a. Predictors: (Constant), Performance

Table 2b. Regression Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
Constant	48.569	5.301		9.162	.000
Knowledge	.486	.242	.229	2.012	.047
Skill	.822	.407	.219	2.021	.046
Attitude	.691	.319	.226	2.164	.033

a. Dependent Variable: Performance

Table 2-a and 2-b show the results of multiple regression analyses. According to the regression coefficients, knowledge ($\beta = 0.486$, $p < 0.05$), skills ($\beta = 0.822$, $p < 0.05$) and attitudes ($\beta = 0.691$, $p < 0.05$) have a significant positive impact on employees’ performance. So the following hypotheses are supported:

- H_{2a}: Knowledge has an impact on Employees’ performance.
- H_{2b}: Skills have an impact on Employees’ performance.
- H_{2c}: Attitude has an impact on Employees’ performance.



As per the regression results, skills have more effect on performance. The R square value of 0.187 denotes that the variations could explain 18.7% of the variation in employee performance in knowledge, skills and attitudes. The remaining 81.3% of the variation in performance could be attributed to other factors.

The moderating effect of the number of training attended on the impact of Training and Development on Employees’ Performance

Table. 3a. Model summary of effect of moderating variable (Number of trainings attended)

R	R-sq	MSE	F	df1	df2	p
.4331	.1876	65.9711	3.6290	3.000	103.0000	.0155

Table. 3b. Model summary of effect of moderating variable (Number of trainings attended)

Variables	coefficient	SE	t - ratio	p value	LLCI	ULCI
Constant	85.1100	.7835	108.6315	.0000	83.5561	86.6638
Trainings	.0873	.9648	.0905	.9281	-1.8262	2.0008
Total trainings	.3785	.1534	2.4681	.0152	.0744	.6827
Int-1	-.0075	.1892	-.0396	.9685	-.3827	.3677

Interactions: Int-1 Training * Number of Training

As can be seen in Table 3-a, the interaction term (training x number of training) is not significant, $b = -.0075$, 95 % $CI (-.3827, .3677)$, $t = -.0396$, $p = 0.968$ indicating that the relationship between training and performance is not moderated by the number of training attended. Therefore, the hypothesis **H₃** :“Number of Training attended has a moderating effect on the impact of Training and Development on Employees’ Performance” is not supported.

The findings of the study emphasized the impact of Training and Development on Employees’ Performance. Results revealed that knowledge, skills and attitude have a significant impact on the performance of employees. Further, it is revealed that there is a positive relationship among the Training and Development, knowledge, skill, attitude and employees’ performance.

Conclusions

The study highlights the impact of Training and Development on Employees’ performance and it is evident that Training and Development have a positive impact on Employees’ Performance. Future researchers need to consider the large sample to generalize the results to the whole population. Future researches could be extended to the private banks and other regions in Sri



Lanka to generalize the study's findings. It is suggested that other dimensions of employee performance, such as quality of work, the quantity of work, speed of work and other relevant measures, need to be included in the model.

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Humour at the workplace: Leader's humour and employee's trust in the leader

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Abstract

Humour at the workplace has become an exciting area of research in organizational behavior and management. There is a lack of studies on the influence of the leader's humour on employee trust, particularly in the Sri Lankan context. This study aims to examine the impact of leaders' styles of humour (affiliate, self-enhancing, aggressive self-defeating) and its impact on employees' trust in their leader. The researcher adopted a quantitative approach to conduct this study. This study was conducted with 202 employees from public sector organizations. A convenience sampling method was adopted to recruit respondents. The proposed model was assessed by hierarchical multiple regression. Four personal and demographic variables were controlled in this study. This study indicated that the control variable has no significant influence on employee trust in their leader. Affiliate and self-defeating style of humour had a positive and negative influence on trust, respectively, as proposed. Nevertheless, unexpectedly self-enhancing and aggressive styles of humour had no significant influence on trust in the leader. This study contributes to the literature by investigating the influence of leaders' four humour styles on subordinate's trust in their leaders in a new, Sri Lankan cultural context. This study contributes to the management practice by identifying humour style that positively and negatively influences subordinates' trust in the Sri Lankan context. This study suggests that leaders can use more affiliate humour to create a positive work environment and enhance their subordinates' trust. Leaders are advised to avoid aggressive self-defeating humour in the workplace. Further studies need to be conducted with Moderator (e.g. gender) and mediator variable (e.g. emotions) to deepen the understanding of humor's influence on employees' work behaviour in Sri Lankan cultural context.

Keywords: culture, humor, leadership, Sri Lanka and trust

Introduction

Leaders' workplace behavior influence their subordinates' behavior and actions. Leaders' use of humour is an interpersonal activity of leadership. Leaders' use of humor can make the subordinates experience positive or negative emotions that may influence the subordinates' work behaviour. There are mainly four types of humour; affiliate (to enhance the relationship with others in a benign fashion), self-enhancing, (to enhance the self in a benevolent fashion) aggressive (to enhance the self detrimentally to others), and self-defeating (to enhance the relationship with others at the expense of



oneself) (Martin et al., 2003). Affiliate and self-enhancing humour are more positive. Aggressive and self-defeating humour is too pessimistic. Leaders engage in humour in particular ways. The influence of humour on employee's workplace behavior has been well documented (Pundt & Herrmann, 2015; Pundt & Venz, 2017). Leader' humour enhances the quality of the leader-member, affective organizational commitment, innovative behavior and performance.

Trust is a significant keystone in the workplace and social relationships. Trust can be defined as “the willingness to put oneself in a position of vulnerability to the actions of another party based on the expectation that the other will behave with one's interests in mind”. Employees observe the nature, actions, and practices of their leaders to draw inferences about the nature of their relationship positively or negatively influence trust in leadership (Neves & Karagonlar 2020). Trustworthiness is an indication of the character of the trustee. According to Neves and Karagonlar (2020), trustworthiness is built around three characteristics (ability, benevolence and integrity). Karakowsky et al., (2020) found that leaders' affiliate humor influences trust in the leader.

Further, they highlighted that affiliate humor indicates benevolence because it reflects humility and reduces status differences between leaders and their teams. Like affiliative humour, self-enhancing humour reflects leaders' ability. Though it has an intrapersonal focus, it is a healthy defence mechanism (Martin et al., 2003). Self-enhancing humor also shows benevolence as it emphasizes the maintenance of a positive outlook. Aggressive and self-defeating humor make employees feel that the leader is not trustworthy (Karakowsky et al., 2020). Through aggressive humor leaders attempt to enhance the self at the expense of others. As leaders making jokes at the expense of others, it can be interpreted as a strategy to pass the blame to others). Self-defeating humor tells to subordinates that the leader may not have the capability and resources to look after their interests.

Though there are a few studies, focus on the relationship between leaders' humour and employee trust, there is no study in a Sri Lankan cultural context. Like many Asian countries, collectivism and high-power distance are the two significant cultural values in Sri Lanka. As humour and trust are related to cultural values, it is necessary to examine the influence of humour on trust in the leader in the Sri Lankan context separately. Also, examining the influence of humour on employee trust in the Sri Lankan cultural context is essential because it has practical implications for the leaders in the Sri Lankan context and extends the existing literature. Therefore, this study aims to identify the leaders' humour styles and its impact on employees' trust in the leader.



Methodology

This study relied on cross-sectional and self-reported data. 250 respondents who work in public-sector organizations in Sri Lanka have been invited to the survey. The researcher received surveys from 212 respondents. After the listwise deletion of the participants with missing questions, our final sample was composed of 202 (80 percent) responses. Male participants accounted for (58%) of the respondents. Hundred and three respondents, accounting for 50 percent, were married. Concerning age and working experience of respondents, their average age and working experience were 39.3 years and 10.7 years, respectively, with a standard deviation of 5.4 years and 4.4 years. The current study proposes the following four hypotheses:

- H₁: Affiliate humour positively influence employee trust
- H₂: Self-enhancing humour positively influence employee trust
- H₃: Aggressive humour negatively influence employee trust
- H₄: Self-defeating humour negatively influence employee trust

Before conducting the analysis, the data's accuracy was checked; no values outside the specified range were found, which means standard deviations and correlations appeared to be reasonable. Further, questionnaire non-responsive rate, item non-response rate, distribution of data and outliers were taken into account and appropriately treated. Partial least structural equation modelling (PLS-SEM) was employed for data analysis.

Indicator reliability was satisfactory; a loading of all variables with related factors was greater than 0.6. The CR and Cronbach's alpha for each construct were greater than the threshold value of 0.7, which indicates that the indicators together measure each construct sufficiently. Convergent was assessed through the average variance extracted (AVE). The AVE of each construct was larger than the threshold value of 0.5. All the scales were measured through Likert-type scales anchored in 1 totally disagree, and 5 totally agree.

Measures

Researcher measured supervisor humor style with the Humor Styles Questionnaire (Martin et al., 2003). The scale has 32 items, eight per dimension. Cronbach's alphas were 0.76 (Affiliative), 0.69 (Self-enhancing), 0.70 (Aggressive), and 0.72 (Self-defeating). Trust in the supervisor was measured with six items scale used by Neves and Caetano (2009). These are the highest loading items of the original interpersonal trust scale developed by McAllister in 1995. Cronbach's alpha of the current study was 0.78.



Results and Discussions

To test the four hypotheses (H₁–H₄), the researcher employed multiple regressions. Four personal and demographical variables were considered as the control variable of the study. In the first step, the four control variables (age, marital status, gender, and work experiences) were entered as a predictor of trust. In the second step, the four leaders’ humour styles have been entered, and the results are summarized in Table 1 and Table 2 below:

Table 1. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.180a	.033	.009	1.44136
2	.665b	.442	.415	1.10766

The results indicated that control variables have no significant influence on trust. The four control variables together explain only a 3.3 % variance in trust. The humour styles explain 41.5% of the variance in trust in the leader.

Table 2. Coefficients

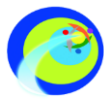
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
Model 1	(Constant)	3.399	.962		3.532	.001
	Marital status	.346	.293	.092	1.180	.240
	age	-.015	.025	-.067	-.578	.564
	experience	-.020	.034	-.068	-.585	.559
	gender	.342	.221	.118	1.548	.123
Model 2	(Constant)	2.690	.881		3.053	.003
	Marital status	.182	.229	.049	.796	.427
	age	.001	.020	.004	.044	.965
	experience	-.023	.026	-.081	-.899	.370
	Your gender	.101	.175	.035	.576	.565
	Affiliate	.187	.062	.192	3.021	.003
	Self-enhancing	.161	.076	.154	2.121	.035
	Aggressive	.124	.079	.106	1.578	.117
Self-defeating	-.420	.063	-.443	-6.705	.000	

a. Dependent Variable: Trust

The results (model 2) indicated that only two styles of humour (affiliate and self-defeating) has significant influence on trust. Affiliate and self-defeating styles had a positive and negative influence in trust, respectively, as expected. Contrary to the expectation, self-enhancing and aggressive styles had no significant influence on trust.

Conclusions

The humour study in the workplace is still in an infant state, mainly if focused on leaders. The current study shows that different leader’s humor styles carry



different consequences to employee behavior. This study empirically confirmed the positive and negative influence of affiliate and self-defeating humor styles on leaders' trust, respectively. These findings are consistent with the recent empirical findings (Neves & Karagonlar, 2020; Karakowsky et al. (2020). Previous studies (Neves & Karagonlar, 2020) found a positive and negative influence of self-enhancing and aggressive humor styles on trust, respectively. But the current study found that both of these two types of humour styles did not significantly influence trust. The unexpected results of this study could be because of differences in the cultural context. Like many Asian countries, collectivism and high-power distance are the two significant cultural values in Sri Lanka. Therefore, employees living in such a cultural context may perceive the leaders' self-enhancement humour and aggressive humor as part and partial of their day to day life.

This study extends the existing literature by investigating the influence of four humor styles on trust in a new Sri Lankan cultural context. This study contributes to the practice by identifying culturally specific hummer styles that significantly influence trust, which is a significant predictor of many positive individual and organizational outcomes. Further studies need to be carried out to identify the influence of humour on employees' positive workplace behavior such as commitment, engagement, and citizenship behavior. Moderator (gender) and mediator variable (emotions) can be introduced to deepen the understanding of humor's influence on employees' work behavior.

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Green Human Resource Management research in emergence: A review and future directions

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Abstract

In the seventeen sustainable development goals of the United Nation more than four goals directly or indirectly connected with Human Resource management in which thirteenth goals is Climate Action. Green Human Resource Management (GHRM) practices play a significant role in Contributing to attain this goal. GHRM seen as the current research trend that plays an essential role in organizations' sustainable Development Strategy. The paper's main objective is 1) to bring to the fore The Concept of Green Human Resource Management.2) study Literature on Different Green practices in HRM .3) Selecting the practices that to future research. To achieve the above stated Objective, this paper employs a methodology to review the article from different research Papers in different journals and websites, Data bases, and books. Hence this paper becomes desk research. This provides insight into Existing GHRM practices by congregating available research studies. Sri Lanka's Organization also follows GHRM practices, even though based on the review of this research, there is a lack of studies identified in Sri Lanka. Especially how practically in each practice GHRM is applied.

Keywords: green human resource management, research trend and sustainable development goals

Introduction

Concern for environmental production policies is increasing (Jabbour, 2013). Therefore, organizations are now more responsible for sustainable outcomes in general and specifically for the environmental effects caused by their activities (Koberg & Longoni, 2019). The role of human resource management (HRM) Critical to enhancing sustainability in organizations and in this aspect, such elements are understood as green human resource Management (GHRM) (Renwick et al., 2013). According to Renwick et al. (2008) it has been specified that distinguished policies in the field of recruitment, performance management and appraisal, training and development, employment relations and pay and reward are considered powerful tools for aligning employees with an organization's environmental strategy. According to Renwick et al., (2013). Three components of GHRM practices may be developed.



- 1) Developing green ability (recruitment and selection, training and development, job description);
- 2) Motivating green employees (performance management/appraisal; pay and reward system);
- 3) Providing green opportunities (employee involvement and empowerment, supportive climate/culture, unions role in EM, organizational learning)

Organizations are now more responsible for sustainable outcomes in general and specifically for the environmental effects caused by their activities. The role of human resource management (HRM) Critical to enhancing sustainability in organizations. Here the researcher try to identify the area in which green practices could be followed in HRM

Objectives of the study

- to bring to the fore The Concept of Green Human Resource Management.
- to study the literature on Different Green practices in HRM.

Literature Review

Mwita (2020) stated that Green HRM provides more advantages like attracting customers and shareholders while enhancing business performance. Krithika et al., (2019) studied that organizations worldwide are working on the road for the implementation of Green HRM practices to increase competitive advantages amongst the corporate world.

Review of Green Practices in Green Human Resource Management

Green job design and analysis

Prasad (2013) stated that each company's HR department can introduce green job descriptions for employees and top-level staff should be accountable for green initiatives and green goals. The corporate world. This study states that the complete implementation of Green HRM requires a transformed approach in the existing HR practices.

Green human resource planning

The corporate environmental management initiatives demand some new job positions and a specific set of skills. Green Human Resource Planning is about a forecasting number of employees and types of employees are required to implement Organization's environmental management activities (e.g., ISO 14001, ISO 1400, ISO 500001). due to that Green human resource planning



gets required. In addition, these companies meet the forecasted demand for environmental works by appointing consultants to perform environmental audits and sometimes outsourcing. Based on the previous literature, it did not specify the practices under the function of green human resource planning. Even, it is possible to identify certain green human resource planning practices (Opatha & Arulrajah et al., 2015).

Green recruitment and green selection

From previous research, it is clearly evident that the recruiting leverages of the organizations can be boosted when they are environment-friendly. According to Renwick et al., (2013) Green recruitment and selection process has two parts: (1) Employing eco-friendly ways for hiring such as online tools, limited paper usage at the time of recruitment and selection process; and (2) Measuring green attitudes at the time of selection, considering people who value green practices and follow basic environment-friendly activities such as recycling, less printing and conservation of energy. Those are some best green HRM practices that are listed out under Green recruitment and Selection.

Green induction

Organizations should ensure that recruits understand their environmental responsibilities, become familiar with health and safety arrangements, appreciate the corporate environmental culture, adopt the company's environmental policy and practices, and know given relevant contact persons within the organisation (Crosbie & Knight, 1995; North, 1997; Renwick et al., 2008 & 2013).

Green performance evaluation

Milliman and Clair (1996) state that when an Environment Management Information System has been developed, it is important that it is not just used for reporting purposes, but should also be integrated with managers' performance appraisals and employees. Incorporating corporate environmental management objectives and targets with the organization's performance evaluation system is a must for any organization nowadays. To sustain good environmental performance, organizations must establish Environmental Management Information Systems (EMIS) and environmental audits. Many organizations have established environmental management information systems (Wells et al., 1993).



Green training and development

Training is widely seen in the literature as a key GHRM intervention to heighten staff awareness of the environmental impact of their organization's activities. To equip staff with core skills, such as collecting relevant waste data (May & Flannery 1995). Well Trained and environmentally aware frontline employees are ideally placed to identify and reduce waste, as they are closest to it. Training in Green issues is widespread now in some countries.

Green reward management

To motivate managers and non-managerial employees on corporate environmental management initiatives, green reward management has significant contributions. Organizations can practice it in two ways, such as financial and non-financial. In some companies' employees are financially (e.g., incentives, bonuses, cash) rewarded for their excellent environmental performance. In some other companies, employees are non-financially rewarded (awards/special recognitions/honors/prizes) for their excellent environmental performance. (Crosbie & Knight, 1995) state that some companies have successfully rewarded extraordinary environmental performance, practices and ideas by including environmental criteria into salary reviews.

Green health and safety management

The scope of the green human green health and safety management scope is broader than health and safety management. That is why nowadays, many organizations are redesigning posts of health and safety managers as health, safety and environmental manager. This post includes a broader job scope than the traditional post of health and safety manager in an organization. For example, it includes biodiversity protection and community support initiatives etc. The crucial role of green health and safety management is to ensure a green workplace for all. Green workplace is defined as a environmentally sensitive workplace, resource-efficient and socially responsible (SHRM, 2009).

Results and Discussions

Based on the review evidence, Green HRM has a huge position of scope and depth in goinggreening of HRM functions will reduce the organization's negative environmental impacts and improve the organization's positive environmental impacts. In improving organization's environmental performance, the people factor is one of the critical factors. To create, practice and maintain environmental related innovative behaviors of employees coupled with right attitude of greening, green HRM practices are critical.



Without proper green HRM practices, it is difficult to create and maintain sustainable environmental performance. Hence it is emphasized that GHRM practices have the capability of performing in a more environmentally friendly manner.

Conclusions and Recommendations

Green Human Resource Management plays an important role in environment-related issues. The present paper's foremost intention was to explore the impact of green concepts towards human resources management. The green HRM practices are more powerful tools in making organizations and their operations green. The GHRM practices identified in this section may have a role to play in improving the environmental performance and the organization's financial performance. Equally, the GHRM practices analyses here are likely to improve employee well-being in the workplace, not least through improving the working environment and satisfying the needs of an increasingly environmentally aware workforce. Based on the review of this research, it can be concluded that there is a lack of studies that have been identified in Sri Lanka, Specially how practically in each practice of GHRM is applied. This gap will stimulate the researchers to do the study on it.

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The role of abusive supervision on the relationship between person-job fit and engagement

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Abstract

According to the person job-fit (PJ-Fit) theory, high PJ-Fit leads to positive work outcomes. However, empirical evidence is not always aligned with this theory, and scholars endlessly called for further research to find the reasons for this. Therefore, this study investigates the influence of employees' person job-fit (PJ-Fit) on their work engagement and the moderating role of abusive supervision on the relationship between PJ-Fit and work engagement. This study was conducted with 114 employees working in public-sector organizations in the northern part of Sri Lanka. Hierarchical multiple regression was employed to analyze the data. Personal and demographical variables (age, gender, marital status, and experience) have been controlled in this study. This study's outcomes indicated that PJ-Fit has a significant (positive) impact on work engagement and the relationship between PJ-Fit and engagement is moderated by abusive supervision. The employees with high PJ-Fit are profoundly engage in their work. However, abusive supervision negatively influences work engagement and weakens the positive impact of PJ-Fit on work engagement. This study extends the literature by investigating the influence of PJ-Fit on work engagement and being the first to introduce the abusive supervision as a moderator on this relationship. This study suggests that recruiting employees who fit well to the job is necessary, but it is not sufficient to make them engage in their work. The Organization needs to take necessary steps to avoid abusive supervision to create an engaged workforce that is a crucial indicator of organizational success

Keywords: abusive supervision, attitudes, engagement, leadership and PJ-Fit

Introduction

In today's fast-changing and competitive environment, organizations make many attempts to maintain engaged employees because engaged employees have high motivation to act, contribute to organizational success and succeed in their carrier. Previous studies highlighted the organizational level factors such as leadership and culture are the antecedents of work engagement and underestimates the role of individuals in controlling their work and work situation. According to fit theory individual has an inner motive to exercise control, and they search job and Organization that fit well to them (Yu, 2013). Therefore, organizational level factors can only partially explain employees' engagement, as they cannot reflect individuals' intrinsic needs (Rayton et al.,



2019). Therefore, this study aims to investigate the role of person-job fit (PJ-Fit) on their engagement.

Methodology

Population and sample

For this study, the researcher collected data from employees in the banking sector. Hundred and fifty participants were randomly selected, and questionnaires were distributed to them through the researcher's personal and professional networks. A convenience sampling method was adopted to recruit respondents. To maintain confidentiality, data that help identify the particular respondent were not collected, and each questionnaire was accompanied by a stamped envelope and a cover letter assuring confidentiality. Out of 150 responses, only 121 responses were received, and seven were removed because of a high number of missing variables. Ultimately this study was conducted with 114 responses. Male participants accounted for (60%) of the respondents. Fifty-six respondents, accounting for 50 percent, were married. Concerning age and working experience of respondents, their average age and working experience were 38.2 years and 9.9 years, respectively, with a standard deviation of 5.8 years and 4.9 years.

Hypotheses of the study

According to the person job-fit (PJ-Fit) theory, high PJ-Fit leads to positive work outcomes. However, empirical pieces of evidence are not always aligned with this theory, and scholars called for further research to find the reasons for this. Supervisors' negative treatment may show that employees have a low value in the Organization that leads employees to feel that they are excluded and impractical (Zhang & Frenkel, 2018). Also, an Individual's self-concept becomes vulnerable to the negative experience in the workplace (Baumeister et al., 2001). Abusive supervision, "as a typical negative situation in an organization, refers to hostile verbal and non-verbal behaviors (not including physical contact) that employees repeatedly perceive in their supervisors" (Shen et al., 2019). Abusive supervision comprises public criticism, impolite handling and ridicule of subordinates. Consequently, abusive supervision makes employees doubt their own importance, value and competence in the workplace, thus resulting in the feeling of lack of (individual) resources, which decrease employees' engagement in their work. Therefore, this study further investigates the role of abusive supervision on the relationship between PJ-Fit and work engagement. The researcher developed the following two hypotheses:

H₁: Person-job fit (PJ-Fit) positively influence engagement.

H₂: The relationship between PJ-Fit and engagement is moderated by abusive supervision



Results and Discussions

Before conducting the analysis, the data's accuracy was checked; no values outside the specified range were found, which means standard deviations and correlations appeared to be reasonable. Further, questionnaire non-responsive rate, item non-response rate, distribution of data and outliers were taken into account and appropriately treated.

Variables and measures

PJ-Fit.

The degree of fit between the person and their job was measured using 6 items scale developed by Rayton et al., (2019) from the original scale developed by Cable and DeRue in 2002. The estimated internal consistency reliability of the previous studies and the current study was greater than the threshold value ($CrA > .7$)

Abusive supervision

Abusive supervision was measured with a 10-item short version scale (Aryee et al., 2007; Shen et al., 2019). Respondents were asked to rate their agreement with statements about their direct supervisor's behavior, using a five-point Likert scale from 1 = strongly disagree to 5 = strongly agree. Cronbach's α for the abusive supervision scale in the previous studies (Aryee et al.'s 2007; Shen et al., 2019) and the current study was satisfactory ($CrA > .7$)

Work engagement

Work engagement was measured with the nine-item Utrecht WE Scale (Schaufeli et al., 2006). The previous study (Rayton, et al. 2019) and the current study reported very high-reliability score ($CrA > .8$). Participants responded to items on a 7-point Likert-type scale (1 = strongly disagree and 7 = strongly agree).

The factor loading of each indicator, Cronbach's alpha, and composite reliability of each construct were more substantial than the threshold value of 0.70. AVEs of all reflective latent variables were greater than 0.5. The square root of AVE is higher than inter-construct correlations. Moreover, each indicator's loadings to the specified constructs is significantly higher than the loading to any other construct. Therefore, it can be concluded that the measurement model has adequate indicator reliability, construct reliability, discriminant validity and convergent validity (Hair et al., 2011).



To test the two hypotheses, the researcher employed hierarchical multiple regressions. Four personal and demographical variables were considered as the control variable of the study. In the first step, the four control variables (age, marital status, gender, management level and work experiences) were entered as a predictor of engagement. In the second step, the four person-job fit has been entered, and the results are summarized in Table 1 below.

Table 1. Outcomes of hierarchical regression analysis

Variables	Model 1		Model 2		Model 3		Model 4	
	t	Sig.	t	Sig.	t	Sig.	t	Sig.
Age	1.00	.28	1.01	.30	1.00	.31	.86	.38
Experience	-.42	.66	-.67	.49	-.56	.57	-.65	.51
Marital status	.17	.86	-.03	.97	-.14	.88	-.09	.91
Sex	.78	.43	.76	.46	.80	.47	.92	.34
<i>PJ-Fit</i>			6.85	.00	7.1	.00	-.29	.76
<i>Abusive sup.</i>					2.10	.04	-1.3	.18
<i>PJ_Fit*Abus.Sup.</i>							2.2	.00

The path coefficient and its significant values indicated that PJ-Fit has a positive ($\beta = .54, p = .00$) impact on engagement. Also, perceived abusive supervision has a negative (significant) influence on the engagement. To examine the moderation effect of abusive supervision on the relationship between fit perception and engagement, the interaction term (PJ-Fit * Abusive supervision) was created. The results indicate that abusive supervision negatively moderates the relationship between fit perception and engagement (R^2 change was significant when introducing the moderator). Therefore, H_1 and H_2 are supported.

Conclusions

This study's findings indicated that PJ-Fit has a significant (positive) impact on work engagement and the relationship between PJ-Fit and engagement is moderated by abusive supervision. The employees with high PJ-Fit are highly engaged in their work. However, abusive supervision negatively influences work engagement and weakens the positive impact of PJ-Fit on work engagement. That is, when employees perceive high-level abusive supervision, PJ-Fit becomes less important in explaining work engagement. When perceived abusive supervision is lower, fit perception becomes more important in explaining engagement. This study extends the literature by investigating the influence of PJ-Fit on work engagement and being the first to introduce the abusive supervision as a moderator on the relationship between PJ-Fit and Work engagement. This study also contributes to the literature by deepening the understanding of the relationship between PJ-Fit and engagement under abusive supervision. This study's findings suggest that recruiting employees who fit well to the job is not sufficient to make them



engage in their work. The organization needs to take the necessary steps to avoid abusive supervision in the workplace. Organizations spent a considerable amount of resources identifying a suitable candidate for a particular job to harvest positive work outcomes from them. To maximize employees' engagement, which is a crucial indicator of organizational success organization should be careful in the way employees are managed in the workplace.

This stud used cross-sectional and self-reported data, which is vulnerable to common method bias (CMB). However, the researcher takes some necessary steps in the survey design state and the data analysis stage to minimize CMB. Further studies are encouraged to introduce a new moderator (e.g., organizational politics) to deepen the understanding of PJ-Fit and employees' outcomes relationship and help management build an engaged workforce.

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Reward and job satisfaction among the nurses in the Jaffna teaching hospital

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Abstract

Reward plays a major role in providing job satisfaction to the employees. The feeling of Job satisfaction can strengthen commitment and Loyalty and make the employees more productive and creative. In this study, the target population is the Nurses in Jaffna teaching hospital. The main objective of this study is to identify the relationship between the employee rewards and their job satisfaction and identifying the effect of both intrinsic and extrinsic reward on employee satisfaction. Through the questionnaire, using five-point Likert scales was used. Based on the analysis there is a positive relationship between extrinsic reward and intrinsic reward with job satisfaction and a positive relationship between payment, promotion, working condition, workgroup and recognition with Job satisfaction.

Keywords: extrinsic reward, intrinsic reward and job satisfaction

Introduction

Intrinsic rewards system from rewards inherent in the job itself and which the individual enjoys as a result of completing the task or attaining his goals. Meanwhile, extrinsic rewards are external to the job's task, such as payment, work condition, fringe benefits, security, promotion, contract or service the work environment and conditions of work. According to Bergum and Lethr (1984) rewards systems are among the most important topics in human resource management. Throughout the literature, theorists and academics and practitioners and managers emphasize the importance of rewards.

Additionally, job satisfaction is Important in Human Resource Management. Job satisfaction provides Employees feelings of fulfillment, achievement and even pleasure for their job (Richard, 1976). The organization's reward system quid its actions that have the greatest impact on the performance of individual employees. The salary increase, bonuses and promotions can be a strong motivation of individual performance. Therefore, the reward must be directly and specifically associated with improved performance (Hackman & Oldham, 1976). A reward can be extrinsic or intrinsic external reward can be in the form of salary, incentive, bonuses, promotion, job security. intrinsic



rewards are intangible rewards or psychological rewards like appreciation. Meeting the new challenges, positive and caring attitude from employer, and job rotation after achieving the goal. This research titled employee rewards and its impact on job satisfaction among the nurses in Jaffna Teaching Hospital tries to explain the employee reward and its impacts on employee satisfaction. According to Jayakody and Ajanta (2017) suggest that EI could be increased by year of experience and training and Education. Reward refers to all forms of financial returns and tangible services and benefits employees receive as part of an employment relationship. Identifying the relationship between the employee rewards and their job satisfaction and identifying the effect of both intrinsic and extrinsic reward on employee satisfaction is the main objective of this research.

Literature Review

According to Fournet, Distefano and Margaret (1966), rewards can be either intrinsic or extrinsic. Intrinsic rewards system from rewards inherent in the job itself and which the individual enjoys as a result of completing the task or attaining his goals. Meanwhile, extrinsic rewards are external to the task of the job, such as payment, work condition, fringe benefits, security, promotion, contract or service the work environment and conditions of work (Gerald & Dorothee, 2004). Extrinsic rewards are often determined at the Organizational level. Intrinsic rewards, on the other hand, are those rewards that can be termed as psychological rewards. Colby, Sippola and Phelps (2001) defined rewards as the payments made to the employees as compensation for the organization's services. Compensation or remuneration is what employees receive in exchange for their work in the enterprise (Clifford, 1985).

Methodology

This study was based on a survey of individuals who held a job in either the private or public sector of Jaffna town hospitals. The total sample was selected from male and female Nurses performing different tasks. The questionnaires were submitted to the staff working in the hospital to get data about rewards and job satisfaction. To measuring respondent's opinion and attitude five point Likert scales was used. Correlation analysis, regression analysis was used for the analysis using SPSS Software. The convenience sampling was applied to collect the data because only a few nurses were ready to contribute voluntarily to this study in their busy schedules. Following hypotheses were developed for testing:

H1: There will a positive relationship between extrinsic reward and job satisfaction.

H_{1a}: There will be a positive relationship between payment and job satisfaction.



- H_{1b}: There will be a positive relationship between promotion and job satisfaction.
- H_{1c}: There will be a positive relationship between working conditions and satisfaction.
- H_{1d}: There will be a positive relationship between Workgroup and satisfaction.
- H₂: There will be a positive relationship between Intrinsic Rewards with job satisfaction.
- H_{2a}: There will be a positive relationship Recognition with job satisfaction.
- H₃: There will be a positive Relationship between total reward and job satisfaction.

Results and Discussions

H₁: There will be a positive relationship between extrinsic reward and job satisfaction

Table 1. Correlation between extrinsic reward and job satisfaction

Variables		satisfaction
satisfaction	Pearson Correlation	1
	Sig. (2-tailed)	
Ex.Reward	Pearson Correlation	.58**
	Sig. (2-tailed)	.000

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

Table 1 shows that there is a medium positive correlation between Extrinsic reward and job satisfaction (correlation= 0.58)

H_{1a}: there will be a positive relationship between payment and job satisfaction

Table 2. Correlation between payment and job satisfaction

Variables		payment	satisfaction
payment	Pearson Correlation	1	0.667**
	Sig. (2-tailed)		.008
satisfaction	Pearson Correlation	.667**	1
	Sig. (2-tailed)	.008	

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

Table 2 shows a medium positive correlation between payment reward and job satisfaction (correlation= 0.667). Therefore, H_{1a} is accepted.

H_{1b}: there will be a positive relationship between promotion and job satisfaction

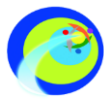


Table 3. Correlation between promotion and Job satisfaction

Variables		promotion	satisfaction
promotion	Pearson Correlation	1	0.816**
	Sig. (2-tailed)		.003
satisfaction	Pearson Correlation	.816**	1
	Sig. (2-tailed)	.003	

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

Table 3 shows a strongly positive correlation between promotion and job satisfaction (correlation= 0.816). Therefore, H_{1b} is accepted

H_{1c} : there will be a positive relationship between working condition and satisfaction

Table 4. Correlation of Working condition and satisfaction

		Working condition	satisfaction
Working condition	Pearson Correlation	1	0.701**
	Sig. (2-tailed)		.005
Satisfaction	Pearson Correlation	0.701**	1
	Sig. (2-tailed)	.005	

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

Table 4 shows a strongly positive correlation between working conditions and job satisfaction (correlation= 0.701). Therefore, H_{1c} is accepted.

H_{1d} : There will be a positive relationship between Workgroup and satisfaction

Table 5. Correlation between workgroup and satisfaction

Variables		Workgroup	satisfaction
Work Group	Pearson Correlation	1	.664**
	Sig. (2-tailed)		.012
Satisfaction	Pearson Correlation	.012	1
	Sig. (2-tailed)	.664**	

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

Table 5 shows a strongly positive correlation between Workgroup and job satisfaction (correlation= 0.664). Hence, the H_{1d} accepted.

H_2 : there is a positive relationship between Intrinsic Reward and Job satisfaction.

Table 6. Correlation between relationship intrinsic reward and job satisfaction

Variables		satisfaction	In.Reward
satisfaction	Pearson Correlation	1	.62**
	Sig. (2-tailed)		.003



In.Reward	Pearson Correlation	.62**	1
	Sig. (2-tailed)	.003	

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

Table 6 shows a strong moderate correlation between intrinsic reward and job satisfaction (correlation= 0.62). Hence, the H₂ is accepted.

H_{2a} There is a positive relationship between Recognition and Job satisfaction

Table 7. Correlations between Recognition and satisfaction

Variables		Recognition	Satisfaction
recognition	Pearson Correlation	1	.886**
	Sig. (2-tailed)		.169
satisfaction	Pearson Correlation	.886**	1
	Sig. (2-tailed)	.169	

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

Table 7 shows a strong correlation between Recognition Reward and job satisfaction (correlation= 0.886).

H₃: There will be a positive Relationship total reward and job satisfaction

Table 8. Model summary of total reward and job satisfaction

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.66 ^a	.868	.824	.47871

a. Predictors: (Constant), Reward

Table 9. coefficient of Extrinsic reward and job satisfaction

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1	(Constant)	2.375		1.984	.141
	Total reward	.594	.134	.66	4.437

a. Dependent Variable: Satisfaction.

According to the table 9, the Constant Value is 2.375 and the coefficient for the Proactive Behavior is (Beta) 0.66. According to the model, Fit exits, thus

$$Y=a+bx$$

$$\text{Job satisfaction}=2.375+.66x \text{ *(total Reward)}$$

The Value of the beta is .66, that shows 1% increase in the Total Reward of the nurses will influence 66% on job satisfaction. In other words, 66% of the nurses' satisfaction is affected by 1% of the total reward. So, this Total reward moderately correlated with job satisfaction. Therefore, H₃ is accepted.



Conclusions and Recommendations

The coefficient of correlation of extrinsic reward and job satisfaction is 0.58. There is moderate positive correlation between extrinsic Reward and satisfaction. There is a positive relationship between payment and satisfaction the payment increases the satisfaction ($r = .667$) the remains depend on another variable. The coefficient of correlation of promotion and job satisfaction is 0.816. There is a strong positive relationship. Moreover, correlation analysis 0.701 is the correlation between working conditions and job satisfaction here, there is a strongly positive relationship between this. Working condition is the important factor for providing better services to the patient. There is a positive relationship between Working group and satisfaction. The payment increases the satisfaction ($r = .664$) the remains depend on another variable. The coefficient of correlation of intrinsic reward and job satisfaction is 0.62. There is a moderate positive correlation between extrinsic Reward and satisfaction. According to the correlation analysis, 0.889 is the correlation between working Recognition and job satisfaction; here, there is a strongly positive relationship these between. Recognition is the important factor for providing better services to the patients. According to the regression analysis, 0.66 is the regression value between working Recognition and job satisfaction. Furthermore, there is a positive relationship ($r = .66$) between total reward and satisfaction by increasing the reward by 1%. The reward will be increased by 66% other 44% will be determined by various factors.

The profession of the nurses is strongly connected with emotion compared with other professions but in this competitive world to achieve competitive advantages, it should be studied other how this Reward system affects other professional's satisfaction. Based on this study by providing the sound intrinsic and extrinsic rewards to the employees made them attain the high level of employee's job satisfaction. Effective administrative activities will help further to create a work environment with a proper reward that will encourage, support, sustain and improve Job satisfaction.

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A comparison study of the top five journals on Human Resource Management indexed with Scopus

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Abstract

This paper presents the quantitative comparison of the top five journals based on many articles published on Human Resource Management (HRM) indexed with Scopus. A total of 102,333 contributions were published in 10,186 Human Resource Management journals. Scopus is one of the large abstract and citation databases of peer-reviewed literature. It has comprehensive metrics to evaluate the journal quality from over 5,000 publishers. This study selected the top five journals publishing human resource management related research output. The top five journals were selected concerning number of articles published by respective journals on human resource management. Quality indicators number of articles published on HRM and h index, CiteScore publication by year, SCI mago journal rank by year, Source Normalized impact/year, source citation by year, source documents by year, percentage of document not cited by year, and international collaboration were used to compare the journal performance. The sum of the research output in the Human resource management journal shows high citation throughout the period considered, it is a potential journal in the field of HRM and trend of international author contribution. The output of this study will help the academics, researchers and information professionals select the quality and potential journals in the field of HRM to publish their research and subscribe to the library.

keywords: citescore, human resource management, journal performance indicators and scimago journal ranking

Introduction

Human resource management becomes more important for any institutions or any company because it contributes to the organization success in many ways. The advancement in human resource management (HRM) evolution has been noted with various approaches (Haneda, 2018). New approaches should be practiced in any organizations to use the human potential for organization success. The successful companies used number of HRM models. Professionals and researchers are continuously updating with the new trends in HRM around the world. Information professionals are playing a vital role in providing quality resources for researches and professionals. Journals play an important role in scholarly communication. Periodicals are the indicators of the emerging new ideas in any discipline. They reveal the existing problems requiring solution, research pattern to solve these



problems; the practices fixed to various areas. “A scientific paper or text reveals not only the world-building strategy of its authors but also the nature and force of the building blocks derived from the domain of science from which it draws and to which it contributes” (Gupta & Kumar, 2001). Scopus is Elsevier’s abstract and citation database launched in 2004. Scopus covers nearly 36,377 titles from approximately 11,678 publishers, of which 34,346 are peer-reviewed journals in top-level subject fields of life sciences, social sciences, physical sciences and health sciences. Assessment of scientific performance, bibliometric and citation indicators are among the most crucial impact measures of scientific literature. This study aims to compare the top five journals indexed with Scopus cover HRM research outputs. Researchers need to select suitable and quality journals to publish their research output. Currently, there are several scholarly journals were publishing research publications. The author has the right to select the quality journals for their research publications. These performance indicators will help the authors select the quality journals and libraries to evaluate their subscription journals.

Literature Review

A study carried out by Murugan and Saravanan (2017) on scientometric study during the year 2006-2015 revealed that the citations to source items indexed within Web of Science core collection of remote sensing performance from all over the world in terms of growth during 10 years. Davarpanah and Aslekia (2008) investigated International LIS journals concerning its productivity and characteristics. This paper presents a quantitative study of productivity, characteristics and various aspects of global publication in library and information science. The productive authorship positions are listed to indicate their productivity and degree of involvement in their research publication. A study in the SCImago Journal and Country Ranking list of Top 50 Ranking Journals of Library and Information Science.” This paper aimed to find out the topmost journals in the field of Library and Information Science. The SCImago Journal and Country Ranking were used to identify the top 50 Journal Publications. The journal Information Systems Research gets the first place with the SCImago Journal and Country Rank of 4.397 and h-index number 116 (Murugan & Ravi, 2016).

Methodology

Data was collected from the Scopus and SCImago journal ranking database. Top five journal on HRM was selected based on the number of articles published. Data was searched as “Human Resource Management” through source title, then searched hits were arranged according to the number of articles. From the arranged list top five journal titles were selected. Scopus recommended quality indicators were used to compare the top five journals,



and the following indicators were collected for each journal from Scopus and SCImago database.

1. Number of articles published on HRM and h index
2. CiteScore publication by year
3. SCImago journal rank by year
4. Source normalized impact/Year
5. Source citation by year
6. Source documents by year
7. Percentage of documents not cited by year
8. International collaboration

Results and Discussions

Table 1 shows the basic information about selected top five journals on Human resource management. The journal International Journal of Human Resource management leads among the top five journals; it published 3734 articles on human resource management from 1990 with the h index of 107. H index 107 reveals that 107 articles received more than 107 citations for its research articles on human resource management.

Table 1. Basic information of top Five Journals

Name	Year coverage	Subjects category	No. of articles	h-index
International Journal of Human Resource management	1990-present	Business Management & Accounting	3734	107
Human Resource management international digest	2002-present	Business Management & Accounting	2188	11
Human Resource Management	1961-present	Business Management & Accounting Psychology	1904	87
Human Resource Management Journal	1990- present	Business Management & Accounting	847	72
International Journal of Human Resource Development and Management	2006-2020	Business Management & Accounting	417	14

1. Cite Score publication by year

Cite Score is the number of citations received by a journal in one year to documents published in the three previous years, divided by the number of documents indexed in Scopus published in those same three years. Cite Score is a simple way of measuring the citation impact of a Journal. We cannot compare between subject fields using CiteScore. CiteScore metric is not field normalized because different journals and citation behavior of research in different fields will affect the value and differences in performance. The



figure1 shows the trend of CiteScore for selected five journals. , The performance of Human Resource Management Journal, is good throughout the period. After 2016 onwards, selected five journals shows the increasing trend in the CitesScore.

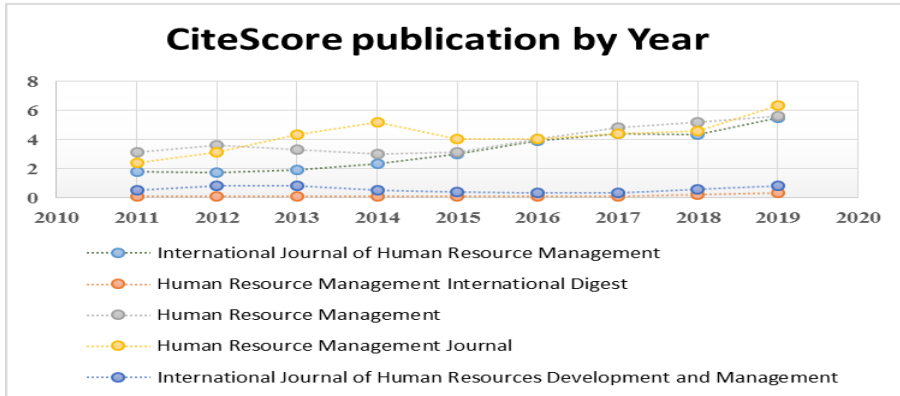


Fig 1. Cite Score publication by Year

2. SCImago Journal Ranking by year

The SCImago Journal Rank (SJR) is an indicator to measure the scientific influence of a scholarly journal that accounts for the number of citations received by a journal and the importance or prestige of the journal where the citations come from. SJR indicates the average number of weighted citations received during a selected year per document published in that journal during the previous three years. The higher the SJR value indicates, the higher the journal prestige.

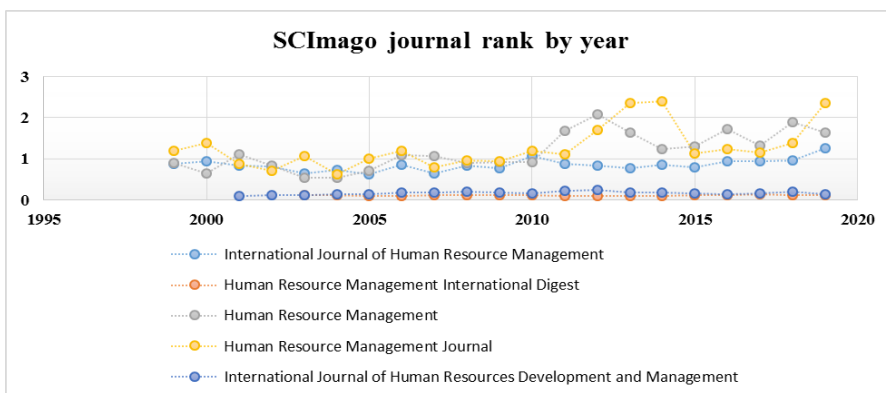


Fig 2. SCImago journal rank by Year



3. Source Normalized impact/paper by year (SNIP)

Source Normalized Impact per Paper (SNIP) is a measure for field-specific differences in citation practices. It does so by comparing each journal's citations per publication with its field's citation potential, defined as the set of publications citing that journal. Comparing these titles with SNIP, the Human resource management journal shows the high SNIP throughout the year. It shows that this journal has potential in human resource management by having a high number of citations for its publications.

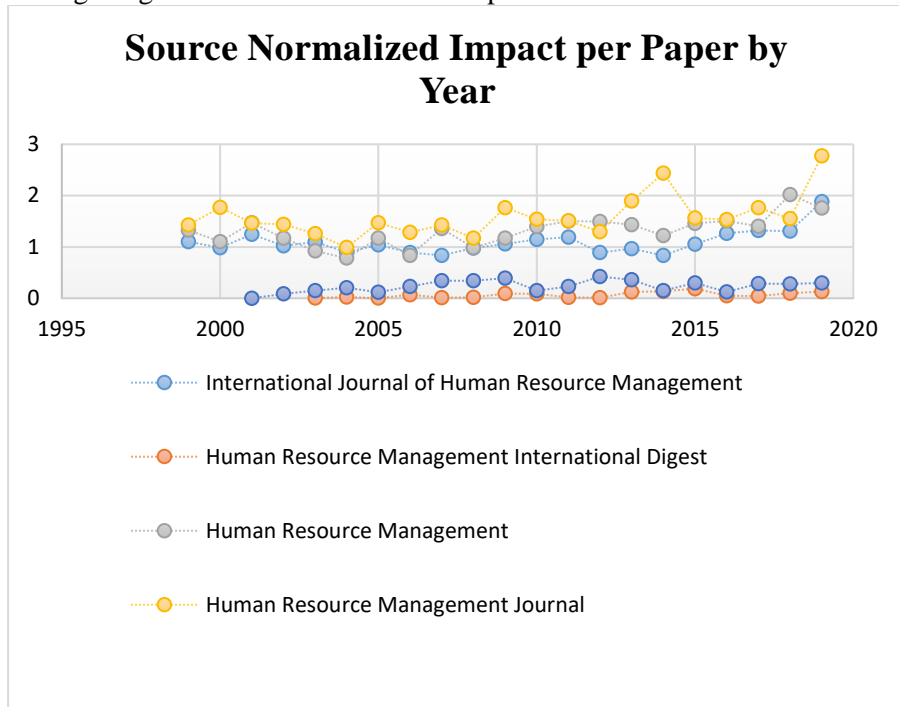


Fig 3. Source Normalized Impact per paper

4. Source documents and the citations

Source documents reveal that number of publications by the particular journal, number of citations received by the published articles and percentage of not cited documents. The quality of each journal on human resource management can be evaluated by using these three measures.

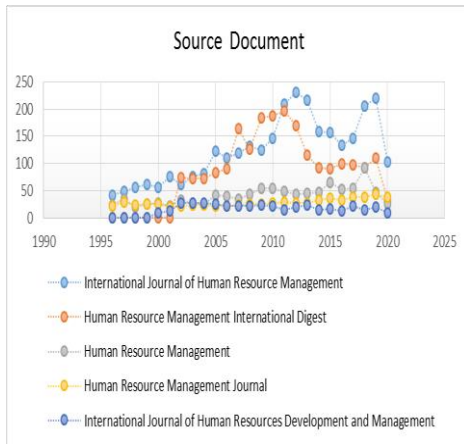


Fig 4. Number document published by journals

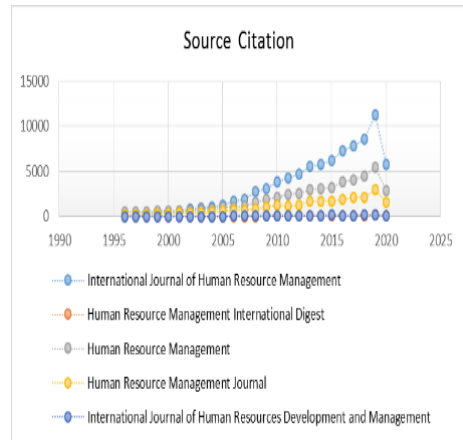


Fig 5. No. of citation received by a journal

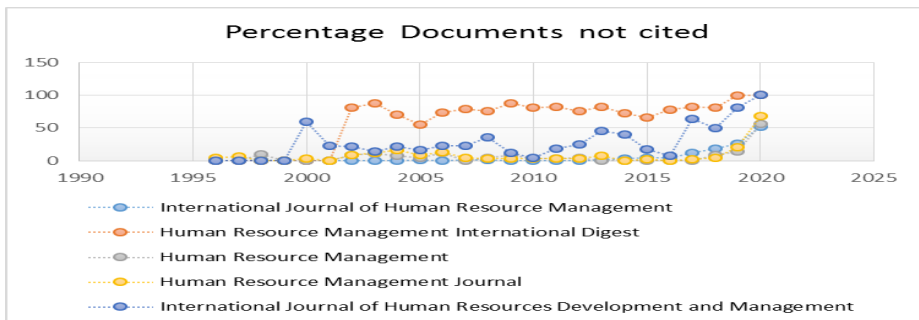


Fig 6. Percentage of not cited documents with journals

When the number of published articles increases, total citation also will increase. Considering the three graphs, International Journal of Human Resource management had a high number of publications and received a high number of citations for published articles. However, nearly 30% of its publication were not cited. This reveals that the number of citations was increased with the number of publications, and the citations are not equally distributed. Considering all three situations, the Human Resource Management Journal performs good in the quality of publications.



5. International collaborations

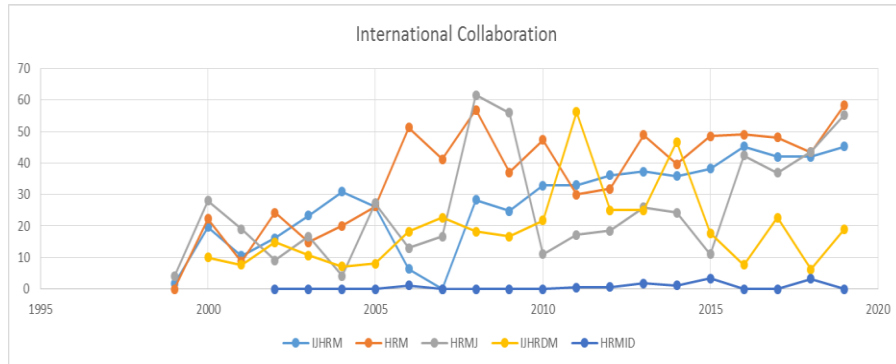


Fig 7. International collaboration for the journal by year

International collaboration shows the number of publications authored by foreign countries. International collaboration allows sharing different concepts, models, approaches and etc in human resource management. It will help to maintain the quality of the publication. The performance of HRM journals is good for international collaboration till 2007 and after that, there is a droop till 2015. After 2015 foreign publications increased in increasing trend.

Conclusions and Recommendations

Summing up the performance of the five selected journals publishing human resource management-based publications, different databases use different indicators to measure journals' quality. This study used the quality indicators recommended by the Scopus database were used to compare the journal performance and quality, such as CiteScore, SCImango Journal Ranking, Source Normalized Impact factor per paper by year, Source documents and International collaboration. It has been observed that Human resource management journal performs well through the period considering the quality of publications. Quality indicators help authors select the best journals for their publications and research to find high-impact articles and help the information professionals select journal for library usage.

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The role of labour law in the protection of employees during COVID-19 pandemic in Sri Lanka

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Abstract

The COVID19 pandemic has created an unimagined crisis that caused thousands of employees worldwide to lose their jobs, have their wages deducted, and deal with and fight against the blatant violations of labor rights benefits guaranteed to them by the existing laws. The Sri Lankan labour force saw no exception to this situation. In this context, it is essential to ascertain the efficacy of the existing legal framework in Sri Lanka in protecting the interests of the employees against adverse labour practices adopted by the employers in their favour, during the COVID-19 pandemic. Therefore, this research seeks to address whether Sri Lankan labour laws were sufficient to protect the interests of the employees during the pandemic situation. The research is carried out using three methodological approaches: the black letter approach of research empirical research methodology and the international and comparative research methodology. The findings of the research reveal the inadequacy and silence of the labour laws in Sri Lanka in addressing and dealing with the labour issues that have arisen due to COVID19 pandemic. The research lays down suggestions to reform the law in Sri Lanka to ensure the maximum protection of the employee rights and benefits against the abuses stemming from the employers' unequal bargaining power during the unfavourable times of global health emergency.

Keywords: employee interests, labour rights and role of labour law

Introduction

The COVID-19 pandemic has brought the fast-phased human activities into a standstill consequent to the virus prevention mechanisms adopted throughout the world. The situation resulted in a fall in economic activity, critically affecting the employees. According to International Labour Organization, by the end of 2020, the total loss of worker's income would range between 860 and 3,440 billion USD and more than 125 million people will permanently lose their employment (International Labour Organization, 2020). The Sri Lankan employment sector has also gotten severely affected by the pandemic related economic downturn. Many industries in Sri Lanka, which largely depend on the global demand and supply, had to go for layoffs, under employment and salary cuts. While these actions are inevitable for certain employers, some employers adopted these measures solely for their benefit. In this situation,, it is incredibly vital to analyse whether the Sri



Lankan law is well equipped to protect the employees' rights and benefits against adverse labour practices adopted by the employers in their favour during the COVID-19 pandemic. The main problem sought to be addressed in this research is whether the Sri Lankan labour laws were sufficient to protect the employees' interests during the pandemic situation.

Literature Review

The literature carried out in the selected research area is rare, perhaps due to the unprecedented nature of the COVID-19 pandemic. From the limited literature available on the Sri Lankan context, Wimalaweera (2020) recognizes that:

the existing legislation does not address the current pandemic situation, depriving both employees and employers alike of relief measures adopted in this situation. (p. iii)

Similarly, research work focusing on other countries also recognize the inadequacy of the existing laws to address COVID-19 related labour issues (Sheeshan, 2013). Some literature emphasizes the necessity of the State's expanded role for the protection of the interests of the labour force during the pandemic (Tham, 2020). However, the existing body of literature still lacks a comprehensive analysis carried out on the efficacy of the labour laws in Sri Lanka in pandemic times, which is sought to be addressed by the present research.

Methodology

The research was carried out using three methodological approaches. The black letter approach of research and the international and comparative research methodology was used based on legislative enactments and international legal standards as primary sources and books, journal articles, conference proceedings, theses, and online resources as secondary sources. The international standards are used as the yardsticks or benchmarks against which the Sri Lankan law's efficacy is ascertained. The empirical research methodology was used to analyse the law in context through the researchers' observations. Moreover, unstructured interviews were held with the selected employees in Information and Communication Technology, Education, Financial Services, Medical and Legal. The sample was selected using the stratified random sampling method to include the employees working at different organizations' levels.



Results and Discussions

The labour law's role has ample angles that raised the need for attention during the health emergency experience. Most parts of the contemporary labour law remained hidden until recently due to a lack of such attention. However, this research will be limited to the following sub-heads that require priority since authors focus on an in-depth analysis in every angle.

i. Work from Home (WFH)

WFH is not a novel topic in the modern labour market. However, it is novel to the conventional labour practices where the employees used to work inside an office within a given timeframe, which was the traditional Sri Lankan practice before the bad experience of COVID – 19. Main enactments that regulate work and remuneration hours such as Shop and Office Act No. 19 of 1954 (as amended) and Wages Boards Ordinance No. 27 of 1941 (as amended) do not include any specification on the concept of WFH. Moreover, the empirical data reveals several unfair labour practices by employers during WFH conditions. According to the interviewees' data, these include unrestricted working hours, cancellation of leaves, no provision of the necessary telecommuting equipment, and the refusal to cover up WFH related expenses. The experience will have been different if the applicable rules and regulations have touched the contemporary labour market models such as WFH. When considered the international standards on WFH, the Home Work Convention, 1996 stipulated by the International Labour Organization can be identified. However, the Home Work Convention does not cover all the practical difficulties that might occur during WFH condition and some employments due to its uniqueness of nature, cannot be performed while staying at home (International Labour Organization, 2020). The Home Work Convention of 1996 can be used as a standard-setting subject to other modifications based on the practical issues that need to be addressed by a law reform in Sri Lanka.

ii. Wages and Other Benefits

The formula to calculate the salary does not mention any of the labour law statutes in Sri Lanka other than the minimum wages stipulated. The main reason behind such silence in the law was to provide a free labour market based on the competent and demand under the free employment contract. The employer will be at liberty to exercise its right under the respective employment contracts, including a mutual settlement between the two parties for lesser payment or no payment of salaries during the lockdown, as the case may be (Goel & Sharan, 2020). However, extreme exploitation of law during the COVID – 19 based on the unavailability of relevant rules and regulations with non-payment of wages and salary and unreasonable deduction of salaries



during the lockdown situation without mutual agreement, is entirely erroneous. On the other hand, employers' condition should be understood since the lockdown brought a huge impact on all employers due to stoppage of production and service provision. If the law has provided a guideline upon which the salaries should be paid and deducted, it would be a relief. Due to the unavailability of such law, employers acted on their sole discretion unequally and disproportionately and it affected the balance of the interests of the tri-party in this labour relationship. Moreover, the Employees' Provident Fund (EPF) and Employees' Trust Fund (ETF) do not include guidelines to be followed during such a situation where the whole salary is not paid. Both the employer and the employee are put in a position of misery due to unavailability and incompatibility of the country's labor laws.

iii. Essential Services

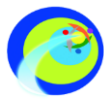
It is with utmost importance the services of the essential service providers need to be admired and appreciated. During the COVID – 19, if not their wholehearted services, Sri Lanka will not manage at least up to this progress level. Thus, the labour laws applicable to them should cover incentives such as higher overtime rates, higher social benefits and other amenities which is a lacuna in the existing legal framework of Sri Lanka. It is the role of the law to identify the needs of the employees in such a way that protects the interests of both the employer and the employee (Arnold, 2020).

iv. Psychological status

The mental condition of the employees is an untouched area of law. In order to expect high performance from the employee, his psychological status should be unharmed. During the lockdown period, the employee's mental status might have been damaged by the unreasonable and mischievous steps taken by the employer and the silence on the part of the State (Millson, 2020). Thus, it will impact on the performance level of succeeding months as well. It is imperative to state that the consistency of the labour laws of a country affects several angles, including the workers' performance, quality of the products, workers' health and social aspects, and operation levels of the work or business.

Conclusions and Recommendations

Sri Lankan labour law framework needs reformation to address the issues that prevailed due to the health emergency. Thus, Work from Home Standards should be introduced with suggestions to practical issues and the international standards as discussed. Moreover, it is required to provide a legal guideline to be followed by employers for calculation of salary, EPF and ETF during an emergency respecting the equality, reasonableness and justice to all



employees affected. Also, recognizing employees of the essential services with higher benefits would provide a better approach to address the issue in discussion. Finally, it is recommended to establish a ‘Grievance Handling Office’ at the Department of Labour to provide advisory and investigatory services to the employers and the employees who require assistance during an emergency. Reformation of labour laws is not sufficient if the implementation of it is not effective. There should be a mechanism to ensure the proper application of the laws.

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The relationship between emotional intelligence and job performance. A study among Sri Lankan teachers

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Abstract

Teaching is a profession that is highly linked with emotions. Teachers should be more aware of their emotions and the way students' emotions are dealt with. This research talks about the relationship between Emotional intelligence and job performance by selecting 212 teachers from the central province, Sri Lanka. Previous studies have been conducted in various cultural contexts and identified the relationship between emotional intelligence and job performance, but these studies' results were inconsistent. It is suggested that cultural context can be a reason for this inconsistent result. Convenient sampling is used and it is quantitative research. Data was collected through a questionnaire survey and a significant correlation emerges from the data between emotional intelligence and job performance. The four main dimensions of Emotional intelligence, self-regulation, self-motivation, self-awareness, and social skill, are tested with job performance. The research found a significant relationship among emotional intelligence, self-awareness, self-motivation, self-regulation and social skill with job performance. Overall, this research contributes to the emotional intelligence literature by providing meaningful management implications to the school administrators and Sri Lankan higher education system.

Keywords: emotional intelligence, emotions and job performance

Introduction

The education system is the backbone of a country's economy and teachers are the ladders of the country's economic growth. A good teacher creates a good society. So, the teachers should be more aware of this emotional intelligence. They should be able to manage their own emotions and also the emotions of others. A teacher who can manage his or her emotions perform better at school. It is vivid that teachers are also normal humans with all-natural emotions and personal life. Nevertheless, if they cannot manage the emotions, their teaching and performance will not be good, which will turn upside down the future of the next generation.

Research Questions

- Does emotional intelligence relate to job performance?
- Does self-regulation relate to job performance?



- Does self-awareness relate to job performance?
- Does self-motivation relate to job performance?
- Does social skill relate to job performance?

Research Objectives

- to identify the relationship between emotional intelligence and job performance.
- to identify the relationship between self-regulation and job performance.
- to identify the relationship between self-awareness and job performance.
- to identify the relationship between self-motivation and job performance.
- to identify the relationship between social skill and job performance.

Literature Review

Emotional Intelligence

Goleman (1995) defines emotional intelligence “as the ability to recognize and regulate emotions both within the self and within others” and also as “An array of non-cognitive capabilities, competencies, and skills that influence one’s ability to succeed in coping with environmental demands and pressures” (Bar-On, 2004a). Offermann, Bailey, Vasilopoulos, Seal and Sass (2004), for example, found that EI better predicted performance on student teamwork projects and on ratings of leadership, whereas a cognitive ability measure better predicted student performance on individual cognitive tasks like tests. Likewise, in an assessment center study that gave participants the chance to work on cognitively complex or simple tasks, found that both cognitive and EI measures predicted leadership emergence. The relative importance of EI and cognitive ability may depend on the cognitive complexity of the job being performed. In almost all work settings, individuals have to cooperate with others and do at least some group work task. EI may be especially important in the service sector and in other jobs where employees interact with customers. In a food service setting, Sy, Tram, and O’Hara (2006) directly related the EI of the leaders to their ability to manage the job satisfaction of their subordinates. In a similar study, although not directly on, Bono, Foldes, Vinson and Muros (2007) found that transformational leaders helped their employees remain in a positive mood while interacting with each other and with customers. It is likely that leaders high on EI would be better at helping their employees maintain positive moods while interacting with customers and performing emotional labor.



Emotional labor occurs when employees must alter their emotional expressions in order to meet the display rules of the organization (Ashforth & Humphrey, 1993; Diefendorff, Croyle, & Gosserand, 2005; Hochschild, 1979; Pugh, 2001). The importance of emotional labor to job performance is even greater now that the service sector of the economy has grown while the manufacturing sector has declined (Bono & Vey, 2007). Emotional labor may be stressful for some employees (Bono & Vey, 2005), especially those lacking in autonomy (Grandey, Fisk & Steiner, 2005), and the ability to regulate one's emotions may help employees cope with this stress.

Dimension of Emotional Intelligence (EI)

Self-regulations

"Self-regulation (or self-regulated learning) refers to learning that results from a student's self-generated thought and behaviors that are systematic oriented toward the attainment of their learning goals" (Schunk & Zimmerman, 2003). Self-regulation or self-management is the second of Goleman's core competencies

Self-awareness

Grayson, (2013) defined self-awareness as the ability to recognize one's feelings, to differentiate between them, to know what one is feeling and why, and to know what caused the feelings. Goleman (1998) defined emotional self-awareness as a way of identifying a person emotions and how it could effect.

Self-motivation

Goleman (1995) defined that emotional self-motivation involves the ability of controlling the emotional tendencies that facilitate in other to reach one's goals.

Social skill (relationship management)

The set of social skills includes respect for others, mutual regard, commitment, openness, tolerance, empathy, negotiation, communication etc. (Schuetz, 2011). It involves the ability of meeting each other's needs, relating to each other over time and exchanging information about one feeling, thought and ideas

Methodology

It is quantitative research. The data is collected from 212 teachers from the central province, Sri Lanka. Convenience sampling is used for this research. Data were collected using the questionnaire, which was developed based on



the instruments by previous researchers. For each variable, five items were used and for each item, a corresponding Likert scale anchored at 1 for “Strongly Agree” and 5 “Strongly Disagree” were used. The respondents were required to respond based on their level of agreeableness. The Statistical Package for Social Science (SPSS) is used for data analysis in this research.

Hypotheses of the study

- H₁: There is a significant relationship between emotional intelligence and job performance
- H_{1a}: There is a significant relationship between self-regulation and job performance.
- H_{1b}: There is a significant relationship between self-awareness and job performance.
- H_{1c}: There is a significant relationship between self-motivation and job performance.
- H_{1d}: There is a significant relationship between social skills and job performance.

Results and Discussions

Reliability Analysis

Table 1. Cronbach’s Alpha

Variables	Cronbach’s Alpha
Emotional Intelligence	0.891
Self-Regulations	0.774
Self-Awareness	0.709
Self-Motivation	0.859
Social Skill	0.859
Job Performance	0.884

As the Cronbach’s Alpha values range from 0.7 to 0.8, there is high internal consistency.

Correlation Analysis

Table 2. Correlation Analysis

	Emotional intelligence	Self-regulation	Self awareness	Self Motivation	Social Skill	Job Performance
Emotional intelligence	1	.645**	.659**	.825**	.802**	.477**
Self-regulation	.645**	1	.247**	.411**	.282**	.203**
Self awareness	.659**	.247**	1	.352**	.423**	.252**
Self Motivation	.825**	.411**	.352**	1	.581**	.380**



Social Skill	.802**	.282*	.423**	.581**	1	.546**
Job Performance	.477**	.203**	.252**	.380**	.546**	1

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

There is a strong positive relationship between the variables, $r = 0.477$, $n = 212$, $p < 0.05$, with a high level of emotional intelligence associated with a high level of the job performance of the respondents

Hypothesis Testing

Table 3. Hypothesis Testing

Hypotheses	Accepted or rejected
H1 There is a significant relationship between Emotional Intelligence and Job Performance	Accepted
H1a There is a significant relationship between Self-Regulation and Job Performance	Accepted
H1b There is a significant relationship between Self Awareness and Job Performance	Accepted
H1c There is a significant relationship between Self-Motivation and Job Performance	Accepted
H1d There is a significant relationship between Social Skill and Job Performance	Accepted

Conclusions and Recommendations

In conclusion, the research highlights the importance of emotional intelligence. It appears that the four domains (self-awareness, self-regulation, self-motivation, empathy, and social skills) of emotional intelligence have a greater impact on teachers' job performance. It is clear that a teacher who can manage his or her feelings and emotions will be producing best brain for the society. In order to sustain high performance and competitive advantage, emotional intelligence should be developed and improved through a systematic and consistent approach (Perkins, 1995; Bar-On, 1997; Goleman, 1998). Therefore, it is recommended that organizations develop training programs in improving emotional competencies of their managers and workers in the organization. Organizations should recognize the significant role of emotional intelligence in developing human capital that leads to a high-performing workforce.

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The impact of protean career orientation on career planning

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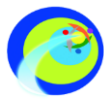
Abstract

The career orientation of the people is one of the decisive determinants of work-related outcomes. The career orientation of Sri Lankan is significantly changing forever due to the vicissitudes take place in the world of work. The present study aims to examine the effect of protean career orientation on the career planning of individuals. Conveniently selected 154 academic and non-academic staff from public Higher Education Institutions (HEIs) participated in the study. A self-administrated questionnaire was issued among the respondents. Two hypotheses were developed. Partial Least Squares (PLS) method and independent-sample t-test were used to test the hypotheses. The study found that protean career orientation has a significant direct impact on career planning and there is no statistically significant mean difference between men and women in terms of their career orientation; however, they are significantly different in planning their careers.

Keywords: academic and non-academic staff, career planning, gender, higher education institutions and protean career orientation

Introduction

People's career orientation has been shifting from traditional loyalty to new as the radical changes take place in the business environment. According to the literature on career, people seek the opportunity to fulfill their career aspirations and cross the organization or nation's boundaries. Due to the attributes of the generations, employees exhibit specific work-related behavior. Generally, it is noted that generations X and Y are native to technology, give priority to family and like more autonomy at work. These two generations are the majority in the workplaces. Therefore, they give importance to their values in selecting their jobs and organizations. Employees all over the world have many similarities in terms of their career dispositions. Dissanayake (2011, 2012) pointed out that Sri Lankan employees' career orientation has been changing and employees prioritize their priorities, even in the public sector organizations (Shanthakumary, 2019a & 2019b). Especially, it was found that people prefer more autonomy in decision making and give importance to their work and life-related values.



Employees in Sri Lankan organizations show a steady move toward their career destination as they are rich in information regarding their present and future jobs. According to De Vos and Sones (2008) and DiRenzo (2010), people who have strong protean career orientation tend to plan their careers i.e., they anticipate future changes and proactively take initiatives to achieve career goals.

Sri Lankan employees show their responses to new career orientation in their career-related behavior. Employees who work in HEIs paid a handsome remuneration than other public sector educational institutes. They directly supply knowledge of human resources to the labour market, though most of them were criticized for the mismatch with industry. The working attitude of employees in HEIs in Jaffna district shows a significant shift from traditional to protean careers (Shanthakumary, 2019). They are reasonably knowledgeable in their career path. On the other hand, female participation in the workforce of HEIs is steadily increasing and the female employees have comparable competencies to the male employees. However, women in Jaffna district generally value their family as they sacrifice many career-related matters for their families. The present study tries to portray how the new career orientation of the employees in HEIs influences their career planning-related activities.

The employees' career planning brings many benefits to them and the organizations as people in the organization are considered the capital of them. It was identified that career orientation of Sri Lankan employees has been changing forever. A smaller number of studies were carried out by Sri Lankan researchers on protean career orientation and its outcomes and no web source available in connecting protean career orientation and career planning of the employees. Therefore, the present study will support to increase the current stock of literature. Therefore, the following research question is formulated: Does protean career orientation (PCO) affect career planning (CP) of the employees in HEIs? The following objectives set out for the study:

- to examine the impact of protean career orientation on career planning
- to analyze the gender differences in terms of the test variables

Literature Review

Protean career orientation is one of the careerists' new career orientations of the careerists and it was first introduced by Hall (1976) in his book on 'careers in organizations.' The term 'protean' derived from Greek work 'proteus' which is the name of the sea god who can change his shape at his will. Career



decision making behind the protean careerists reflect two different predispositions such as self-directedness and value-driven. Self-directedness means the degree to which people accept responsibility for their career decision and action whereas value-driven means one's internal value gives individual guidance to take career-related decisions (Briscoe et al., 2006) and both of the aspects lead to psychological career success. Researchers like De Vos and Sones (2008) and DiRenzo (2010) considered career planning as the components of proactive career management behaviors and they found a positive association between protean career orientation and career planning. Rahim (2015) found that components of protean career orientation have a positive impact on career goal development. Likewise, Herrmann, Hirschi and Baruch (2015) also found a significant positive association between protean career orientation and career planning.

Methodology

Instruments and Sample

A self-administrated five-point Likert scale questionnaire was issued among the respondents to collect the required data consisting of statements related to demographical profile, protean career orientation and career planning. Fourteen statements were given to measure self-directed career orientation and eight statements given for value-driven career orientation and the statements developed by Briscoe et al. 2006, Gubler, 2011 and the researcher. The scale for career planning was developed by Gould in 1979 and the researcher. The response ranges from 'strongly agree' to 'strongly disagree.' Conveniently selected 154 academics in HEIs gave their responses. It was identified that the total mid and early-career employees in HEIs is 1001. Two hundred questionnaires were issued among them and 159 were returned among the questionnaires issued, 154 responses were found usable.

Hypothesis of the study

The relationship between PCO and CP was studied by many researchers and the results revealed a significant relationship between both of the constructs.

- H₁: Protean career orientation has a direct impact on the career planning of the employees.
- H₂: Male and female employees are different in terms of their career orientation and career planning.

Analytical survey and statistical methods

The collected data were analyzed using SMART PLS, version 3, suitable for a small sample size. Among the items taken for analysis, seven PCO items and three items of CP were removed due to the lower than the criterion of



0.5(Hair et al., 2014). The following figure clearly explains the impact of protean career orientation (PCO) on career planning (CP).

Results and Discussions

Table 1 Construct Reliability and Validity

	Cronbach's Alpha	rho_A	CR	AVE
CP	0.939	0.963	0.955	0.811
PCO	0.935	0.944	0.943	0.526

The table given above depicts the model has sufficient reliability and validity. According to Hair et al. (2014), the value of Cronbach's Alpha should be greater than 0.6, which means the measure has internal consistency. However, composite reliability (CR>0.6) and average variance extracted (AVE>0.5) is above the criterion values. Both of the variables have satisfactory composite reliability and average variance extracted.

Table 2 Discriminant Validity

	CP	PCO
CP	0.900	
PCO	0.481	0.725

According to the above table, the measure has discriminant validity as the inner value is lower than the diagonal.

Hypothesis Testing

The below measurement model shows that PCO has a significant direct impact on the CP of individuals. The path coefficient value is 0.481, $p < 0.01$ and the $r^2 = 0.232$ shows 23% of the variation in career planning is explained by protean career orientation. However, Bootstrapping was performed to examine the significance of the path. 5000 sample was set to generate the results.

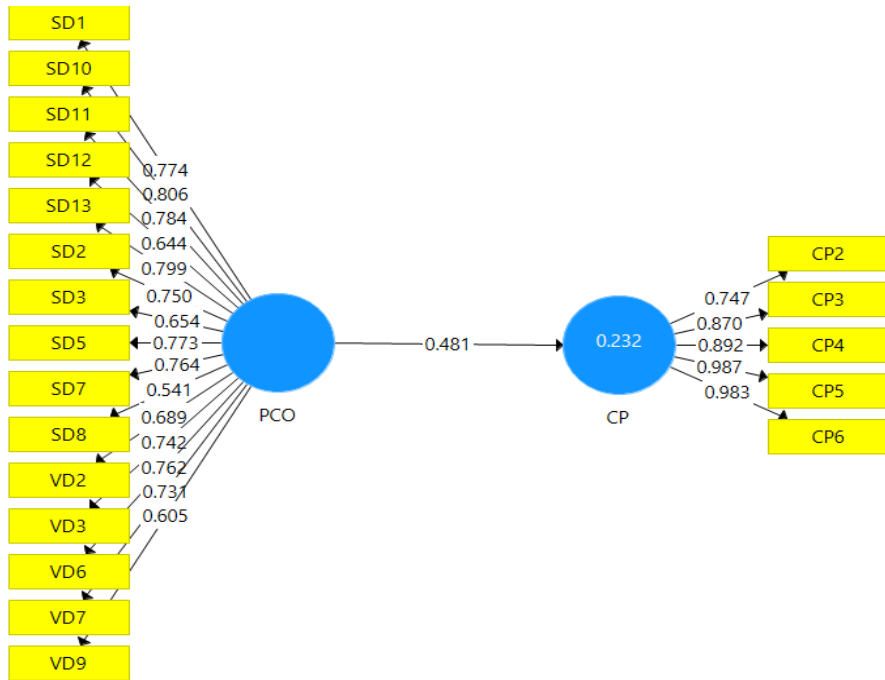


Fig 1. The measurement model

Table 3. Results of Bootstrapping

Path	(O)	(M)	STDEV	T Statistic	P	Bias	2.5%	97.5%
PCO->CP	0.481	0.492	0.070	6.920	0.000	0.010	0.336	0.605

O- Original Sample

M- Sample Mean

STDEV-Standard Deviation

Table 4. Gender and the test variables
Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tail)	Mean Difference	SE Difference	95% Confidence Interval of the Difference	
								Lower	Upper	
Ave.P	Equal variances assumed	4.486	.036	2.016	152	.046	.1866	.09255	.0037	.3694
CO										



	Equal variances not assumed	2.003	139.49	.047	.1866	.09316	.0024	.37078		
	Equal variances assumed	4.031	.046	3.045	152	.003	.3702	.12159	.12996	.61042
Ave.c p	Equal variances not assumed	3.021	135.19	.003	.3702	.12256	.12781	.61257		

An Independent sample T-test was performed to determine mean differences between the gender of the respondents to PCO and CP. As per the given table 4, F and T statistics are significant as the values are less than 0.05. However, the decision was confirmed via Man -Whitney U test.

Table 5. Hypothesis test summary

Null Hypothesis	Test	Significance	Decision
The distribution of avePCOnew is the same across categories of Gender		0.078	Retain the Null Hypothesis
The distribution of aveCP is the same across categories of Gender	Independent samples Mann-Whitney U test	0.011	Reject the Null Hypothesis

Significance level is 0.05.

According to the above test, the null hypothesis of equality of variance is accepted for PCO and it is rejected for CP. Therefore, it is concluded that men and women are equal in terms of protean career orientation and men and women are different in career planning. The mean value of the men (4.31) is greater than the women (3.94). Men have a greater tendency to plan their careers than women.

Conclusions

The study identified that protean career orientation directly impacts career planning and the male and female employees are similar in protean career orientation and showed significant difference in career planning. Male staff in Higher Education Institutes tend to plan their career than female staff.

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Mediating effect of job engagement on the relationship between leadership styles and organizational performance

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Abstract

Job engagement has received considerable attention among the academic community and business professionals in recent years. This issue still needs to be prioritized in academic research, especially as it is essential to understand organizational performance's antecedents. The objective of this study is to examine the relationship between leadership styles and organizational performance and explore whether job engagement can mediate this relationship based on social exchange theory. Survey data were collected from the employees working in a mobile phone company in Bangladesh. The collected data were analyzed using SPSS version 21, and Partial Least Squares-Structural Equation Modeling (PLS-SEM) was used to test the study hypotheses. The measurement model's result indicates that concerning leadership styles, the relationship between transformational leadership style and organizational performance is statistically significant; whereas, the relationship between transactional and passive-avoidant leadership style with organizational performance is not significant. Similarly, the relationship between transformational leadership style and job engagement is significant; but the relationship between transactional and passive-avoidant leadership style with job engagement is not significant. In terms of mediation effects, job engagement mediates the relationship between leadership styles and organizational performance.

Keywords: job engagement, leadership styles and organizational performance

Introduction

In recent years, job engagement has become an exciting topic among academic researchers and corporate practitioners as the key to an organization's success and performance job engagement has frequently been considered (Kang, Lee & Lee, 2018). Furthermore, job engagement is regarded as the precursor of organizational performance supported by empirical evidence (Huang, Ma & Meng, 2018; Bhatti, Alshagawi & Juhari, 2018). Researchers further asserted that with the right kind of leadership style, leaders would be able to enhance organizational performance (Buil, Martínez & Matute, 2019). Although there are a few research on a similar topic, there are not many studies on job engagement as the mediator on the relationship



between leadership styles and organizational performance concerning Bangladesh context (Safiullah, 2015; Rahman, 2012). Hence, this study was conducted to explore job engagement's role to enhance organizational performance and leadership styles.

Research Questions

This study attempts to answer the following questions:

- Is there any significant positive relationship between leadership styles (transformational, transactional and passive-avoidant) and organizational performance?
- Is there any significant positive relationship between leadership styles (transformational, transactional and passive-avoidant) and job engagement?
- Is there any significant positive relationship between job engagement and organizational performance?
- Does job engagement mediate the relationship between leadership styles (transformational, transactional and passive-avoidant) and organizational performance?

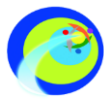
Research Objectives

The research objectives of this study are mentioned below:

- to determine the relationship between leadership styles (transformational, transactional and passive-avoidant) and organizational performance;
- to determine the relationship between leadership styles (transformational, transactional and passive-avoidant) and job engagement;
- to determine the relationship between job engagement and organizational performance.
- to investigate the mediating role of job engagement on the relationship between leadership styles (transformational, transactional and passive-avoidant) and organizational performance

Methodology

This study has adapted across-sectional survey design to collect data as suggested by Sekaran and Bougie (2013). Mainly, this study was conducted in a mobile phone company in Bangladesh. The data was collected through structured questionnaires. Before the data collection process, written permission was obtained from the respondents' organization to conduct the



survey. To obtain 278 samples as suggested by Krejcie and Morgan (1970), the researcher had a frequent meeting with the senior management and distributed the questionnaires to the employees directly who were selected through the convenience sampling method from a reputed mobile phone company in Bangladesh.

Sampling

This study adopted the convenience sampling technique to draw the samples (Sarstedt et al., 2018). Basing on the sample size rule of thumb mentioned by Krejcie and Morgan (1970), the sample size was determined in this study. A total of 556 structured questionnaires were distributed to the respondents where 306 questionnaires were returned. Among them, 87 were returned incomplete and 219 (40 percent) questionnaires received were usable. This rate is considered sufficient based on the argument of previous studies (Hair et al., 2017) that a 30 percent response rate is suitable for the survey study.

Measurement

Existing measurement scales have been used in this study. The survey questionnaire comprises four sections i.e. job engagement, leadership styles, organizational performance and demographic information of the respondents. A total of 17 items scale representing job engagement, 24 items for leadership styles, and 16 items for organizational performance have been used. Last section includes demographic information of respondents.

Hypotheses of the study

The research hypotheses of this study are mentioned below:

- H₁: There is a significant positive relationship between leadership styles (transformational, transactional and passive-avoidant) and organizational performance;
- H₂: There is significant positive relationship between leadership styles (transformational, transactional and passive-avoidant) and job engagement;
- H₃: There is a significant positive relationship between job engagement and organizational performance;
- H₄: Job engagement mediates the relationship between leadership styles (transformational, transactional and passive-avoidant) and organizational performance.

Analytical strategy

The data analysis methods are selected based on the study questions and variable characteristics (Uprichard&Dawney, 2019). Several analyses



techniques have been used for examining the hypothesis of the constructs established on the foundation of the literature review. In this study, data were analyzed using SPSS version 21 and the Smart PLS 3.0. The structural equation modeling (SEM) approach has been adopted for the analysis of data for this study. Essential data are shown in a different chart, graph, diagram, and figure. Figure wise analysis also is interpreted at the beneath of each table. Lastly, data are presented analytically in a descriptive format. However, the analysis has been conducted to satisfy the research questions that generated four hypotheses linked with the endogenous and exogenous variables.

Results and Conclusions

To attain the hypotheses ($H_1 - H_4$), which predicted a positive relationship between the leadership styles and organizational performance was tested using the PLS-SEM method and the findings reveal that transformational leadership style and organizational performance is statistically significant ($\beta=0.130$, $t=1.724$, $p<0.042$), but the relationship between transactional leadership style and organizational performance ($\beta=0.033$, $t=0.294$, $p<0.385$); and the relationship between passive-avoidant leadership style and organizational performance is not statistically significant ($\beta=0.020$, $t=0.335$, $p<0.369$). Similarly, the results between leadership styles and job engagement has revealed positively significant ($\beta=0.647$, $t=15.932$, $p<0.000$); whereas, the relationship between transactional leadership style and job engagement ($\beta=0.057$, $t=0.985$, $p<0.133$); and no significant relationship between passive-avoidant leadership style and job engagement ($\beta=0.070$, $t=1.538$, $p<0.038$). Simultaneously, the relationship between job engagement and organizational performance is statistically significant ($\beta=0.212$, $t=3.420$, $p<0.003$).

According to Hair et al. (2017), the value of VAF value between 0.20 and 0.80 ($0.20 \leq \text{VAF} \leq 0.80$) represents partial mediation (Hair et al., 2017; Hair et al., 2014). On the other side, the result revealed that job engagement mediates the relationship between transformational leadership style and organizational performance partially ($\text{DE}= 1.724$, $\text{IE}=0.783$, $\text{TE}=2.507$, $\text{VAF}=0.31$). Thus, job engagement partially mediates the relationship between transformational leadership style and organizational performance. That job engagement partially mediates the relationship between transactional leadership style and organizational performance statistically ($\text{DE}=0.294$, $\text{IE}=1.640$, $\text{TE}=1.934$, $\text{VAF}=0.84$). The relationship between passive-avoidant leadership style and organizational performance statistically ($\text{DE}= 0.335$, $\text{IE}=0.385$, $\text{TE}=0.720$, $\text{VAF}=0.53$). By addressing the high level of job engagement in the organization, mobile phone companies can improve their performance level. The study findings clearly emphasize the application and importance of transformational leadership style to boost organizational performance. Hence,



by practicing such kind of leadership style organizations may be benefited in terms of their performance.

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The impact of stress in Sri Lankan youth

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Abstract

One of the main threats the world is facing is suicides. The world is losing many of its valuable youths because of this stress. This research talks about the symptoms, causes and ways the youth try to over the stress. It is quantitative research where structured questionnaires were distributed among 300 Sri Lankan youth. Young age is the critical period because youth faces lots of changes in his/her life. The world at large should know the usual symptoms, causes of stress so that when someone is experiencing the stress, another could give a hand. Overeating, Insomnia and Depressions are the top-rated symptoms of stress. Youth should be highly educated about the Stress and right ways of coping up to stand stronger as a nation making our youngsters lead the Country and the World.

Keywords: depression, stress and suicides

Introduction

Stress is “any external event or any internal drive which threaten to upset the organism equilibrium is stress”. In the competitive age it is reported that young generation are found to be more in stress. The Society and Organizations should take quick steps to get the youngster to the normal from experiencing stress.

Literature Review

According to Lazarus and Folkman (1984), stress is a mental or physical phenomenon formed through one’s cognitive appraisal of the stimulation and is a result of one’s interaction with the environment. The existence of stress depends on the existence of the stressor. Stress can be caused by environmental factors, psychological factors, biological factors, and social factors. Academic stress among students have long been researched on, and researchers have identified stressors as too many assignments, competition with other students, failures, lack of pocket money (Fairbrother & Warn, 2003), poor relationships with other students or lecturers, family or problems at home. Institutional (university) level stressors are overcrowded lecture halls, (Ongori, 2007; Awino and Agolla, 2008), semester system, and inadequate resources to perform academic work. Researchers have long identified stress symptoms as lack of energy, taking over the counter



medication, high blood pressure, feeling depressed, increase in appetite, trouble concentrating, restlessness, tensions and anxiety among others.

An individual experiencing one of these factors is likely to be a victim of stress. Although this may also depend on how the individual appraises the situation, and how resilient is the person. While the negative effects of stress on an individual may vary considerably from one student based on their previous encounter with situations and the resilient of the individual student. In their findings (Jaramillo et al., 2005; Stevenson and Harper, 2006) point out that, the perception of the individual determines whether or not the stressor has a detrimental effect; that is whether it causes physical or psychological symptoms of stress in the individual. Another reason why little has been done on student's stress could be due to the fact that students' presence in the institution have no direct relationship to the quality of education they get. We argue that, unless the university puts appropriate measures that take care of well-being of the students, the student's health may compromise the quality of education they are supposed to get (Daniels & Harris, 2000). Gibbons and Gibbons (2007) and McCarty and Garland (2007) have carried out extensive research on stress and found out that, stress is associated with how an individual appraises situations and the coping strategies adopted.

Causes of stress among youngsters

Academics-. The fear of exams and workload create stress among students. The first cause of stress among university students is many assignments.

Finances – All young people feel stress about money! Most young people do not have jobs, or the jobs they have do not pay as much as they would like for them too.

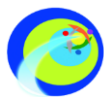
Relationships –. Everyone wants to have friends, whether they are close friends or just acquaintances. If a person finds that making friends is a bit harder than he/ she had expected, stress is present here.

Career- The high competition, an inconsiderate work colleague, a lack of job security, there are many causes of job stress. The students have a fear of not getting the job opportunity and competition in the market.

Time Management- Balancing academics, peer activities, and home life can be difficult. Toss in a part-time job and the challenge increases.

Research Questions

- What are the leading causes of stress?
- What are the symptoms of Stress among youth?
- What are the strategies used to cope up with stress?
- Does age and stress level are related?



- Does the income of the family and stress are related?
- Does working parents and stress are related?

Research Objectives

- to identify the leading cause of stress.
- to study the symptoms of stress among youth.
- to identify the strategies to cope up with stress by the youth.
- to identify whether there is a relationship between age and stress level.
- to identify whether there is a relationship between the income of the family.
- to identify whether there is a relationship between working parents and stress level

Methodology

It is quantitative research. Structured questionnaires were distributed to 300 youth where 225 responded. Structured questionnaires are distributed for the sample of 300, where 225 responded. T. Test and Avova were used to analyze the results. A questionnaire is designed with three sections. One section highlights the symptoms of stress, the second section highlights the stressor and the third section highlights the coping strategies used by the Youth. In order to achieve the objective, both primary and secondary sources of information are relied upon. The primary data was collected through structured questionnaires apart from discussions with students.

Hypotheses of the study

- H₁: There is a significant relationship between age and stress level.
H₂: There is a significant relationship between the income of the family and Stress level.
H₃: There is a significant relationship between the Working status of parents and Stress Level.

Results and Discussions

Table 1. Stress Symptoms

Stress Symptoms	%	Rank
Headaches	71.29	8
Tense muscles, sore neck and back	74.93	5
Fatigue	73.60	7
Anxiety, worry, phobias	67.20	10
Insomnia	79.82	2
Irritability	70.84	9
Bouts of anger	64.18	11
Boredom, Depression	78.22	3
Overeating	81.60	1



Constipation	75.38	4
Restlessness	73.69	6

Table 2. Kind of stress

Kind of Stress	Level of Stress	Rank
Academics	61.81	5
Financial or Economic Stress	72.55	3
Relationship Stress	74.74	1
Future / Career Growth Stress	68.39	4
Psychological Stress	73.40	2
Overall Stress	70.18	

Table 3. Action to cope with stress

Action to Cope with Stress	N	%	Rank
Watch movie with friends	150	66.67	4
Play Games	139	61.78	5
Talk with friend(s)	182	80.89	1
Talk to family member(s)	168	74.67	3
Go to picnic/excursions	75	33.33	10
Use the Internet (Social networking sites - Facebook, Google+ etc.) or other sites.	171	76.00	2
Listen Music	137	60.89	6
Do exercise / yoga	92	40.89	7
Read self-help books	77	34.22	9
Attend cultural programs	83	36.89	8

Analysis of age and stress

Table 4. Age

Age	N	Mean	SD	F	df	Results
Up to 20 years	56	3.57	0.66	0.518	3, 216	NS (p > 0.05)
21-22 years	88	3.47	0.58			
23-24 years	51	3.54	0.65			
Above 25 years	25	3.43	0.51			

Hypotheses are rejected and a non-significant relationship is found.

Analysis of family income and stress

Table 5. Income

Income	N	Mean	SD	F	df	Result
Rs. 10,0001 - Rs. 20,000	37	3.55	0.47	8.611	4, 177	*** (p < 0.001)
Rs. 20,0001 - Rs. 30,000	51	3.10	0.41			
Rs. 30,0001 - Rs. 40,000	39	3.41	0.47			
RS 40001-50000	26	3.82	1.00			
Above 50001	29	3.50	0.37			

A significant result has occurred between the different income group. There is an overall significant relationship exist between different income groups. Hypotheses are accepted.



Analysis of working status of parents and stress

Table 6. Working Status of parents

Working Status of Parents	N	Mean	SD	Z	Result
Mother - Father Both Working	32	3.85	0.67	3.557	*** (p < 0.001)
Single Parent is Working	193	3.45	0.57		

Hypotheses are accepted that there is a significant relationship between working status and stress

Conclusions and Recommendations

A high degree of stress is identified among youth in Sri Lanka. Symptoms and causes of stress should be clearly known by the society where this would protect the person going to the peak of stress. Right way of coping with the stress should be educated to the younger populations. In this research, it is clear that there is no significant relationship between age and stress. Every age category of people face stress somehow, and the way they handle and overcome is the key. There is significant relationship between income of the family and stress. Low income people face more stress than the high income earners. There is significant relationship between working status of parents and stress. When parents are working, their children's stress level is high due to lack of time they are with parents. Therefore, it is always suggested to have more communication and connection with the child if the parents work. Working parents should maintain a good friendship with their youth children. This study contributes to the literature by examining the overall stress among the youths in Sri Lankan cultural context, which was unnoticed in the literature.

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Factors influencing the effectiveness of bilingual educational programs by a selected school in Jaffna zone

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Abstract

Bilingual education plays a significant role in society and essential for higher education, employability, or economic growth among students and societies. This research aims to investigate the factors influencing the effectiveness of higher education for human capital. Data were collected through a questionnaire and analyzed by the research is undertaken using the SPSS package. Data will convert to numerical codes and entered a predesigned data entry spreadsheet in SPSS. 75 students were randomly selected from the Jaffna zone. Theory derived from education and physiology and sociology literature for analyzing and finding. The result indicates that "behavioral, motivation" and "education level" variables have no significant influence on the bilingual education to start-up and controvert findings in prior literature. Result further expose that social networking and internal control variables could positively affect bilingual education to start up the human capital investment process. Present system of education are increasingly unhealthy for the goals. Encouraging positive mindsets, creativity, and associating with challenging new thoughts and ways of responding to adopt innovation are a critical future enhancement.

Keywords: bilingual education, effectiveness influence and prospects

Introduction

Bilingual education was introduced to Sri Lanka in 2001, initially through Amity School Programs. In this Bilingual Program, English is the medium of instruction in selected subjects from grade 6 to grade 11. The students of Bilingual Program are expected to be competent both in First Language (Tamil / Sinhala) and second Language (English). However, the students find it difficult to express themselves in English, especially in academic performances. The research findings of the National Institute of Education, 2007. The bilingual education in Jaffna Zone is limited to a few subjects and other subjects are done in mother tongue. The school learning process has a considerable dominance of Mother tongue in the learning practices. Bilingualism is the mastery of two languages. The regular use of two languages is the distinguishing characteristic of a bilingual. Bilingualism may occur due to many reasons. Often, people of minority groups become bilingual since they are 'forced' to learn the majority's language in parallel to



their first language. At the same time, when a link language is widely used in a country apart from the state language, bilingualism may occur. Definitions of Bilingualism cover a comprehensive spectrum of linguistic abilities. Children who are exposed to more than one language in early childhood are sometimes referred to as simultaneous bilinguals." Those who begin to learn a second language later are referred to as sequential bilinguals (Lightbown & Spada, 1991). The objectives of Bilingual Education may vary from country to country, depending on its cultural, social, economic and educational needs. The spectrum of Bilingual Education is vast but three common types of Bilingual Education Programs can be identified as Transitional, Developmental and Immersion, depending on the instructional models used. In Sri Lanka, the Developmental Bilingual Program was implemented in 2001 through Amity School Programs. In terms of Bilingual Education in Sri Lankan context, the National Education Commission's proposals –2003, state their standpoint under Bilingual Education Policy.

Bilingualism should be promoted by using English as the medium of instruction in selected subjects such as Mathematics, Science and Technology, including Computer Literacy, Social Sciences in secondary grades, year by year, from Grade 6, depending on teachers' availability. It is expected that students will reach an acceptable level of proficiency in English at the end of junior secondary education without jettisoning Tamil, which will continue to be the medium of instruction in selected subjects (Bilingual Education, Teacher Developmental Manual, 2007). Thus, Bilingual Education is implemented in Sri Lankan schools as suggested and the first batch who has studied under Bilingual Program has already faced their GCE (O/L) in 2007.

Most people are interesting to study in studying in the mother language while the importance of the English medium of education is losing from society step by step in Sri Lanka. As a result, the rate of education knowledge is higher than other Asian countries. However, the English language level level is significantly below average. Due to this reason, most youths are unable to perform well any interviews to get a job from the competitive job market. Further, the citizens of Sri Lanka are also unable to understand each other and cannot minimize the ethnic conflict. At present, the parents and the government have been spending more and more money to enhance English knowledge. The government of Sri Lanka again introduced bilingual education programs to the schools to develop the English knowledge to meet the global demands. The research mainly focuses on the question, To what extend the bilingual education program implemented, would create or develop the English knowledge to meet the global demands?



Literature Review

This chapter is briefly reviewed the available literature in bilingual education. (UNESCO 1953, 11) Tracing the history of bilingual education, Cummins cites Darcy (1953), that the prevailing attitudes in the past as follows: the introduction laid the basis in dealing with the question of difficulties in speaking and reading in English faced by grade nine students in bilingual education program, on which the proficiency in English seen as a necessary characteristic to be excelled in bilingual education, with the advent of specific euro psychological and social and psychological theories gaining recognition and popularity, many researchers have discussed the difficulties in English language competency, by the students in by lingual education. Where there have been arguments, theories and ideas either validating or refuting these particular issues, these theories combined with awareness and education result in many countries striving to change the role of English education. In Sri Lanka, more students came into the bilingual mode, which was positively confirmed only for very few students at the beginning. The importance of mother language learning is one of the main elements that has stratified and ranked the theoretical aspects and research findings related to bilingual education is an excellent division among theorists. Academic tasks and several investigators argued that bilingualism itself was a cause of mental confusion and language handicaps" (Cummins, 1979).

National Institute of Education research, which has taken place in 2007, explains that the “linguistic mismatch” hypotheses, which suggested that mismatch between the language of the schools' home and language to the academic retardation, had aggravated the situation. However, these attitudes were intrigued several decades ago and show that there are different myths about the adverse effects of Sri Lanka on Mother Language. Bilingual education in Sri Lanka is a long term plan to preserve the language, culture and the heritage of the Nation while giving importance to a global language. Hence, in the Sri Lankan context, the dominant language is intended to remain dominant while the state as weak in Sri Lanka or international language is to be developed. As discussed in the introduction, based on the NIE research finding, it is that students in the bilingual mode find difficulties in Sri Lanka for the competency. Tcome across academic performance difficulties.

Large numbers of recent studies done by Baker (2000) shown that bilingualism can positively influence both the cognitive and linguistic development of children. Especially, research done by Jim Cummins of Ontario institute for studies in education at University of Toronto supports the basic tenet of bilingual education; 'children's first language should be well



developed to get their academic and linguistic performance of maximized. 'Cummin's development Interdependence theory suggests that successful growth in a second language depends on a well-developed the first language. This view is quite applicable to Sri Lankan bilingual education program because this bilingual mode is initially introduced considering different socio-political, economic, cultural, and cognitive needs of the country.

Bilingual education in Sri Lanka is a long term plan to preserve the language, culture and the heritage of the Nation while giving importance to a global language. Hence, in the Sri Lankan context, the dominant language is intended to remain dominant while the state as weak in Sri Lanka or as an international language is to be developed. As discussed in the introduction based on the NIE research finding, it is obvious that students in the bilingual mode find difficulties in Sri Lanka for the competency and come across difficulties in academic performance. The theory of language as a particular conceptual distinction that has important implications for policy and practice to distinguish conversational fluency and academic aspects of Sri Lanka performance, has done a reanalysis large-scale language acquisition data from the Toronto Board of education. When this particular observation is applied to Sri Lanka bilingual education program, it is evident that those students, too, are quite comfortable in Basic interpersonal communication skills rather than cognitive academic language proficiency.

Policies related to languages have had far-reaching consequences for social inequality in Sri Lanka as they have had in many other postcolonial nations. Consequently, language policy, specific language in education policy, has been frequently mobilized to address social inequality, with varying degrees of success. Bilingual education imitated in order to effect changes in language learning. The study in the English medium themselves as superior and distance themselves from mother-tongue medium students and the effectiveness of Ministry circular and campaigns to position English as a tool rather than a weapon

Methodology

The study adopted a descriptive and explanatory research design and it will be conducted on the mixed method such as Qualitative and quantitative bases. Define the descriptive survey design as a description of the state of affairs. The study will be conducted at Jaffna Zone because of its conveniences to the researcher, and the possibility to access relevant data in the institution. Primary data will be collected from the Schools, Zonal educational office and



the students from the bilingual schools by a questionnaire, group discussion. The secondary data will be collected from annual reports, magazines, and statements. The procedure involved that the questioner will be distributed personally and randomly to select seventy five (75) students in grade seven to eleven from schools in Jaffna zone. Data and the management is undertaken using the SPSS package. Data will convert to numerical codes and entered a predesigned data entry spreadsheet in SPSS. Similar information is then categorized and grouped to give a summary of results using descriptive statistics. The descriptive statistics used include measure of central tendency (mean) and measure of dispersion (standard deviation) these statistics are used to determine the relative importance of critical factors of both the dependent and independent variables. Multiple linear regression is used to develop a model that predicts bilingual education output using the independent variables.

Results and Discussions

Descriptive and explanatory statistics will be used to present and analyses the results. Responses of strongly Agree, Agree, Neutral, Disagree and Strongly Disagree were weighted as 5,4,3,2, and 1, respectively. The sum of weights was divided by 5 to get a criterion mean of 3 so that responses with men score of less than three were not accepted and meant negative attitudes towards bilingual education and those with a mean score of 3 to 5 were accepted as representing marginal to positive attitudes of students.

Table. 1 Demographic Variable

Demographic Variables	No. of Students
Tamil Medium education in Jaffna district -115812	98%
Bilingual education in Jaffna district - 2327	02%
Tamil Medium - Male students	48.12%
Tamil Medium Female students	49.91%
Bilingual education Male student	00.9%
Bilingual education - Female (School census – Province) - 1235	01.1%
Influencing Area (N-75)	
Parents Educational Level – more than Degree	79%
Family Income (Business and Government jobs)	68%
Students willingness	35%
Parent's willingness	65%

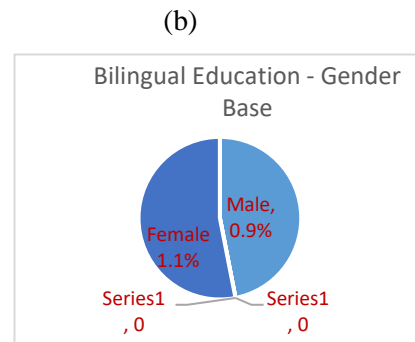
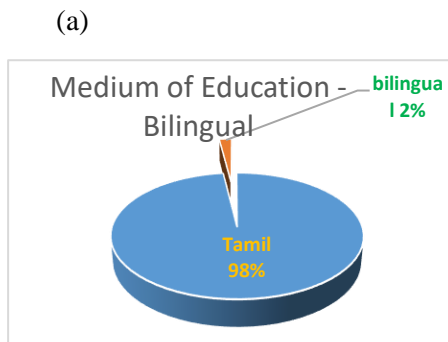


Fig 1. Medium of Education

Fig 2. Gender base

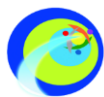
The result in table –1 shows that more students study in Tamil medium (98%) that there were significantly few students (02%) study in the educational programme. Table-1 further showss that more female students (1.1%) and less male students (0.9%) in Jaffna's bilingual education. Most of the 'students' in bilingual from parents who were educated families (79%), sufficient income families and leading business communities (68%). Furthermore, parents were decided (65%) the medium of education of their children while the least number (35%) students were decided their medium of education by themselves.

Table 2. Behavioral, motivation and education level is significant of 'students' attitudes (N-75)

Item	Mean	Std.Dev
I have been studying by myself in bilingual for my future	4.06	1.3
I have been studying to satisfied my parents' expectations	4.15	0.9
Schoolteacher teaching and guidance is motivated to me	4.37	1.3
My parents are always motivating in a positive way	3.17	1.0
School Physical resource supports my bilingual	3.09	1.1
Bilingual education support to my future job and higher education	2.03	1.2
Average	3.47	1.3

M= Mean score

The result in Table 2 show that there are a willingness and acceptance by most of the student ($3 < M < 5$) that bilingual education is a desirable career and that bilingual education is essential in preparing them to become as a talented student. The mean of 3.47 also indicates that their behavioral, motivation, and education level attitude towards bilingual education is positive for most students. 6 items measuring behavioral, motivation and education attitude



towards bilingual education 3 items with a mean score of 4 and above demonstrate that.

Table 3. Affective selection of bilingual students

Item	Mean	Std. Dev
Students should have minimum Credit pass with the English language	3.56	1.0
Both Parents have well known English and Tamil	4.12	1.4
Students selection considered Both parties willingness (student and Parents)	3.98	.93
Town side students only	2.73	1.3
Average	3.60	1.16

Table 3 shows that the general feeling and emotions of students and parents towards bilingual education is positive in three items measuring the affect component of 'students' attitudes high positive, the mean score is above 3 that is ($3 < M < 5$) one item where $M > 4$ parents show very high positive attitudes towards the bilingual education. The mean of mean $M = 3.60$ shows that overall, students and parents' affective intentions towards bilingual education are positive.

Table 4. Social networking and internal control variables

Item	Mean	Std.dev
Inadequate bilingual education opportunities from the schools	3.92	0.91
Lack of Bilingual education knowledge and skills	1.45	1.5
Lack of start- up social networking support such as how to initiate the bilingual education	3.95	1.1
Difficulty in accessing bilingual facilitation	4.14	0.87
Bilingual examination (islandwide competitive) which is not education-friendly	1.98	1.0
Average	3.09	1.08

Table 4 shows the challenges that act as barriers to 'students' bilingual intentions. The main challenge that affects the interest and hence attitude of students towards bilingual education after going through bilingual education difficulty to get the facilitations ($M > 4$). Challenges with a moderate effect on students interest hence negatively affect their attitude toward bilingual education are lack of initiate the bilingual education ($M = 3.95$), lack of bilingual opportunities ($M = 3.92$), student believe examination ($M = 1.98$) is the support of an effort to start bilingual also that they do not lack bilingual knowledge and skill ($M = 1.45$)

Table 5. Overall measurements of 'students' attitude toward bilingual education

Students attitude component	Mean	Std.dev
Behavioral Motivation and Education level	3.47	1.3
Affective selection of bilingual education	3.60	1.16
Social networking and internal control	3.31	1.08
Average	3.39	1.18



Table 5 shows that overall, students' attitude towards bilingual education and their higher education is positive ($M=3.39$). This shows that bilingual education has been effective in motivating students' students to view bilingual education as a future career option.

Conclusions and Recommendations

The result of the study showed overall attitude of students towards bilingual education has a very positive score. It is also shown that students believe their participation in bilingual education helps stimulate their interest in bilingual education. In his study, he also found that by developing skill, knowledge and motivation of higher studies to engage successfully. The bilingual education programme had given them enough knowledge and skill to successfully start their carrier and further education. Results indicate that behavioral motivation and education level variables have no significant influence on bilingual education to start up and contradict previous literature findings. Results further reveal that affective selection of bilingual variables could positively affect bilingual education start up human capital investment practices. Results support the social capital theory's validity, revealing that social networks have values and productive benefits. Results show demographic variable reveal could positively affect bilingual education and Gender plays roles in the bilingual education start up practices, with female predominate high education or employability or entrepreneurship culture.

The global economy, propelled by the push and pull of technology, changes at a speed never before seen. This is having profound political, social and economic effects that necessitate fundamental change in the activities. Current models of education are proving increasingly unfit for purpose. Nurturing and encouraging positive mindsets, creativity, supporting the testing of new ideas and ways of doing things, and adapting/adopting innovation are critical future employability factors. Our future prosperity and well-being will be dependent on creating new learning models. Significantly encroach the entrepreneurship or enterprises' education for the future carrier. This work builds on an extensive literature review coupled with this research. Bilingual education shall originate a variety of disciplines for development. The result is a very challenging set of thoughts, comments and suggestions that are relevant to all education institutions, at policy, strategy and operational levels shall establish. Based on the above conclusions, there are several recommendations that can be made.



First bilingual teaching and learning process needs to be more specific. The bilingual education provides students with teaching, learning and doing strategies that may compensate for the difficulties assimilating and processing new concepts and technology through the second language. In addition to multiple intellectual power bilingual students do to integrate new content, a new language seems to deploy a positive impression on their cognition and learning. Second, as follow-up, the above recommendation of bilingual education needs to invite, as part of teaching members from institutions that provide facilities that enhance technical and quality education. There is a qualitative challenge. The teachers frequently lack good resources such as teaching materials and textbooks, or proper training. The quality of teaching is essential to good learning outcomes. This indicates an education system that attracts and retains qualified teaching staff and supports teachers in the class room and their continued professional development. Third, the teachers need to help students become more able to identify their opportunities. The bilingual education system is only as good as its teachers; the teachers are important to universal and quality education. They are central to modeling the coming generations' minds and attitudes to deal with new global challenges and opportunities. Innovative, comprehensive and results-focused teaching is crucial to provide the best possible opportunities for children and youth. Fourth as part of bilingual education teaching, teachers need to make teaching more practical by linking with further education and carrier. Professional development for teachers in an essential aspect of becoming a well-rounded and experienced educator. The practice of continually developing 'one's skills as an educator is vital to creating a teaching workforce best suited to helping students. Such as ways for education, develop the skills, workshops, field study, short courses and specific aspects of education and online teaching. The school and zones need to come up with database of students who were able to start their bilingual education for their carrier pathway or business to monitor and provide technical support where needed.

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Track 4: Business Economics and Entrepreneurship



Factors affecting the utilization of machinery for paddy cultivation: Special reference to Ibbagamuwa Divisional Secretariat Division

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Abstract

Paddy cultivation occupies a unique place in agriculture in Sri Lanka. This is further confirmed by the dual consideration of national production as well as domestic rice demand. Although it has played a positive role in the rural agriculture sector as subsistence agriculture as traditional paddy cultivation, modernized paddy cultivation can be seen in Sri Lanka with the help of modern agricultural machinery. At the same time, there are significant benefits to be gained from leaning towards this mechanized agriculture to make the agrarian community an economically strong community for promoting local agriculture. Accordingly, the study's main objective is to identify the factors that influence the use of machinery for paddy cultivation in agriculture in Sri Lanka. Preliminary data were collected from hundreds of paddy farming households in the Batalagoda area of the Ibbagamuwa Divisional Secretariat in the Kurunegala District of Sri Lanka. Descriptive statistical methods identify the socioeconomic background of the paddy farmers in the sample. The factor analysis was carried out to identify the most effective factors influencing the use of machinery for paddy cultivation. Accordingly, labor, convenience, time, and cost were identified as the most effective factors. According to the research findings, manure spraying and weed removal are still traditional practices in paddy cultivation and there is an urgent need for research and innovation in some modern machinery. Therefore, Strategies will enable even the farmers engaged in traditional paddy cultivation methods to use the machinery required for efficient and effective paddy cultivation instead of arrears.

Keywords: agricultural mechanization, paddy farming and Sri Lanka

Introduction

The productivity of agricultural products depends on the collective processes of using advanced planting techniques, organic fertilizer, water management, and new technological knowledge. Agriculture is one of the best avenues for development. Karale et al., (2008) studied about the relationship between the use of machinery and agricultural products. It showed machines add value to the agricultural products and provides power for farm operations such as irrigation. In agriculture, the processes from plowing to sowing seeds and harvesting are progressively more sophisticated.



Nevertheless, before 1950, agriculture used manpower and animals. Since then, with the advent of the agricultural revolution and the agricultural sector's advancement, modern machinery has been able to reap the maximum benefits of agriculture. Decreasing manual labor requirements is an important aspect of farm mechanization. Therefore, saving in machine buying costs and labor costs and timelines in farm management practices (Chandran, 2018 & Singh, 2006). The fast-paced technological advances in agriculture have led Japan and Taiwan, China, and Korea, to become more dependent on agriculture. Singh (2006) found that mechanization of agricultural operations has been undertaken in many parts of the world to increase farmers' income and promote the economic interests of agriculture. It is in this backdrop that local agriculture also tends to mechanize. Paddy cultivation occupies a unique place in agriculture in Sri Lanka, which is even more evident when considering both the national production and the local rice requirement. Rural agriculture plays a significant role in subsistence agriculture as traditional subsistence agriculture. Mechanical agriculture is known as mechanized farming, from land preparation to harvesting, and there are great benefits to this farming community in promoting indigenous agriculture as an economically viable practice. Less number of laborers is needed to complete the cultivation process by mechanized farm compared to traditional farms (Rahman et al., 2011). Labor shortages during growing sessions and the low speed of manual cultivation compared with mechanized farming are also significant problems (Pateriya & Datta, 2012). Therefore, it has become a timely need to study the factors that lead to mechanized agriculture and obtain policy solutions to develop paddy cultivation and related issues. The use of machinery for paddy cultivation is present more prevalent in the world. It is problematic to have to use different machinery based on different characteristics from area to area. Research in various countries has shown that the use of machinery for paddy cultivation is an effective policy.

In addition to the various factors identified by national and international research, other factors may influence machinery use for local paddy cultivation. The study of the literature indicates that few research papers in Sri Lanka have come forward to make policy decisions on the development of paddy cultivation using machinery. This study was intended to fill that research gap. The study's main objective is to identify the factors that influence the use of machinery for paddy cultivation in agriculture in Sri Lanka. The study also intends to identify changes in the use of agricultural machinery due to socio-economics factors.



Methodology

The study was based on primary empirical data. 100 of paddy farming households in the Ibbagamuwa Divisional Secretariats' Division were selected by simple random sampling method. The data was gathered by a structured questionnaire. In addition to this survey, the problem of using machinery was identified through targeted and group discussions. The data analysis was explained, including both descriptive and statistical analyses. The factor analysis was conducted to determine the factors that affect agricultural machinery use in paddy cultivation. Factors analyzed on the Principal Component Method.

The descriptive analysis was carried out to identify the variation in socio-economics factors in terms of the use of machinery for paddy cultivation. The socio-economics background of paddy farmers in the sample was identified through descriptive methods, including tables and graphs. Further, the factor analysis of the most effective factors that influence the use of machinery for paddy farming was presented using a diagram. Accordingly, several factors that affect the use of agricultural machinery in paddy cultivation were recognized.

Conceptual Framework

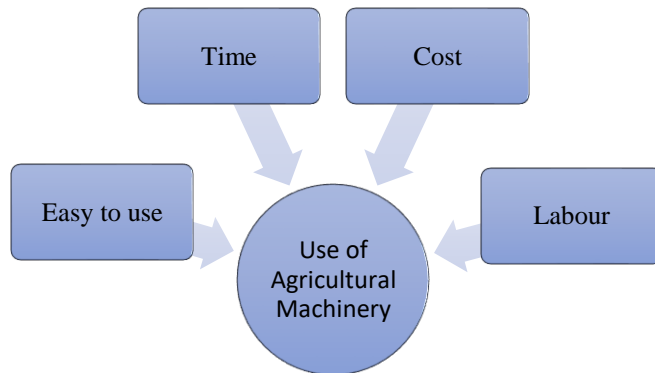


Fig 1. Conceptual Framework

Results and Discussions

Descriptive Analysis results emphasize that the percentage of machinery utilization for paddy cultivation varies by age group and educational level. The chart (a) below shows the relationship between the use of machinery by farmers engaged in agriculture and their age groups. Particularly, the younger generation under the age of 30 is 11% less likely to be involved in farming,



but the percentage of machinery used for paddy cultivation is more than 50%. The chart (b) below shows the relationship between machinery use by farmers engaged in agriculture and their educational level. Compared to the educational level, those who have studied up to A / L are the lowest in the sample, and they all use more than 50% of the machinery.

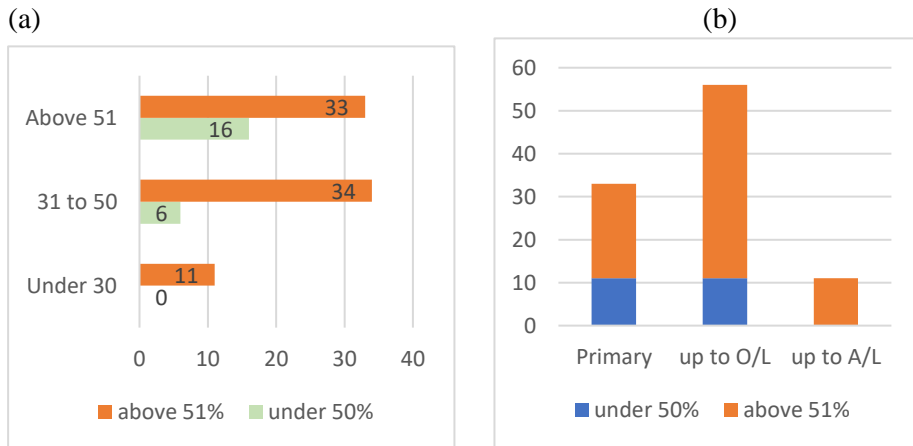


Fig 2: (a) Relationship between Percentages of using agriculture machineries and Age Level;

(b) Relationship between Percentage of using agriculture machineries and Education Level

In the statistical analysis of the factors affecting agricultural machinery use for paddy cultivation, Cronbach's Alpha test was first performed to test the reliability of the data for the analysis, with a value of 0.703. Two tests were performed to test for consistency, with a KMO score of 0.676, and Bartlett's test was run separately (Chi-Square = 1186.944 / P = 0.000). An Eigen analysis of correlation was performed to identify the common factors of the variables used.

Table 1. Results of Eigen analyses of the correlation matrix

Component	Initial Eigenvalue	% of Variance	Cumulative %
Easy to use	4.196	34.970	34.970
Time	2.940	24.503	59.473
Cost	1.998	16.653	76.126
Labor	1.467	12.224	88.350

Four common factors greater than 1 were identified for the 12 variables used. Accordingly, the factors that affect the use of agricultural machinery in paddy



cultivation could be identified as (1) easy to use, (2) time, (3) cost, and (4) labor. These four factors are the most significant factors for the research purpose.

Conclusions

According to the descriptive analysis results, most of the workers in the age group between the ages of 31- 50 are engaged in paddy cultivation using machinery. Therefore, an agricultural subsidy scheme and agricultural insurance scheme should be expanded throughout the country through state and rural banks to encourage youth and subsidize machinery and fuel maintenance. Although the farming community can be empowered by initiating a formal concessionary loan scheme to locate the financial position, they need to purchase machinery to further develop agriculture. These strategies will enable even the farmers engaged in traditional paddy cultivation methods to use the machinery required for efficient and effective paddy cultivation instead of arrears. As the farming community with a higher level of education such as the GCE Ordinary Level and Advanced Level is mostly engaged in this division's agricultural sector. Agriculture should be centralized as the vocational sector that strengthens the rural sector in the country. They are engaged in paddy cultivation using machinery, which has enabled them to increase the agricultural sector's efficiency using capital applications. Duet to this, low cost paddy cultivation methods and high-efficiency machinery should be introduced to transform them into a new professional, knowledgeable farming community capable of generating innovations. The recommendation is to introduce agricultural machinery in developed countries to Sri Lanka to train them to give them professional recognition to the educated youth and thereby create a rural agricultural employment economy capable of resolving the national employment crisis.

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Household income and expenditure behavior in Northern Province in Sri Lanka: A non-parametric analysis

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Abstract

The study aims to identify households' income and expenditure behavior based on selected theories in Sri Lanka. The sample was selected from households in five districts in the Northern province such as Jaffna, Mannar, Mullaitivu, Kilinochchi and Vavuniya. By using a systematic sampling method, 930 households were identified and a self-administrated questionnaire was issued to collect data. Finally, 909 usable questionnaires were considered, and then data were analysed with a non-parametric analysis. The results reveal that majority (79.7%) of the household income is less than Rs.100,000 and 62.6% of the income used for consumption purposes. The majority of the respondents accepted that their consumption behaviour was changed during the post war era. According to the chi-square test, the relative income hypothesis was rejected and the permanent income hypothesis was accepted. Simultaneously, the application of the hyperbolic discounting model is more suitable for low- and middle-income people. Therefore, the study concludes that households' expenditure behavior in Sri Lankan is connected with their level of income.

Keywords: hyperbolic discounting, income and expenditure, permanent income and relative income

Introduction

The economic condition of a country is one of the major factors to determine the income and expenditure behavior of the general public, especially the recession and fluctuations would normally cause changes in the general public's socioeconomic and social standing. Some economic condition changes often lead to a social crisis (Atinc & Walton, 1998). Atsushi Maki (2006) reported that the economic crisis leads to sudden changes in saving behavior and the lifestyle of the households.

The current advertising strategies and sales promotions mainly focus on the slogan of 'spend wisely'. Therefore, people's expenditure increased tremendously, ; it was 33 times more than 1985/86 (Department of Census



and Statistics, 2016). In the Northern part of Sri Lanka, the economic condition was changed from 2009 onwards due to the end of 30- years of civil war. Resettlement, foreign and government aids, finance companies' entrance, and introduction of new products lead to more cash flows in this area. This situation created more consumption and capital expenditure among households without proper planning and budgeting regarding their income and expenditure. So, there is a question that the consumption theories are applicable or not to determine the income and expenditure behaviour. Therefore, this research aims to study the income and expenditure behavior of Northern households based on selected theories.

Literature Review

Many theories are related to income and expenditure behaviour even though relative income hypothesis, permanent income hypothesis and hyperbolic discounting theory are considered in this study. The following section discusses these three theories.

Duesenberry (1949) developed the Relative Income Hypothesis. The theory describes that consumption behaviour lays stress on an individual's relative income rather than his absolute income as a determinant of his consumption. The consumption depends on relative position in the income distribution in a society; that is, his consumption depends on his income relative to other individuals' incomes in society.

The permanent income hypothesis was developed based on the basic intuition of individual people who would wish to smooth consumption than fluctuate consumption with short-run fluctuation in income. Therefore, people spend their earning in a way that is consistent with their expected long-term income. This hypothesis underlines that consumers will prefer to spend money based on their lifetime income but, not just current income.

Hyperbolic Discounting was termed by psychologist Herrnstein (1961). The model says that people choose a smaller-sooner reward because of time-inconsistent mechanism of choice than a larger-later reward. As per human's impulsive behavior, people tend to show more preference for an immediate, less valuable reward rather than waiting for a later, higher valuable reward. These people are described as present-oriented and with more concern for current or immediate satisfaction rather than delayed or future satisfaction. Therefore, this behaviour affects the saving mechanism of people (Angeletos et al., 2001).



Methodology

A self-administrated questionnaire was used to collect data and from each district, 10% of the Grama Niladhari (GN) divisions were selected by using the systematic random sampling method then from each GN division ten households were randomly selected. Therefore, from Jaffna 440, Kilinochchi 100, Mullaitivu 140, Vavuniya 100 and Mannar 150 households were identified and a field survey was conducted from September to December 2019. Finally, 909 questionnaires entirely were usable for this survey. The permanent income hypothesis was tested in two ways. First, it was verified that last ten years, their consumption pattern was changed or not and second, whether they expect more income in the future or not. To test the relative income hypothesis, the respondents were asked to answer whether they prefer to maintain social status equal to neighbours or not. To test the hyperbolic discounting theory, respondents were asked to answer whether they prefer Rs.100,000 now or Rs.125,000 one year later.

Results and Discussions

Table 1. Income and Expenditure

Variables		Percentage
Monthly Family Income	Less than 50,000	21.1
	50,000-100,000	58.6
	above 100,000	20.3
Spending	Consumption	62.5
	Repayment of loan and interest	0.6
	Purchase household items	2.2
	Business or agriculture purpose	34.0
	Others	0.7

Table No.1 describes that the majority (79.9%) of the respondents' monthly income level is less than Rs.100,000 and their 62.5% of income used for consumption purposes.

Table 2. Permanent Income Hypothesis- Anticipating more income in the Future

	Income Category			Total
	< 50,000	50,000-100,000	> 100,000	
Strongly Disagree	181	550	147	878
Disagree	2	7	0	9
Neutral	4	1	0	5
Agree	3	2	0	5
Strongly Agree	6	5	1	12
Total	196	565	148	909

Chi-Square Tests



	Value	df	Asymp. Sig. (2-sided)
	22.908 ^a	8	0.003
Symmetric Measures			
	Value		Approx. Sig.
Nominal by Nominal Phi	0.159		0.003

The chi-square test was performed to examine whether there was an association between income and income expectation in the future. According to the above table, 96.6% of the respondents strongly disagree that they don't expect more income in the future; therefore, their present spending is low. The results proved a significant association between current income and income expectation (Chi square value = 22.908, $p < .003$). The Phi-value of .159 also suggests that there is a weakly significant association between these two variables.

Table 3. Permanent Income Hypothesis- Changes of Consumption Pattern

	Income Category			Total
	< 50,000	50,000-100,000	> 100,000	
Strongly Disagree	4	17	2	23
Disagree	0	1	0	1
Neutral	0	1	0	1
Agree	6	16	2	24
Strongly Agree	186	530	144	860
Total	196	565	148	909
Chi-Square Tests				
	Value	df	Asymp. Sig. (2-sided)	
	68.043 ^a	8	.000	
Symmetric Measures				
	Value		Approx. Sig.	
	0.274		0.000	

The table No.2 analyse the changes in consumption pattern during the last ten years. Among the sample respondents, 94.6% of the respondents strongly agreed that their consumption pattern was changed during post-war period. According to the results, there is a weakly significant relationship between income and consumption pattern changes in the study area.

Table 4. Relative Income Hypothesis

	Income Category			Total
	< 50,000	50,000-100,000	> 100,000	
Strongly Disagree	187	539	136	862
Disagree	5	6	0	11
Neutral	1	1	0	2
Agree	2	18	12	32
Strongly Agree	1	1	0	2
Total	196	565	148	909
Chi-Square Tests				
	Value	df	Asymp. Sig. (2-sided)	
	19.721	8	0.011	



Symmetric Measures	
Value	Approx. Sig.
0.147	0.011

According to table 4, the chi-square result indicated that there is a significant relationship between income and maintain equal social states even though the cross-tabulation reveals that the majority of respondents reject the relative income hypothesis because relative income hypothesis is related to psychological factors. At the same time, direct and indirect influence also determines the expenditure behaviour related to the relative income hypothesis. Therefore, according to the Phi Coefficient (0.147), it was identified that there is a weak association between these two variables.

Table 5. Hyperbolic Discounting

	Income Category			Total
	< 50,000	50,000-100,000	> 100,000	
Now Rs.100,000	161	363	20	544
Later Rs.125,000	35	202	128	365
Total	196	565	148	909
Chi-Square Tests				
	Value	df	Asymp. Sig. (2-sided)	
	177.316 ^a	2	0.000	
Symmetric Measures				
	Value	Approx. Sig.		
	0.442	0.000		

Finally, the hyperbolic discounting model was tested. According to the results presented in table No.5, it is revealed that there is significant relationship between household income and the impulsive behaviour of people. The majority of the respondents (60%) prefer sooner rewards than later. The Phi Coefficient (0.442) suggests a moderate association between income level and reward preference. Further, the result indicates that most low-income (82%) and middle income (64%) prefer sooner reward and only 13% of the high-income people prefer sooner rewards. These results indicate that people's needs play a significant role in determining the spending behavior.

Conclusions and Recommendations

The study emphasizes on income and expenditure behavior of households in Sri Lanka. The data were collected from five districts in Northern Province, Sri Lanka. , The majority of households' income level in this study area, is less than Rs.100,000 and of this, 62.5% is used for consumption purposes. The chi-square results reveal that income level is supported to determine the expenditure behavior, and most of the low- and middle-income people prefer sooner rewards than later. Therefore, the study concludes that households'



income and expenditure behavior in Northern province in Sri Lanka supported the theories.

The people in this study area were affected by civil-war directly or indirectly. Therefore, during the post-war period their consumption pattern was changed because of some economic changes even though low- and middle-income people expect more financial support for their consumption purpose. Therefore, the study recommends that the government and other agencies should consider these people for more economic development

Acknowledgment

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Determinants of market participation: Special reference to paddy farmers in Verugal Division

சந்தைப் பங்குபற்றலைத் தீர்மானிக்கும் காரணிகள்:
வெருகல் பிரதேச நெல் விவசாயிகளை அடிப்படையாக
கொண்ட ஆய்வு

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Abstract

The study entitled “Factors Determining Market Participation of Paddy Farmers” in the Verugal Divisional Secretariat, Trincomalee District aims to identify the factors that determine the market participation of paddy farmers in the Verugal area and how they relate to and influence market participation; Market share is determined by the amount that paddy farmers sell in their produce. Questionnaires were provided to 100 paddy farmers on a proportionate basis and the data on latent variables were collected through a 5-point Likert-type scale. The results were obtained through regression analysis and descriptive analysis. Thus, the farmer's monthly income, the farm's size is significant and positively influences at 1% level, whereas the farmer's family members, the distance to the market are negatively and significantly influence at 5% level. Meanwhile, the farmer's level of education and the farmer's age negatively influence market share at a 10% significant level. Market information and farmer credit use have a moderate impact on the paddy farmer's market share, while road infrastructure facilities and output cost have a high impact on the farmer's market share. The lowest impact is on the farmer's livestock income and non-farm income. These have highlighted the nature of paddy farmers' market participation in the Verugal area and the factors that determine them. Therefore, it is best to consider not only the use of Western technology in the process of modernization of paddy.

Keywords: market share, paddy farmers, farm size and monthly income

ஆய்வின் அறிமுகம்

இயற்கை வளம் நிறைந்த திருகோணமலை மாவட்டத்தின் மூதூர் வலயத்தில் ஒரு பிரிவான வெருகல் பிரதேச செயலகப் பிரிவினாள் உள்ளடங்கும் 10 கிராமசேவை பிரிவிலும் நெல் விவசாயமானது முக்கியமானதாகவும் சாத்தியமான தொழிலாகவும் காணப்படுகின்றது. இங்குள்ள 3873 குடும்பங்களினதும் பிரதான தொழிலாக நெற்செய்கையே காணப்படுகின்றது. இங்குபயிரிடு நிலப்பரப்பான 1586.67 ஹெக்டெயரில், நெற்பயிற்செய்கையானது 1400 ஹெக்டெயர் நிலப்பரப்பில் செய்கையாகி, 5,404 மெட்ரிக்தொன் வெளியீடு பெறப்படுகின்றது. நாட்டின் உணவு அதிகரிப்பில் பங்களிப்பினை ஆற்றுகின்ற இவ்வற்பத்தியை விருத்தி செய்வதற்கு அரசு பல முறையில் உதவினாலும் பிரதேசத்தில் சந்தை



வாய்ப்பின்மை விவசாயிகளின் வாழ்க்கைத் தரத்தை குறைப்பதோடு இடையீட்டாளர்கள் மூலம் அதிகளவு சரண்டப்படுவதற்கு சாதகமாக அமைகின்றது (கமநலசேவை நிலைய பதிவேடு, பூநகர், 2019).

இங்கு விவசாயமானது ஒரு மரபு ரீதியான தொழிலாகவும் விவசாயச் செய்கையானது பாரம்பரிய முறையில் இருந்தாலும் நவீன உள்ளீடுகளின் பாவனை படிப்படியாக அதிகரித்து வருகின்றது. ஆயினும் இப்பிரதேச விவசாய உற்பத்திகளின் சந்தைப்படுத்தல் தொடர்பான அறிவு விவசாயிகள் மட்டத்தில் குறைவாக உள்ளமையால் விவசாயத்திலிருந்தான தேறிய வருமானமும் குறைவாக உள்ளது. விற்பனை வசதிகள் ஒழுங்கற்றதும் விவசாயிகளால் அடைய முடியாத நிலையிலும் காணப்படுகின்றதுடன், களஞ்சிய வசதியும் இல்லை. பயிர்ச்செய்கைக்கு உரிய காலப்பகுதியில் உரிய வசதி வாய்ப்புக்கள் கிடைக்காமையால் தகுந்த விளைச்சலை பெற முடியாமலும் மிகை உற்பத்தியை வழங்க முடியாமலும் உள்ளது. மகாவலி கங்கையால் நீர்ப்பாசனம் பெறும் வெருகல் பிரதேசத்தில் நெல் உற்பத்தியானது பிரதான வருமான மூலமாகவும் குறைந்த உள்ளீட்டு செலவுடன் அதிக இலாபத்தை பெறக்கூடிய வழிமுறையாகவும் குறுகியகால இடைவெளியை கொண்டதாகவும் காணப்படுகிறது. எனினும் பயிர்ச்செய்கை மற்றும் சந்தைப்படுத்தல் தொடர்பில் மக்களினுடைய செயற்பாடு குறித்த முழுமையான தரவுகள் காணப்படாத நிலையில் இவ்வாய்வானது குறித்த பிரதேச விவசாயிகளுக்கும், நிறுவனங்களுக்கும், பிரதேச அபிவிருத்தி மற்றும் சந்தைப்படுத்தல் விரிவாக்கம் தொடர்பிலான அபிவிருத்தி நடவடிக்கைகளுக்கு உதவக் கூடிய, மிக முக்கியமான தொன்றாக காணப்படுகின்றது.

முழுமையானதொரு விவசாய பிரதேசமாக காணப்படுகின்ற இப்பிரதேசத்தில் அனைவருக்கும் சாத்தியமான உற்பத்தி வாய்ப்பாக நெல் விவசாய உற்பத்தி காணப்படுகின்றது. அதாவது நிலத்தின் கிடைப்பனவு மற்றும் நீர்ப்பாசன வசதி காரணமாக நெல் உற்பத்தியில் ஈடுபடக்கூடிய சாதக வாய்ப்பினைக் கொண்டுள்ளதுடன் யுத்த நிறைவைத் தொடர்ந்து ஏற்பட்ட சூழல் ரீதியான அநுகூல நிலைமையும் விவசாய உற்பத்தியை அதிகரித்தது. இக்காரணிகளின் தள்ளுமற்றும் இழுவிசைகளால் படிப்படியாக சந்தைப்படுத்தலை நோக்கிய உற்பத்தி ஆரம்பித்தது. இருப்பினும் மக்கள் தமது உற்பத்திக்கான சிறந்த சந்தைவாய்ப்பினை அடைவதற்கான வசதி வாய்ப்பானது இன்னும் முழுமையடையாத நிலையில் காணப்படுகின்றது. இந்நிலையானது நெல் விவசாயிகள் தமது உற்பத்திகளை மிகத் தொலைவில் உள்ள சந்தைகளை அடிப்படையாக கொண்டு செயற்பட நிர்ப்பந்திப்பதுடன் அவர்களின் வருமானத்தில் தாக்கத்தை ஏற்படுத்துவதாகவும் காணப்படுகின்றது. மேலும் தொலைவில் உள்ள சந்தையில் உற்பத்திக்கு வழங்கப்படும் விலையை காட்டிலும் அதிகவிலை அருகில் உள்ள சந்தையில் வழங்கப்பட்ட போதும் அதை அவர்கள் அறியாமலுள்ளனர். எனவே அதிகரித்து வருகின்ற உற்பத்திகளைக் கொண்டு நெல் விவசாயிகளின் சந்தைப்பகுப்பற்றல் தீர்மானம் எவ்வாறு காணப்படுகின்றது மற்றும் பங்குபற்றலில் செல்வாக்கு செலுத்தக்கூடிய காரணிகள் எவை என இனங்காண்பதை பிரதான நோக்கமாகக் கொண்டு இவ்வாய்வு முன்னெடுக்கப்பட்டுள்ளது. மேலும், வெருகல் பிரதேசநெல் விவசாயிகளின்



சந்தைபங்குபற்றலில் சமூக, பொருளாதார, சந்தைசார் மற்றும் உற்பத்திக் காரணிகள் எவ்வாறு தாக்கம் செலுத்துகின்றன என்பதை உப நோக்கங்களாகக் கொண்டுள்ளது.

முன்னைய ஆய்வுகளின் மீளாய்வு

சந்தைப்படுத்தல் பற்றிய நவீன வரை விலக்கணமானது “சந்தைப்படுத்தல் என்பது மனிதநடத்தையின் மூலம் தேவை விருப்பங்கள் என்பவற்றின் எதிர்பார்க்கை முகாமை ஆகியவற்றின் திருப்தி போன்ற பரிமாற்ற செயன்முறையின் வழிநடத்தலாகும்” எனக் கூறுகின்றது. Soe மற்றும் பலர் (2015) நெல் சந்தைப்படுத்தலை தீர்மானிக்கும் காரணிகள் என்றதலைப்பில் மேற்கொண்ட ஆய்வில் மியன்மாரில் உள்ள நெல் விவசாயிகளை அடிப்படையாகக் கொண்டு முதன்நிலை தரவுகளை பெற்று Multinomial logit model பயன்படுத்தி மேற்கொள்ளப்பட்டுள்ளது. இவ்வாய்வின் முடிவாக குறைந்த உட்கட்டமைப்பு வசதிகள், சந்தைப்படுத்தல் வசதிகள், போதியளவு கடனைப் பெற்றுக் கொள்ள முடியாமை, சந்தை கவலை பெற்றுக் கொள்ள முடியாமை, மற்றும் சந்தைக் கட்டமைப்பு சிலர் உரிமையாக காணப்பட்டமை போன்ற காரணங்களால் நெல் சந்தைப்படுத்தல் பாதிக்கப்படுகிறது என்கின்றனர். Hussain (2012) பண்புசார் மற்றும் விபரணப் புள்ளிவிபரவியல் மூலம் நெற செய்கையில் சிறந்த பயனைப் பெறவேண்டுமாயின் உள்ளீடுகளான கடன், பயிரிடு நிலம் மற்றும் உரப் பாவனையும், நீர் பாவனையும் அவசியமானது எனும் போது, பிரசன்னாவும் அவரது குழுவினரும் (2012) லொஜிற் மாதிரியம் மூலம் வடமத்திய மாகாணத்தில் நெல் கொள்வனவு சக்தியானது சிலருடைய கையில் தங்கியிருப்பதும் நிலமானது சிலருடைய உரிமையில் இருப்பதாலும் மற்றும் விவசாய செயற்பாடுகளுக்காக விவசாயிகள் முறைசாரா சந்தையில் அதிகம் கடன் பெறுவதாலும் இவர்கள் நெல் சந்தைப்படுத்தல் மூலம் அதிக இலாபம் பெறமுடியாமல் காணப்படுகின்றனர் எனக்கண்டுள்ளனர். மேலும் கேகாலை, குருநாகலை மாவட்டங்களில் அகியார் (2017) மேற்கொண்ட விபரணப் புள்ளிவிபரவியல் ஆய்வு நெற்செய்கையில் கூலிக்கான செலவு, உரம் மற்றும் கிருமிநாசினிக்கான செலவு உயர்வாகக் காணப்படல், உற்பத்தி இயந்திரம் காணப்படாமை மற்றும் விவசாயிகளின் கல்வியறிவு குறைவுபோன்றதனால் உற்பத்திசெலவு அதிகமாகும் என்கிறது. இதேபோல், மஹ்ரூபா மற்றும் செனவிரத்தன (2014) ஆய்வு முடிவுகள் குறைவான தொழிற்பு சாதனங்களை பயன்படுத்தும் விவசாயிகளுக்கும் சந்தை கவல்களுக்கும் இடையே இடைவெளி அதிகளவு காணப்படுகிறது என தெரிவிக்கின்றது.

ஆய்வுக் கருதுகோள்கள்

H_{1A}: வெருகல் பிரதேசத்தில் நெல் விவசாயிகளின் சந்தைபங்குபற்றுதலில் சமூகக் காரணிகள் தாக்கம் செலுத்துகின்றன.

H_{2A}: வெருகல் பிரதேசத்தில் நெல் விவசாயிகளின் சந்தைபங்குபற்றுதலில் சந்தைக் காரணிகள் தாக்கம் செலுத்துகின்றன.

H_{3A}: வெருகல் பிரதேசத்தில் நெல் விவசாயிகளின் சந்தைபங்குபற்றுதலில் உற்பத்திகாரணிகள் தாக்கம் செலுத்துகின்றன.



H4A: வெருகல் பிரதேசத்தில் நெல் விவசாயிகளின் சந்தைப்பங்குபற்றலில் பொருளாதாரகாரணிகள் தாக்கம் செலுத்துகின்றன.

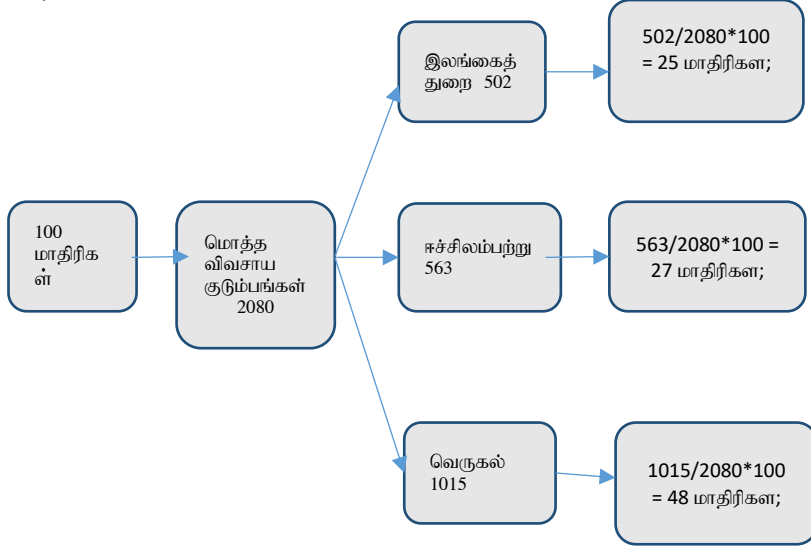
ஆய்வுமுறையியல்

ஆய்வின் நோக்கங்களுக்கமைவாக கருதுகோள்களும் முன்வைக்கப்பட்டு, ஆய்வுப் பிரதேசத்தில் சந்தைப் பங்குபற்றலுடன் தொடர்புபட்ட காரணிகளை சந்தைக்காரணி, சமூகக்காரணி, பொருளாதாரக்காரணி, உற்பத்திக்காரணி என வகைப்படுத்தப்பட்டு ஆய்வு செய்யப்படுகின்றது. ஆய்வாளரின் செயல் நிலை ஆய்வின் போது இனங்காணப்பட்ட நெல் உற்பத்தியாளர்களின் சந்தைப் பங்குபற்றலை தீர்மானிக்கும் காரணிகள் பற்றிய ஆய்வில் முதலாம் நிலைத்தரவுகள் மற்றும் இரண்டாம் நிலைத்தரவுகள் சேகரிக்கப்பட்டு பகுப்பாய்வு செய்யப்படுகின்றன. இவ்வாய்விற்காக வெருகல் பிரதேசசெயலகப் பிரிவிற்சுள் உள்ளடக்கப்படும் மூன்று விவசாயப் போதனாசிரியர் பிரிவுகளை அடிப்படையாக கொண்டு மாதிரித் தெரிவானது இடம் பெற்றுள்ளது. மேலும் இங்கு ஆய்விற்காக 100 மாதிரிகள் தெரிவு செய்யப்பட்டு அதனடிப்படையில் ஆய்வானது முன்னெடுக்கப்பட்டுள்ளது. அந்தவகையில் மொத்த சனத்தொகையில் விவசாயச் செய்கையில் ஈடுபடும் மொத்த குடும்பங்களான 3316 குடும்பங்களினை அடிப்படையாகக் கொண்டுமாதிரித் தெரிவானது இடம்பெற்றுள்ளது. அந்தவகையில் விகிதாசார ரீதியில் எழுமாற்று மாதிரிஎடுப்பை பயன்படுத்தி, மொத்த மாதிரி தொகையில் 5 சதவீதத்தை பயன்படுத்தி (100 பேர்) மையப்படுத்தி 100 விவசாயிகள் மாதிரியாக தெரிவுசெய்யப்பட்டு ஆய்வுக்குட்படுத்தப்பட்டனர்.

இவ்வாய்வில் தரவுப் பகுப்பாய்வானது பிரதானமாக மூன்று பகுதிகளாக கட்டமைக்கப்பட்டுள்ளன. அந்தவகையில் முதலாவது பகுதியில் விவரணப் புள்ளிவிபரவியல் பகுப்பாய்வு நுட்பத்தினைப் பயன்படுத்தி மாதிரிகளின் பண்புகள் மற்றும் அவர்களின் உற்பத்திமற்றும் சந்தை தொடர்பான விடயங்கள் அவை தொடர்பான தரவுகள் போன்றவை பகுப்பாய்வு செய்யப்படுகின்றன. இரண்டாவது பகுதியில் ஆய்வுப் பிரதேசத்தில் நெல் உற்பத்தியாளர்களின் சந்தைப் பங்குபற்றலைத் தீர்மானிக்கும் காரணிகள் குறித்த விளக்கத்தினைப் பெறுவதற்காக பிற்செலவுப் பகுப்பாய்வு முறையானது பயன்படுத்தப்படுகிறது. இந்நிலையில் சார்ந்த மாறியான சந்தைப்பங்குபற்றலும் சாரா மாறிகளான சந்தைப் பங்குபற்றலைத் தீர்மானிக்கும் அட்டவணையில் குறிப்பிடப்பட்டுள்ள ஏனைய மாறிகளையும் மதிப்பிடுவதற்கு இங்கு பிற்செலவு பகுப்பாய்வானது பயன்படுத்தப்பட்டுள்ளது. மேலும் ஏனைய சிலகாரணிகள் மூன்றாவது பகுதியிலே Likert Scaling முறையினைப் பயன்படுத்தி சந்தைப்பங்குபற்றலைத் தீர்மானிக்கும் விதம் பற்றிவிளக்கப்பட்டுள்ளன.



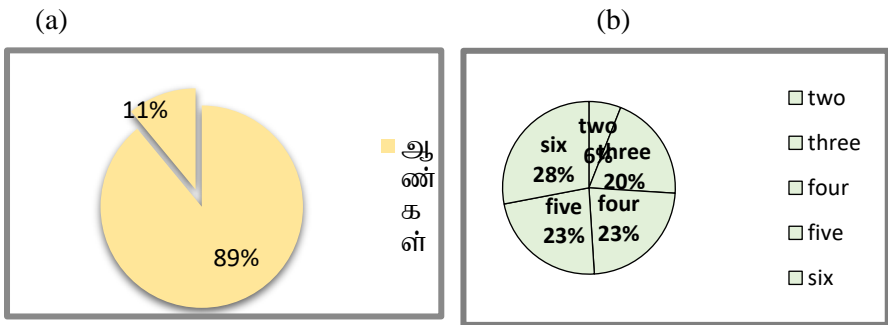
மாதிரி எடுப்பு



உரு 1. மாதிரி எடுப்பு

பல மாறிபிற்செலவு பகுப்பாய்வு முறையானது 5 புள்ளி Likert scale கூற்றுக்களை STATA கணினி மென்பொருளின் ஊடாகப் பகுப்பாய்வு செய்து SPSS மென்பொருளின் மூலமும் விவசாயிகளின் தனிப்பட்டத் தரவுகள் MS Excel இன் உதவி கொண்டும் பகுப்பாய்வுசெய்யப்பட்டுள்ளது.

ஆய்வின் முடிவுகள்



உரு 2(a):நெல்விவசாயிகளின் பால்நிலை உரு 3(b):நெல்விவசாயிகளின் குடும்பஅங்கத்தவர்



பல்மாறிபிற்செலவுகூப்பாய்வுமுடிவுகள்

$$Y = \beta_0 + \beta_1AG + \beta_2ED + \beta_3WG + \beta_4FM + \beta_5FS + \beta_6MI + \beta_7MD + U_i$$

$$Y = 83.998 - .2032 AG - .4659ED + .0035 WG - 1.1148 FM + .7720 FS + .0023 MI - .2944 MD$$

Y =சந்தைப்பங்குபற்றல் (விவசாயிசந்தையில் விற்கும் நெல்லின் அளவு/மொத்தஉற்பத்தி)

இவ்வாய்வின் முடிவின்படி துணிவுக் குணகமானது 0.2738 ஆகக் காணப்படுகின்றது. கருத்தில் கொள்ளப்பட்ட சாரா மாறிகள் சார்ந்த மாறியான நெல் விவசாய உற்பத்தியாளர்களின் சந்தைப் பங்குபற்றலின் விலகலை 27% விளக்க கூடியதாக உள்ளன. ஆதே வேளை 73% சார்ந்த மாறியின் விலகலை ஆய்வில் உள்ளடக்கப்படாத ஏனைய மாறிகள் விளக்குகின்றதாக இருந்த போதிலும் சமூக விஞ்ஞான ஆய்வுகளைப் பொறுத்த வரையில் இவ்வாறான நிலையானது இயல்பான தொன்று எனவும் துணிவுக் குணகமானது உளவியல் ரீதியான சமூக ஆய்வுகளில் குறைவாக வருவதற்கான வாய்ப்புகள் உள்ளன. இவ்வாய்வில் பயன்படுத்தப்பட்டுள்ள சாரா மாறிகளில் ஒன்றை தவிர ஏனையவை பொருண்மைத்தன்மையைக் கொண்டுள்ளமையானது சாரா மாறிகளின் பொருத்தப்பாட்டினை விளக்குகின்றது.

அட்டவணை 1. பிற்செலவு ஆய்வின் முடிவுகள்

மாறிகள்	பிற்செலவு குணகம் திப்புக்கள்	T பெறுமதி	நிகழ்தகவுப் பெறுமதி	நியமவழு
விவசாயியின் வயது(AG)	-.2031776*	-1.89	0.062	.107529
கல்விகற்றவருடங்கள் (ED)	-.4659281*	-1.55	0.100	.300261
வழங்கப்படும் கூலியளவு (WG)	.0035158	0.71	0.481	.004964
குடும்பமபுங்கத்தவர் எண்ணிக்கை (FM)	-1.114834**	-2.36	0.020	.472451
பண்ணையின் அளவு. (FS)	.7720053***	2.90	0.005	.266243
மாதாந்தவருமானம் (MI)	.0022782 ***	4.22	0.000	.000529
re;jf;fhdதூruk; (MD)	-.2944291**	-2.49	0.015	.118477
வெட்டுத்துண்டு	83.99758	9.05	0.000	9.28610
துணிவுக்குணகம்	R ² : 0.2738		F பெறுமதி : 4.52	

*** 1% பொருண்மைமட்டம் , ** 5% பொருண்மைமட்டம் , *10% பொருண்மைமட்டம்.

இவ்வாய்வின் முடிவுகளைத் தொகுத்து நோக்கும் போது நெல் விவசாய உற்பத்தியாளர்களின் சந்தைப் பங்குபற்றலைத் தீர்மானிப்பதில் நெல் விவசாய உற்பத்தியாளரின் கல்வி நிலை, மற்றும் விவசாயியின் வயது, விவசாயின் குடும்ப அங்கத்தவர் எண்ணிக்கை, சந்தைக்கான தூரம் போன்றவை எதிர்மறையான தாக்கத்தினையே செலுத்துகின்றன.



ஆய்விலே நெல் விவசாய உற்பத்தியாளர்களின் சந்தைப்பங்கு பற்றலில் செல்வாக்குச் செலுத்தும் காரணிகளில் 1% பொருண்மை மட்டத்தில் பண்ணையின் அளவு மற்றும் நெல் விவசாய உற்பத்தியாளருடைய மாதாந்த வருமானம் ஆகியவை காணப்பட, 5% பொருண்மை மட்டத்தில் நெல் விவசாய உற்பத்தியாளரின் குடும்ப அங்கத்தவர் எண்ணிக்கையும் மற்றும் சந்தைக்கான தூரமும் காணப்படுகின்றன. 10% பொருண்மை மட்டத்தில் நெல் விவசாய உற்பத்தியாளர்களின் வயது, நெல் விவசாயினுடைய கல்விநிலை ஆகியவை காணப்படுகின்றன.

கருதுகோள் பரிசீலனை முடிவுகள்

கருதுகோள் பரிசீலனை-01

H_{1A}: வெருகல் பிரதேசத்தில் நெல் விவசாயிகளின் சந்தைப்பங்குபற்றலில் சமூகக் காரணிகள் தாக்கம் செலுத்துகின்றன. (விவசாயியின் வயது, விவசாயின் கல்விநிலை, விவசாயின் குடும்ப அங்கத்தவர் எண்ணிக்கை)

பிற்செலவு ஆய்வு முடிவுகளின் படி ஏனைய காரணிகள் மாறாத நிலையில் நெல் விவசாய உற்பத்தியாளரின் வயதானது மேலதிகமாக ஒரு அலகினால் அதிகரிக்கும் போது நெல் விவசாய உற்பத்தியாளரின் சந்தைப்பங்குபற்றலானது -2031776 அலகினால் வீழ்ச்சியடையும். மேலும் சார்ந்த மாறியான நெல் விவசாயிகளின் சந்தைப்பங்குபற்றலில் சாரா மாறியான விவசாயியின் கல்வி நிலையானது ஏற்படுத்தியுள்ள தாக்கத்தினை விளக்கும் பிற்செலவு குணக மதிப்பானின் பெறுமதி -4659281 ஆகக் காணப்படுகின்றது. இதன்படி ஏனைய காரணிகள் மாறாத நிலையில் விவசாயியின் கல்வி நிலையானது மேலதிகமாக ஒரு அலகினால் அதிகரிக்கும் போது நெல் விவசாய உற்பத்தியாளரின் சந்தைப்பங்குபற்றலானது -4659281 அலகினால் வீழ்ச்சியடையும். அடுத்து, குடும்ப அங்கத்தவர் எண்ணிக்கையானது ஏற்படுத்தியுள்ள தாக்கத்தினை விளக்கும் பிற்செலவுக் குணக மதிப்பானின் பெறுமதியானது -1.114834 ஆகக் காணப்படுவதனால் ஏனைய காரணிகள் மாறாத நிலையில் நெல் விவசாய உற்பத்தியாளரின் வயது குடும்ப அங்கத்தவர் எண்ணிக்கையானது மேலதிகமாக ஒரு அலகினால் அதிகரிக்கும் போது நெல் விவசாய உற்பத்தியாளரின் சந்தைப்பங்குபற்றலானது -1.114834 அலகினால் வீழ்ச்சியடையும்.

கருதுகோள் பரிசீலனை-02

H_{2A}: வெருகல் பிரதேசத்தில் நெல் விவசாயிகளின் சந்தை பங்குபற்றலில் சந்தைக் காரணிகள் தாக்கம் செலுத்துகின்றன (சந்தைக்கான தூரம், சந்தைத் தகவல்கள்).

சார்ந்த மாறியான சந்தைப்பங்குபற்றலின் மீது சாரா மாறியான சந்தைக்கான தூரம் ஏற்படுத்தும் தாக்கத்தினை விளக்கும் பிற்செலவு குணக மதிப்பானின் பெறுமதி -.2944291 ஆகக் காணப்படுகின்றது. இதன்படி ஏனைய காரணிகள் மாறாத நிலையில் நெல் விவசாய உற்பத்தியாளரின் சந்தைக்கான தூரம் ஒரு அலகினால் மேலதிகமாக அதிகரிக்கும் போது நெல் விவசாய உற்பத்தியாளரின் சந்தைப்பங்குபற்றலானது-.2944291 அலகினால் குறையும். சந்தை தகவல்கள் குறித்து 4 வரையான கூற்றுக்கள் வழங்கப்பட்டு



5 தெரிவுகள் வழங்கப்பட்டன. இதனடிப்படையில் பெறப்பட்டத் தரவுகளானது பின்வருமாறு ஆராயப்படுகின்றது 5 புள்ளி Likert scale கூற்றுக்கள் மூலமான பகுப்பாய்வு முறையில் பெறப்பட்ட இடைப் பெறுமானங்கள் அட்டவணையில் குறிப்பிடப்பட்டுள்ள வீச்சுக்களின் அடிப்படையில் மதிப்பிடப்பட்டு முடிவுகள் பெறப்பட்டுள்ளது.

வீச்சு	தீர்மானமுடிவுகள்
1 ≤ \bar{X} < 2.5	குறைந்தநிலை
2.5 ≤ \bar{X} < 3.5	நடுத்தரநிலை
3.5 ≤ \bar{X} ≤ 5.0	உயர்ந்தநிலை

அட்டவணை 2. சந்தைத்தகவல்கள்

கூற்றுக்கள்	இடை	நியமவிலகல்	மீடறன்				
			1	2	3	4	5
			#	#	#	#	#
சந்தைத்தகவல் பங்குபற்றலைத் தீர்மானிக்கிறது	4.7500	.51981			3	17	79
சந்தைத்தகவல் சிரமம் இல்லை	4.6600	.65474			10	15	75
சந்தைத்தகவல் பங்குபற்றலுக்கு அவசியமானது.	4.9500	.21904				5	95
சந்தைத்தகவல் கிடைப்பதால் இலாபம் அதிகரிக்கிறது	5.0000	.00000				5	95
சந்தைத்தகவலின் சராசரி	4.8400	.20573					

- 1 –முற்றுமுழுதாக ஏற்றுக்கொள்ளவில்லை
- 2 –ஏற்றுக்கொள்ளவில்லை
- 3 –நடுநிலை
- 4 –ஏற்றுக்கொள்கிறேன்
- 5 –முழுவதுமாக ஏற்கின்றேன்

சந்தைத்தகவல்கள் தொடர்பான கூற்றுக்களைத் தொகுத்து நோக்குகையில் இடைத்தரகர்கள் தொடர்பான ஒவ்வொரு கூற்றினதும் விபரத்தின் அடிப்படையில் சராசரி இடை 4.84 ஆகவும் நியமவிலகல் (0.20) ஆகவும் காணப்படுகிறது. கூற்றுக்களின் \bar{X} பகுப்பாய்வுப் பெறுமானம் $3.5 \leq \bar{X} \leq 5.0$ என்ற வீச்சினுள் அமைகிறது. எனவே இடைப் பெறுமதிகள் உயர்ந்த மட்டத்தில் காணப்படுகின்றது. இதனடிப்படையில் சந்தைத் தகவல்கள் விவசாய உற்பத்தியாளரின் சந்தைப் பங்குபற்றலில் அதிகளவில் செல்வாக்கு செலுத்துகின்றது; சந்தைத் தகவல்களைச் சிறந்த முறையில் பெற்றுக் கொள்கின்ற நிலையில் நெல் விவசாய உற்பத்தியாளரினுடைய சந்தைப் பங்குபற்றலானது சிறப்பானதாக காணப்படும்.



கருதுகோள் பரீசீலனை 3

H_{3A}: வெருகல் பிரதேசத்தில் நெல் விவசாயிகளின் சந்தைப்பங்குபற்றுதலில் உற்பத்திகாரணிகள் தாக்கம் செலுத்துகிறது. (பண்ணையினுடைய அளவு, வெளியீட்டின் விலை)

பண்ணையினுடைய அளவு ஏற்படுத்தியுள்ள தாக்கத்தை விளக்கும் பிற்செலவு குணக மதிப்பானின் பெறுமதியானது .7720053 ஆகக் காணப்படுகின்றது. இது ஏனைய காரணிகள் மாறாத நிலையில் நெல் விவசாய உற்பத்தியாளரினுடைய பண்ணையின் அளவானது மேலதிகமாக 1 அலகினால் அதிகரிக்கும் போது நெல் விவசாய உற்பத்தியாளரின் சந்தைப் பங்குபற்றலானது .7720053 அலகினால் அதிகரிக்கும் என்பதைவிளக்குகின்றது.

வெளியீட்டின் விலைகுறித்து 4 கூற்றுக்கள் வழங்கப்பட்டு 5 தெரிவுகள் வழங்கப்பட்ட அடிப்படையில் பெறப்பட்ட தரவுகளானது பின்வருமாறு ஆராயப்படுகின்றது.

அட்டவணை 3. வெளியீட்டின் விலை

கூற்றுக்கள்	இடை	நியம விலகல்	மீறன்				
			1	2	3	4	5
			#	#	#	#	#
			%	%	%	%	%
வெளியீட்டின் சாதகமானவிலையான துபங்குபற்றலைஅதிக ரிக்கின்றது	4.39	0.584			55	51	44
உற்பத்திகளுக்கானநியாயமானவிலையினைப் பெறுகின்றேன்	2.48	0.594		42	53		
ஏனைய சந்தைகளின் விலைகளுக்கேற்பவிலையிடுகின்றேன்.	2.47	0.521	11	51	48		
விலைஉயர்வடையும் போதுஅதிகஉற்பத்திகளைசந்தைப்படுத்துகின்றேன்	3.4	0.603		55	49	46	
வெளியீட்டின் விலையின் சராசரி	3.185	0.278					

வெளியீட்டின் விலை தொடர்பானவெரு கூற்றினதும் விபரத்தின் அடிப்படையில் சராசரி இடை 3.18 ஆகவும் நியமவிலகல் 0.27 ஆகவும் காணப்படுகிறது.

ஆய்வு முடிவுகளும் விவாதிப்புக்களும்

இலங்கையில் 70 வீதமானவர்கள் கிராமப்புறங்களில் வசிக்கின்றவர்களாகவும் அவர்களின் பிரதான பொருளாதார நடவடிக்கையாக விவசாயமும் காணப்படுகின்றது. எனவே இலங்கை மக்களின் வாழ்வாதாரத்தோடு ஒன்றிணைந்த பொருளாதார நடவடிக்கையாக விவசாயம் காணப்படுகின்றது. கிராம மக்கள் விவசாயத்தினூடாகதம் உணவுத் தேவைப் பூர்த்தி மட்டுமன்றி



நாட்டின் உணவு நிரம்பலிலும் பங்கெடுக்கின்றனர். இந்நிலையில் ஆய்வுப் பிரதேசத்தில் நெல் விவசாய உற்பத்தியாளர்களின் சந்தைப் பங்குபற்றல் தொடர்பாக மேற்கொள்ளப்பட்ட இவ்வாய்வின்மூலமாக ஆய்வின் நோக்கங்களை அடையும் வகையில் பின்வரும் முடிவுகள் பெறப்பட்டுள்ளன.

ஆய்வின்மூலம் முடிவுகளின் படி ஆய்வுப் பிரதேசத்தில் விவசாயியினுடைய மாதாந்தவருமானம், பண்ணையின் அளவு, ஆகியவை 1% பொருண்மை மட்டத்திலும் விவசாயியினுடைய குடும்ப அங்கத்தவர் எண்ணிக்கை, சந்தைக்கான தூரம் போன்றவை 5% பொருண்மை மட்டத்திலும் விவசாயியினுடைய கல்விநிலை மற்றும் விவசாயியினுடைய வயது ஆகியவை 10% பொருண்மை மட்டத்திலும் நெல்விவசாய உற்பத்தியாளர்களின் சந்தைப் பங்குபற்றலில் செல்வாக்குச் செலுத்துகின்றன. இருந்த போதிலும் விவசாயியால் ஊழியருக்கு வழங்கப்படும் கூலியினளவு நெல் விவசாய உற்பத்தியாளரின் சந்தைப் பங்குபற்றலில் புள்ளி விபர ரீதியாக பொருண்மைத் தன்மை அற்றதாக காணப்படுகின்றது. மேலும் ஆய்வின் முடிவன்படி நெல் விவசாய உற்பத்தியாளர்களின் சந்தைப் பங்குபற்றலில், கல்விநிலை, விவசாயியின் வயது, குடும்ப அங்கத்தவர் எண்ணிக்கை ஆகியவை எதிர்த்தாக்கத்தினை ஏற்படுத்துகின்றது. அதாவது விவசாயியின் வயதானது அதிகரிக்கின்ற தன்மை விவசாயியினுடைய பங்குபற்றலைக் குறைக்கின்றது. மேலும் வயதின் அதிகரிப்பு நிலையானது இயல்பாகவே உற்பத்தியின் வெளியீட்டைக் குறைக்க அது சந்தைப்பங்குபற்றலைக் குறைக்கின்றது.

ஆய்வில் 5 புள்ளி Likert Scale கூற்றுக்கள் மூலமான பகுப்பாய்வு மூலம் பெற்ற முடிவுகளின்படி சந்தைத் தகவல்கள் மற்றும் விவசாயியினுடைய கடன் பயன்பாடு என்பவை விவசாயியின் சந்தைப்பங்குபற்றலில் உயர் மட்டத் தாக்கத்தினைக் கொண்டுள்ளமை அவதானிக்கப்பட்டுள்ளது. மேலும் வீதி உட்கட்டமைப்பு வசதிகள், மற்றும் வெளியீட்டின் விலை போன்றவை நெல் விவசாய உற்பத்தியாளரின் சந்தைப்பங்குபற்றலில் மத்திமமான மட்டத்தில் தாக்கத்தை காட்டி நிற்கின்றமையும் கண்டறியப்பட்டுள்ளது. குறைந்த மட்டத் தாக்கத்தினை விவசாயியினுடைய கால்நடைகளில் இருந்தான வருமானம், மற்றும் பண்ணை சாரா வருமானம் ஆகியவை கொண்டுள்ளன.

முடிவுரை

வெருகல் பிரதேசத்தில் நெற 'பயிர்செய்கை மேற்கொள்பவர்களின் சந்தைப்பங்குபற்றலை தீர்மானிக்கும் காரணிகளை வெளிக் கொணர்ந்த இந்த ஆய்வு, அவர்களின் தனிப்பட்ட குணாம்சங்கள் சார்ந்த அகக் காரணிகளும் சந்தை, சமூகம் சார்ந்த புறக் காரணிகளும் தொடர்புறுவதையும் தாக்கம் செலுத்துவதையும் எடுத்துக்காட்டுகிறது. இவற்றுள் முயற்சியாண்மை சார்ந்த திறன் அம்சங்கள் மேலைத்தேய கலாச்சாரத்துடன் இணைந்தவையாக இருப்பதனால் வெளிநின்ற காரணிகளில் மாற்றம் காணவிழையும் அதே சமயம் மாற்றங்கள் அகக் காரணிகளான உள்பாங்கு, கருத்துநிலை என்பவற்றிலும் ஏற்பட்டாலன்றி பரிந்துரைகள் செயற்படா. ஆகவே முன்மொழியப் படும் கொள்கைத் தீர்மானங்கள் இவற்றையும் கருத்திலெடுப்பது உசிதமாகும்.

பரிந்துரைகள்

ஆய்வுப் பிரதேசத்தில் நெல் விவசாய உற்பத்தியாளர்களின் உற்பத்தி நடவடிக்கை, சந்தைப்படுத்தல் தொடர்பான மேற்பார்வையினை ஒழுங்கு செய்து நெல் விவசாய உற்பத்தியாளர்கள் அமைப்புக்களை நிறுவி தரவுகளைப்



பேணல்; நெல் விவசாய உற்பத்தியாளர்களின் உற்பத்திகளை கொள்வனவு செய்யும் வர்த்தகர்களின் விபரத் திரட்டு பேணப்பட்டு கொள்வனவு விலை தொடர்பான ஒழுங்கு விதிகளைப் பேணல்.

வெருகல் பிரதேசத்தில் பொதுச்சந்தையொன்றை நிறுவி, நெல் விவசாய உற்பத்தியாளர்கள் தமது உற்பத்திகளை கொண்டு இடை நடுவரற்ற சந்தைப்பங்குபற்றலை ஏற்படுத்துவதற்கான ஒழுங்கு முறைகளை ஏற்படுத்திக் கொடுத்தல்; உற்பத்தியாளர்களுக்கு களஞ்சிய வசதிகளை ஏற்படுத்திக் கொடுப்பதன் மூலம் உற்பத்திகளை உடன் சந்தைப்படுத்தல் என்ற கட்டாய நிலையிலிருந்து பாதுகாத்தல். நெல் விவசாயிகளினுடைய சிறந்த தர முடைய உற்பத்திகளை அறுவடை செய்வதற்கான வழி முறைகளை பெற்றுக் கொடுத்தல்; விவசாயிகள் சந்தை பற்றிய தகவல்களை பூரணமாக உரிய வகையில் அரசிடமிருந்து பெற்றுக் கொள்ள வழிவகை செய்தல்..

நெல்விவசாய உற்பத்திகள் பெரிதும் பின் தங்கிய பிரதேசங்களில் காணப்படுகின்றமையால் வீதி உட்கட்டமைப்பு மற்றும் மின்சார வசதிகளை ஏற்படுத்திக் கொடுப்பதன் மூலம் அவர்களது உற்பத்திகளுக்கு இடை நடுவரற்ற சந்தை வாய்ப்பையும் உற்பத்தி பாதுகாத்தல் வசதிகளையும் ஏற்படுத்திக் கொடுத்தல். விவசாயிகளுக்கு குறைந்த வட்டியில் கடன்களை முறை சார்ந்த நிறுவனங்கள் வழங்குவதற்கு வழிவகை செய்தல்; விவசாயிக்கு கொடுக்கும் கடன்களை விவசாய தேவைகளுக்காகப் பயன்படுத்துவதை கடன் கொடுக்கும் நிறுவனங்கள் முகாமை செய்தல் வேண்டும்.

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Non-performance of contractual obligations in international commercial contracts in the wake of Coronavirus: A legal perspective

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Abstract

The rapid growth of the Coronavirus disease (COVID-19) has undoubtedly impacted business relations worldwide, leading to significant consequences caused by the non-performance of international commercial contracts. Given the circumstances, the current study scrutinises how the international commercial law can provide relief to for non-performance of contractual obligations due to the impact of the COVID-19 crisis through legal instruments such as the United Nations Convention on Contracts for the International Sale of Goods (CISG) and UNIDROIT Principles of International Commercial Contracts (UNIDROIT Principles). This research was conducted following the doctrinal legal research methodology. Examining the CISG and the UNIDROIT Principles revealed that the legal concepts such as *force majeure* and hardship could be invoked to grant relief. The study finds that the COVID-19 Pandemic will provide the legal basis to invoke these measures depending on different factors such as the duration of impediment, allocation of contractual risks, causal link and the date of signing the contract. In conclusion, the relief provided by these international instruments is likely to be constructed based on the judicial precedent established during comparable circumstances in the past, such as the outbreak of the Severe Acute Respiratory Syndrome (SARS).

Keywords: COVID-19, force majeure, hardship and international commerce

Introduction

COVID-19 has caused unprecedented challenges for businesses worldwide. This extraordinary situation has turned the spotlight on the consequences of COVID-19 on the performance of contractual obligations in the global business arena. This situation demands a close analysis of the various legal measures that allow coping with the difficulties in performing international commercial contracts obligations.

CISG and UNIDROIT Principles are the most commonly applicable legal instruments to international commercial contracts. The CISG is a binding legal instrument, whereas the UNIDROIT Principles constitute soft law. Further, the scope of the application of the UNIDROIT Principles is wider than the CISG. While the CISG applies only to specific types of international



sale of goods contracts, UNIDROIT Principles would also apply to solve disputes arising under international service or other contracts (Ryan, 2005).

Examining these legal instruments reveals that there are legal measures to excuse non-performance of contractual obligations in unforeseen situations such as the COVID-19 pandemic. The legal concepts of *force majeure* and hardship are significant in this context. Yet, it is unclear to date how the relevant provisions in these international legal instruments will be interpreted and applied given the current pandemic. In this light, this research explores how contracting parties will be provided relief under the CISG and the UNIDROIT Principles for non-performance due to the COVID-19 crisis.

Literature Review

Force Majeure and Hardship are commonly invoked legal concepts in international trade when unforeseen events happen and render the performance impossible or impracticable (Bortolotti & Ufot, 2019). Article 79(1) of the CISG reflects *force majeure* and provides for an “impediment which is beyond his control (the Party’s) that he could not reasonably have been expected to take into account at the time of the conclusion of the contract or to have avoided or overcome it, or its consequences”. Article 7.1.7 of the UNIDROIT Principles is titled *force majeure*, and it mirrors the wording of Article 79(1) of the CISG. Besides this, Article 6.2.2 of the UNIDROIT Principles spells out the legal concept of hardship. Hardship refers to an exceptional situation created when supervening circumstances are such that they lead to a fundamental alteration of the contract’s equilibrium.

The precedent case law concerning comparable situations to the COVID-19 pandemic, such as the Arbitration Award 2005, L-Lysine case (2005) emphasised the importance of foreseeability under Article 79 of the CISG. In this arbitral award, the tribunal decided that the seller could not claim SARS as a *force majeure* event and get excused from performance under the Article described above since SARS had happened a few months before the contract was signed.

As for relevant case law on hardship, *Churchill Falls (Labrador) Corp. v. Hydro-Québec*, (2018) decided by the Supreme Court of Canada, emphasised that “in a situation of ‘hardship’ that corresponds to the description of that concept set out in the UNIDROIT Principles, the conduct of the contracting party who benefits from the change in circumstances cannot be disregarded and must be assessed.”



Methodology

This research was conducted following the doctrinal methodology, which typifies a distinctly legal research (Watkins & Burton, 2013). For data collection, mainly the primary sources *viz.* international Conventions and case law were critically analysed supported by the secondary sources *viz.* books and online sources to establish an arguably correct and complete statement of the law on the matter in hand.

An in-depth analysis of the CISG and the UNIDROT Principles was conducted. The sole aim of this doctrinal research is to describe the relevant body of law and how it applies (Dobinson & Johns, 2007). However, the scarcity of case law to date on the particular scenario under concern constructed a research limitation. This research's scope is limited to the breach of contractual obligations of the contracts to which the CISG or the UNIDROIT Principles apply.

Results and Discussions

Review of the CISG and the UNIDROIT Principles reveals that there are means to provide relief for failure to perform contractual obligations due to the COVID-19 pandemic's repercussions. Notably, the Supreme People's Court in the Republic of China has stated that the contracts affected by SARS shall be dealt with on the grounds of either *force majeure* or hardship (Cristofor&Dusa, 2020). Given the precedent, the COVID-19 crisis can be seemingly pleaded as an exonerating cause under Article 79 as well as the Articles 6.2.2 and 7.1.7 of the UNIDROIT Principles provided that the necessary elements such as unforeseeability are fulfilled. Article 79 and Article 7.1.7 of the UNIDROIT Principles can excuse non-performance of contracts temporarily. On the other hand, Article 6.2. UNIDROIT Principles permits renegotiating the contractual terms and allows the contract to be kept alive, although on revised terms.

Unlike Article 6.2.2 of the UNIDROIT Principles, there is no specific rule in the CISG that refers explicitly to hardship. Generally, under Article 79, economic hardship alone does not constitute *force majeure*. However, if the reasonable unforeseen circumstances have made the performance unequivocally burdensome for one of the parties, relief can be provided under Article 79 keeping in line with the reasoning in *Scafom International BV v. Lorraine Tubes S.A.S.*, (2009) decided by the Belgian Supreme Court.

Conclusions and Recommendations

COVID-19 has affected and will continue to affect a broad spectrum of international commercial contracts. Nevertheless, there are tools in



international commercial law to tackle the difficulties this pandemic has created. COVID-19 pandemic will provide the legal basis to invoke these measures depending on different factors such as the duration of the impediment, allocation of contractual risks, causal link and the date of signing the contract. These are to be assessed on a case-by-case basis. Further, the relief provided by international instruments such as the CISG and UNIDROIT Principles are likely to be constructed based on the judicial precedent established during corresponding circumstances in the past, such as the outbreak of SARS.

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Entrepreneurial motivation and self-employment intention: Special reference to management undergraduates in Jaffna district

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Abstract

This study aims to present the relationship between entrepreneurial motivations and self-employment intention among management undergraduates in the Jaffna district. A quantitative approach was utilized in this study. In the quantitative approach, the desirability of self-employment, tolerance for risk, planned behaviour and background factors were used as the independent variables to predict the self-employment intention. It was examined in a convenient sampling of 154 management undergraduates at the University of Jaffna, from third and final year students with the structured questionnaire's help through which Findings have drawn for this quantitative analysis, the researcher has got 100 percent of the response. The entrepreneurial intention level of the management undergraduates and higher national diploma students is in the most substantial level. The students are interested in being their own boss, having desirability on self-employment, planned and systematic behaviour, and do not like to wait for the government job. Further, Entrepreneurial motivation contributes significantly to Self-employment intention and predicts acceptable percent of the variation found. Another significant limitation is that entrepreneurship is interrelated with environmental factors, economic issues and fiscal and monitoring portfolio which will not be examined in this research.

Keywords: background factors, desirability of self-employment, planned behaviour, self-employment intention and tolerance of risk

Introduction

Today, most economists agree that entrepreneurship is an essential ingredient for stimulating economic growth and employment opportunities in all societies. Entrepreneurs are important drivers of economic and social progress and change (Austin, Stevenson, & Wei-Skillern, 2006). The entrepreneurial spirit may manifest itself in the development of new markets, new products, new production methods and management, the discovery of new inputs, and the establishment of new businesses and even new organisational forms (Fayolle, 2007). Entrepreneurs are the persons who usually organise and develop their own businesses and benefit from a range of fields, including various



knowledge areas, hands-on experience, creative visions and insights, network support, and risk-taking (Lope Pihie, 2008). development programmes to raise the once-troubled economy. The primary focus had been to achieve sustainable economic growth through entrepreneurship.

Entrepreneurs are considered as the cogs of the economics of the country. In northern province of Sri Lanka, especially in Jaffna district, after the 30-year civil war, there is a tremendous entrepreneurial opportunity due to the country's economic and political condition. Thus, there is a huge niche market. It seems many people have so much interested in doing entrepreneurship. Entrepreneurs are the persons who usually organise and develop their own businesses and benefit from a range of fields, including various knowledge areas, hands-on experience, creative visions and insights, network support, and risk-taking (Lope Pihie, 2008). They have a heightened ability and awareness for recognising and audaciously exploiting business opportunities. They persistently and continually seek opportunity-laden information in order to satisfy internal motivators such as the need for achievement and the fulfillment of competitive urges. They act as catalysts of economic activity for the entire economy. Entrepreneurs are the persons who usually organise and develop their own businesses and benefit from a range of fields, including various knowledge areas, hands on experience, creative visions and insights, network support, and risk-taking (Lope Pihie, 2008). They persistently and continually seek opportunity-laden information in order to satisfy internal motivators such as the need for achievement and the fulfilment of competitive urges (Pech & Cameron, 2006). They act as catalysts of economic activity for the entire economy. In particular, Jaffna district needs graduates who are innovative, dynamic, smart, daring, efficient, determined, modern and employable or, in one word, entrepreneurial. Self-employment intention is always in the root in many people as their ambition. As per the pilot study, twenty students said they have a high amount of eager to start a new career as entrepreneurs. Thus, this study identifies the factors which relate to the intention of self-employment. Therefore, a study on entrepreneurial motivation on self-employment intention among undergraduates from a university like the University of Jaffna is essential in Jaffna. It can be fruitful empirical work, which may likely differ from other Sri Lanka districts. Thus, the research asks “to what extend the entrepreneurial motivation has a relationship with entrepreneurial intention”.

The study's main objective is to find out the relationship between entrepreneurial motivation and entrepreneurial intention (background variables, the desirability on self-employment intention, tolerance of risk and planned behaviour) among management undergraduates. Sub objectives are



to identify the relationship between planned behaviour and self-employment intention, identify the relationship desirability on self-employment and self-employment intention, identify the relationship between tolerance of risk and self-employment intention, and identify the relationship between background variables and self-employment intention.

Literature Review

Entrepreneurship has emerged as an essential force in global economic growth. Entrepreneurship is now considered as a significant contributor to global economic growth (McStay, 2008). Entrepreneurship as an academic discipline is still considered as relatively new, although its origin can be traced back to the seventeenth century when economist Richard Cantillon coined the term “entrepreneur.” Entrepreneurship needs entrepreneurial motivation.

Early studies explain that venture creation in entrepreneurship is the trigger of motivation (Clark, Davis & Harnish, 1984). The motivation in the entrepreneurship literature has evolved along a path similar to that of the organisational psychology field. From an organizational psychology perspective, theories of motivation have progressed from static, content-oriented theories to dynamic, process-oriented theories, a framework suggested by Campbell (1992). This entrepreneurial motivation included several factors. Such as desirability of self-employment, planned behaviour, tolerance of risk and background factors.

Planned behaviour is how a person is planned for all. Uncertainty, as a stream of research in the entrepreneurship literature, has taken two paths (McMullen & Shepherd, 2006). One path is the level of uncertainty about an unknown future for those deciding to act or not. Tolerance of risk is as per Lambing and Kuehl (2000) outlined several requirements for entrepreneurs: tolerance of obstacles, perseverance, determination, risk management, a positive attitude towards change. Background factors include education factors, previous experience, personal background, socialization and family role. All these factors are considered as vital background factors to decide the entrepreneurial intention among the undergraduates. Hence these factors are more important for self-employment intention. Self-employment intention refers to the action of an individual’s attitudes toward the outcomes of that action and individual’s self-efficacy. It relates to the perceptions of desirability and feasibility and the propensity to act upon opportunities.



Methodology

The students from the University of Jaffna Faculty of Management Studies & Commerce, third & final year, were taken as the sample. 154 students were taken as the sample. Convenient sampling method was utilized due to easiness and time rigidity. Quantitative approach was utilized in this study. In the quantitative approach, the desirability of self-employment, tolerance for risk, planned behaviour and background factors were used as the independent variables to predict the self-employment intention. It was examined in a sample of 154 management undergraduates at the University of Jaffna, from third and final year students with the structured questionnaire's help through which Findings have drawn for this quantitative analysis, the researcher has got 100 percent of the response.

Conceptual Framework

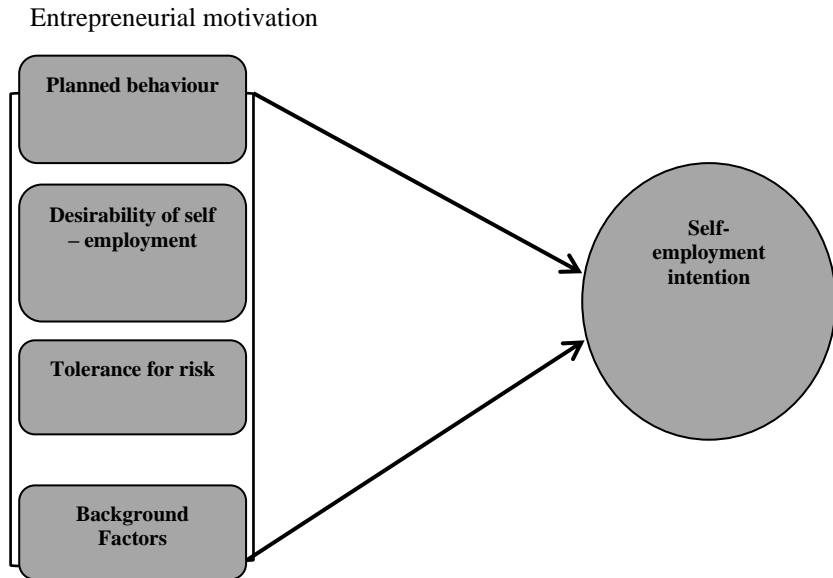


Fig 1. Conceptual Framework



Results and Discussions

Table 1. Person correlation analysis

Variables	I	DSI	TR	PB	BF	EM
Intention	1					
Desirability of Self-Employment	.752**	1				
Tolerance of Risk	.746**	.669**	1			
Planned Behaviour	.630**	.491**	.661**	1		
Background Factors	.496**	.364**	.505**	.497**	1	
Entrepreneurial Motivation	.814**	.777**	.892**	.815**	.736**	1

Based on the quantitative study, as per the table 1 the management undergraduates' entrepreneurial intention level is in the strongest level, which is more than 0.7 for desirability self-employment and tolerance of risk. It proved all the associations were found to be significant at the 99% level and there were positive correlations among all the constructs because none of the constructs have a negative sign on self-employment intention. The results also illustrate that entrepreneurial motivation is positively associated with self-employment intention, whereas positive association has been found that $r = 0.814$ which is also significant at 0.01 level ($P < 0.05$). It was followed by the desirability of self-employment with $r = 0.777$, tolerance of risk with $r = 0.892$, planned behaviour with $r = 0.815$ and background factors with $r = 0.796$. All correlations were significant at 0.01 levels and had a strong positive relationship with self-employment intention. Thus, the result has shown a significant positive relationship between independent variables (desirability of self-employment, tolerance of risk, planned behaviour, background factors) and dependent variable (self-employment intention).

Conclusions and Recommendations

According to the results of Pearson correlation analysis (2 tailed), entrepreneurial motivation contributes significantly to self-employment intention ($P < 0.05$). Whereas desirability of the self-employment, tolerance of risk, planned behaviour, and background factors, entrepreneurial motivation contributes significantly to self-employment intention. Therefore, it can be concluded that there is a positive relationship between the dependent variables (Self-employment intention) and above said independent variables. In terms of the simple linear regression analysis, the researcher can conclude that the predictor power of the entrepreneurial motivation is at the higher level. Further above said, other variables in the entrepreneurial motivation contribute significantly to self-employment intention. This result was consistent with the study conducted by Ummah (2009), which reported that the entrepreneurial motivation contributes to the self-employment intention level among management undergraduates in Sri Lanka. Financial sectors and intermediaries should focus on the microfinance, insurance, leasing, another



special loan scheme, and special accounts for entrepreneurs to give the financial infrastructures. Non-governmental organisations can give consultancy and other supporting services to the emerging entrepreneurs in the Jaffna district. The government has to play a significant role in addressing some of the challenges confronting prospective and current entrepreneurs.

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Effect of microfinance services on the performance of micro-entrepreneurs: A study in Pilimathalawa area

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Abstract

This study examines the effect of microfinance services on the performance of micro-entrepreneurs in the Pilimathalawa area. One hundred micro entrepreneurs received the benefits from the Samurdhi Bank selected as a sample in this study purpose. The microfinance services – micro-credit, micro-savings, and micro-training- are considered independent variables and entrepreneurs performance considered as dependent variables of the study. Data were collected through issuing a structured questionnaire to the respondents and analyzed using SPSS version 20. The Regression analysis and factor analysis were done for the effects of financial services on the performance of micro entrepreneurs. The present study results indicated that the microfinance services – micro-credit, micro-saving, and micro-finance have highly impact the performance of entrepreneurs. Finally, the microfinance services – credits, serving, and training - have highly effective on the performance of the micro-entrepreneurs. Further, the study recommended that the micro-savings has a higher effect on the entrepreneurs' performance than that of other services

Keywords: micro-entrepreneurs, microfinance services and performance

Introduction

The microfinance movement in Sri Lanka dates as far back as 1906 with the establishment of Thrift and Credit Co-operative Societies (TCCSs) under the Co-operative Societies Ordinance introduced by the British colonial administration. Microfinance has evolved as an economic development approach intended to benefit low-income women and men. The term refers to the provision of financial services to low-income clients, including the self-employed. Financial services generally include savings and credit; however, some microfinance organizations also provide insurance and payment services. In today there is area wise institutions providing microfinance in Sri Lanka, such as state banks, Regional Development Banks and other licensed specialized banks, Co-operative rural banks and other co-operatives, Thrift and credit cooperative societies (TCCSs/Sanasa Societies), Samurdhi Bank Society, NGO-MFIs and Other financial (Microfinance industry report, 2009). The research question of the present study is; How does the



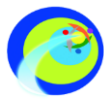
microfinance services affect the micro-entrepreneurs' performance? The objectives of the present study are to:

- measure the impact of microfinance services on the performance of the micro-entrepreneurs.
- determine which services have a higher effect on the performance.

Literature Review

The microfinance banks' services have significantly improved the performance of women-owned enterprises in Benue State, Nigeria. The study concludes that microfinance banks loan services and saving services have a more significant effect on women-owned enterprises' performance. The study also concludes that microfinance banks' training services have significantly improved the skills and experience of women transferred to their enterprises (Diaka & Asenge 2019). Syed Hussain Haider et al., (2018) highlighted training of microfinance beneficiaries is vital for getting better performance. The results indicated that the growth rate of Micro and Small enterprises whose owners have been trained was better than those Micro and small enterprises whose owners have never been given training. Khin et.al. (2017) found that the significant microfinance service factors influencing women entrepreneurs' entrepreneurial success utilizing such services in Sri Lanka. Kingsley Bernard et. al., (2017) discussed the influence of microfinance services on women's entrepreneurial success in Sri Lanka. The study found that the positive relationship among micro-credit, micro-savings, and women's entrepreneurial success and the negative relationship between micro-insurance and entrepreneurial success.

Herath et al., (2015) found that microfinance's impact on poverty and vulnerability of women borrowers. The finding of this study identified that four criteria – access, creation and control over private resources, freedom of decision making at home, self-confidence on socio-economic activities and status in community and family were positively affected the women. A qualitative study expressed that microfinance services (micro-credit, micro-savings, micro-insurance, Business support, skills development) on the entrepreneurial success of poor women. Further, the study discussed weaknesses of such services in the process of women achieving entrepreneurial success (Kingsley Bernard 2015) The provision of a micro-loan by micro-finance institutions was rated as the highest factor that positively contributed to the performance of small and medium enterprises, followed by the economy's general performance and consulting services. Finally, Provision of micro-loans by micro-finance institutions was rated as the factor that positively contributed to the performance of small and medium



enterprises (Kinimi 2014). Prasansha Kumari (2014) explored the impact of microfinance on small entrepreneurship in Sri Lanka. The study identified four finance services – credit, saving mobilization, micro-insurance, and pawning. Further, the study concluded that the small-scale entrepreneurs empowered and created new business through SEEDS's financial services.

Even though many foreign and Sri Lankan researchers researched the impact of microfinance in entrepreneurial development and women entrepreneurs' performance. There were also few numbers of researches regarding effects of microfinance factors on entrepreneurs' performance in Sri Lanka. These studies are also based only on entrepreneurs' performance. Therefore, the researcher has identified this as the research gap and will carefully investigate the effect of microfinance in entrepreneurs' performance. Based on the above literature survey, following hypotheses were derived in this study:

H₁: Microfinance services have a higher impact on the entrepreneurs' performance.

H₂: There is a significant effect of Microfinance services and the entrepreneurs' performance.

Methodology

For this study purpose, 100 micro-entrepreneurs identified in the Pilimathalawa area get assistance from Samurdhi Bank. A convenient sampling technique was used in this study. The microfinance services – micro-credit, micro-savings, and micro-training- are considered independent variables and entrepreneurs performance considered as dependent variables of the study. Data is entered and analyzed using SPSS version 20. Reliability, Validity, Regression analysis, and factor analysis were done for the effects of financial services on micro entrepreneurs' performance.

The first reliability of variables was measured in this study. For measuring the reliability, Cronbach alpha was calculated. The Cronbach alpha of the variables of this study is 0.997. It is greater than the cut-off rate 0.70. The KMO and Bartlett's tests were measured for the adequacy of data. The study indicated that all variables' adequacy is 0.711 and significant. It is indicating that the values of adequacy are Meritorious.

Results and Discussions

Impact of Microfinance Services on the Performance of Entrepreneurs.

For testing Hypothesis 1, the regression analysis was done in this study. The results are illustrated in Table 1, Table 2 and Table 3.



Table 1. Results of model fit

Model	R	R ²	Adjusted R ²	Sig-value
1	0.902	0.813	0.807	0.000

The results from Table 1 show that the coefficient of determination (R-square) explains the variation in the dependent variable due to changes in the independent variable. The R-square value of 0.813 indicates that there was a variation of 81.3% in the performance of entrepreneurs. Due to the microfinance credit service changes, microfinance savings service, and microfinance training service of 95% confidence interval. Also, the value of R (0.902) indicated that there was a strong relationship between variables. As well as statistics in table 4.8 indicates that the population's parameter had a significance level of 0.000, which shows that the data is ideal for concluding the population's parameter as the value of significance (P-value) is less than 5%. This implies that microfinance credit service, microfinance saving service and microfinance training service significantly affect the performance of entrepreneurs in the Pilimathalawa area.

Table 2. Estimated results of multiple Regression

Variables	Unstandardized coefficients	Std.Error	Standardized coefficients	Sig. value
Constant	0.751	0.152		0.000
M-credit***	0.548	0.067	0.579	0.000
M-saving***	0.166	0.055	0.183	0.003
M-training***	0.213	0.048	0.256	0.000

Note: *** represents 1% level of significant

In the above table, Firstly, the regression coefficient for microfinance credit service is 0.548, which implies that the respondent who have strongly agreed and more satisfied with the micro-credit service given the microfinance institutions, their performance also will be higher. In other words, the entrepreneurs have better micro-credit services; their performance also higher. Based on the study P-value for microfinance credit service, 0.000 is less than 0.05, which is an indication that the variable has a significant positive effect on the performance of entrepreneurs. Secondly, the regression coefficient for microfinance saving service is 0.166, which implies that, the respondent who has strongly agreed and more satisfied with the micro-savings service given the microfinance institutions, their performance will also be higher. Based on the study, P-value for microfinance savings service 0.003 is less than 0.05, which is an indication that variable has a significant positive effect on the performance of entrepreneurs.

Finally, microfinance training service is 0.213, which implies that the respondent who has strongly agreed and more satisfied with the micro-



training service given by the microfinance institutions, their performance will also be higher. In other words, the entrepreneurs have better micro-training services in their performance. According to the study P-value for microfinance training service, 0.000, is less than 0.05, which is an indication that variable has a significant positive effect on the performance of entrepreneurs. Based on the regression, the hypothesis one is supported in this study. Hence these three services highly impact the performance of the entrepreneurs in the Pilimathalawa area.

Demographic variables of respondents and performance

Effect of Microfinance services and the entrepreneurs' performance

For testing the hypothesis 2, the factor analysis was done in this study. The results of the factor analysis illustrated in table 3.

Table 3. Factor loadings and Communality Estimates

Item	F1	F2	F3	h^2
TQ1	0.975			0.629
TQ2	0.963			0.786
TQ3	0.969			0.720
TQ4	0.958			0.780
TQ5	0.976			0.749
SQ1		0.951		0.972
SQ2		0.951		0.973
SQ3		0.956		0.987
SQ4		0.956		0.959
CQ1			0.788	0.992
CQ2			0.881	0.967
CQ3			0.820	0.983
CQ4			0.860	0.957
CQ5			0.851	0.990
Eigen	6.67	3.37	2.40	
Variance	47.63	24.07	17.16	
Com.Var	47.63	71.69	88.86	

$h^2 = \text{Communality Estimates}$

Factor I: Micro-training factor

The factor I explains 47.63 percent of the total variance. This includes TQ1, TQ2, TQ3, TQ4 and TQ5. This factor also has significant factor loadings on these variables, which are formed in this major cluster. So this factor has provided a basis for the conceptualization of dimension, which can be called “Micro training factor.”

Factor II: Micro-Savings factor

Factor II explains 24.07 percent of the total variance. This includes SQ1, SQ2, SQ3, and SQ4. This factor also has significant factor loading on these variables, which formed the second important cluster concerning the



variation. So, this factor provided a basis for the conceptualization of dimension which can be called “Micro saving factor.”

Factor III: Micro-credit factor

Factor III explains 17.16 percent of the total variance. This includes CQ1, CQ2, CQ3, CQ4 and CQ5. This factor also has significant factor loading on these variables, which formed the third important cluster concerning the variation. So, this factor provides a basis for the conceptualization of dimension which can be called “Micro credit factor”

Table 4. Factor wise average score

Serial No.	Factor	Factor score	Rank
I	Micro-training	0.209	2
II	Micro-saving	0.261	1
III	Micro-credit	0.204	3

The factor ranking shows that factor II: Micro-saving is the most crucial issue that impedes the entrepreneurs’ performance in the Pilimathalawa area. This factor includes provide the capital necessary to invest (SQ1), Risk of repayment of the loan (SQ2), Cover the expenditure of the business (SQ3) and Smooth irregular income (SQ4). This has reflected the own savings of the entrepreneurs were the best asset for the entrepreneurs. Therefore, it highly affected their performance than the other factors. The second most crucial factor is Micro-training. This factor includes Knowledge of financial literacy (TQ1), Management skills (TQ2), Operational skills (TQ3), Technological skills (TQ4) and Knowledge of leadership (TQ5). These factors have been found working to improve the business knowledge of the entrepreneur. The micro-credit factor includes Physical assets of the business (CQ 1, Machines/tools/equipment), Operational facility (CQ2), Number of products (CQ3), Number of buyers (CQ4) and Business volume (CQ5) and it was the third important factor.

Based on the results, the cumulative variance of the three factors is 88.8%. It observed that the factors have a higher effect on the performance of the entrepreneurs. These three factors highly effect on the entrepreneurs’ performance. Hence hypothesis 3 is accepted.

Conclusions and Recommendations

This study's main objective is to examine the effect of microfinance services on the entrepreneurs’ performance in the Pilimathalawa area. Based on the results, the study concludes that the microfinance services significantly impact on the entrepreneurs’ performance. Micro-training, micro-savings, and micro-credits have a higher effect on the entrepreneurs' performance in



this study. The results supported the prior researchers' study (Kimani et al. 2013, Kingsley Bernard et al. 2017, and Syed Hussain Haider et. al., 2018). The study recommended that the micro-savings have a higher effect on the entrepreneurs' performance than other services. The researchers need to consider other determinants and the entrepreneurs' subjective and objective performance in their future studies.

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An insight into the critical success factors influence on women entrepreneurship

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Abstract

Entrepreneurship has presently employed a prominent residence in the record of rewarding career opportunities for women. There is an extensive reservoir of human resource potential that remains untapped in the economy. Many factors influence women entrepreneurs when they are running their business. This study aims to identify the factors that influence the success of women entrepreneurs in the Northern Region. For this study purpose 100 small scale women entrepreneurs identified in the Northern Region registered in the Industrial Development Board. A convenient sampling technique was used in this study. Data is entered and analyzed using SPSS version 20. The present study results indicated that the mean square and F-value of the Economic factors, Socio-cultural factors, and Family factors significantly associate with the success of the women entrepreneurs. Further Correlation results indicated that Economic factors, Socio-cultural factors, and Family Factors are positively and significantly correlated with the success of women entrepreneurs and Psychological factors, Enterprise factors and legal factors are positively correlated but insignificant in this study.

Keywords: critical success factors, the success of women entrepreneurs and women entrepreneurs

Introduction

Entrepreneurship has presently employed a prominent residence in the record of rewarding career opportunities. Women's labor force participation is essential for an economy for many reasons. It indicates the utilization of labor in an economy (and influences the growth potential); relates to income/poverty status of households; and is a signal of women's economic empowerment. There is an extensive reservoir of human resource potential that remains untapped in the economy. This becomes particularly critical as most Sri Lanka's population is Women and as the population begins to age and fewer working-age individuals remain in the workforce. After the end of the 30 years of Civil war in Sri Lanka, women are mostly engaged in medium, small, and micro enterprises in the Northern Region to generate income to look after their family and support their husbands or other family members. Many factors influence women entrepreneurs when they are running their business. Despite numerous papers previously exist that discuss women entrepreneurs, there have been very a few research focusing on factors



influencing and challenges facing women entrepreneurs, more specifically in the Northern Region. This is one of the Northern Region studies that embrace empirical evidence to investigate pivotal factors hampering women entrepreneurs and calls for more research in this domain. Therefore, the objectives of this study are to;

- analyse, the association between the influencing factors and the success of women entrepreneurs.
- measure the relationship between the influencing factors and the success of women entrepreneurs.

Literature Review

Women entrepreneurship is one of the world's rapidly evolving entrepreneurial populations (Brush, Bruin & Welter, 2009). They make substantial contributions to innovations, employment and wealth creation (Brush et al. The issue of women and men's entrepreneurship has gained evolving consideration among policymakers in the developing and developed countries (Hossain, Naser & Zaman, 2009).

Women and men's entrepreneurial activities are pivotal in creating and enhancing employment opportunities and safeguarding economic growth. It can be understood that women entrepreneurship is a rising concept and has a remarkable economic impact in all economies. Notwithstanding, women entrepreneurship has challenges and drawbacks that need to be addressed and definite needs that have to be discovered to enhance their success (Ayadurai, 2006). Jayawardane (2016) stated that the phenomenon of women entrepreneurship is much interesting and important in the world. Of late, it has been absorbing loftier significance in Sri Lanka and economic changes and globalization. Moreover, legislation has been formulated to assist fostering entrepreneurship, encouraging education and training for potential entrepreneurs; which has supported the empowerment of women entrepreneurs. Women entrepreneurship should be learned for various reasons (Jayawardane et al., 2015); women entrepreneurship has been embraced during the last decade as a prominent facet of the country's economic growth. Women entrepreneurship in Sri Lanka generates open doors to harness different approaches in entrepreneurship research. Moreover, women entrepreneurs create new jobs for themselves and the nation as well. These women can be encouraged to be entrepreneurs who will contribute to the income of their families. The recognition of the significance of the research approach's context and significance will stimulate more informed policymaking. The development and cultivation of women entrepreneurs



would be a value accumulation to the holistic country's business development and affluence.

Weerawansa and Samarasinghe (2018) noted that women had grasped their business firm dramatically in recent years. They abdicate well-paid jobs in their private sector to launch their business venture. Additionally, these phenomena were created due to frustration at hitting a glass ceiling, dissatisfaction with their career advancement, unmet career expectations, and corporate downsizing. Intriguingly, they fulfill their dreams of entrepreneurship, being their own boss, achieving their business success.

Methodology

For this study purpose, 100 small scale women entrepreneurs identified in the Northern Region registered in the Industrial Development Board. The researchers selected 20 women entrepreneurs from every five districts, especially Mannar, Vavuniya, Mullaitivu, Kilinochchi, and Jaffna. A convenient sampling technique was used in this study. The Economic, Socio-Cultural, Family, Psychological, Entrepreneurial competencies, Legal factors are considered independent variables and the success (performance) of the women entrepreneurs is as a dependent variable of the present study. Data is entered and analyzed using SPSS version 20. One sample T- test, F - test for mean value, and correlation analysis were done to analyze the factors influencing the success of women entrepreneurs. The following hypotheses were derived:

- H₁: There is an association between the influencing factors and the of women entrepreneurs.
- H₂: There is a relationship between influencing factors and the success of women entrepreneurs.

Results and Discussions

The present study describes the Economic, Socio-Cultural, Family, Psychological, Entrepreneurial competencies. Legal factors are considered independent variables and the success (performance) of the entrepreneurs is as a dependent variable of this study. The results of the association between the influencing factors and success of women entrepreneurs were indicated in table 1:

Table No. 1 ANOVA Analysis

Variables	SS	MS	F	Sig
Economic Factors	.640	.213	5.431	.002
Socio-Cultural Factors	.492	.098	2.360	.046



Family Factors	1.058	.176	4.941	.000
Psychological Factors	.294	.029	0.635	.780
Enterprise Factors	.004	.002	0.042	.959
Legal Factors	.274	.091	2.119	.103

The results of the present study illustrated in the Table 1 the mean square and F-value (5.431, $p < 0.01$, 2.360, $p < 0.05$, and 4.741, $p < 0.01$ respectively) of the Economic factors, Socio - cultural factors, and Family factors significantly associate with the success of the women entrepreneurs. The psychological factors, Enterprise factors and legal factors have no association with the success of women entrepreneurs. Hence the hypothesis 1 is partially accepted.

To test hypothesis 2, the researchers performed the correlation analysis.

Table 2. Correlation Analysis

Variables	Success of women Entrepreneurs	Sig.
Economic Factors	.763	.000
Socio-Cultural Factors	.432	.042
Family Factors	.683	.003
Psychological Factors	.008	.324
Enterprise Factors	.029	.325
Legal Factors	.048	.425

Table 2 indicated that the correlation relationship between influencing factors and the success of women entrepreneurs. The results indicated that the Economic factors, Socio-cultural factors, and Family Factors are positively and significantly correlated with the success of women entrepreneurs and Psychological factors, Enterprise factors and legal factors are positively correlated but insignificant in this study. Hence the hypothesis 2 is partially accepted in this study.

Conclusions and Recommendations

Based on the results, the study concludes that the Economic factors have more association with women entrepreneurs' success than the other factors because the F statistics of the Economic factor is higher than the other factors and has significant. Hence the Economic factors mostly influence the success of the women entrepreneurs than the other factors in the Northern Region. The women entrepreneurs are facing some challenges in running their business. They need to overcome the challenges of getting advice from the Government sector and non- government sector to improve their business.



Further, they should get proper training from the relevant training institution for improving their entrepreneurial skills. They should break social barriers. Further, women entrepreneurs have strong communication skills with their proficiency in the core business, attributed their success to the quality of their output, which was rated better than their competitors, conditioned by their hard work and dedication to achieving success.

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The challenges and consequences of Covid-19 epidemic on entrepreneurship: A qualitative study on entrepreneurs

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Abstract

Unprecedentedly, the COVID-19 (Coronavirus) outbreak causes businesses with many unforeseen challenges due to its rapid spreading and global reach. Due to the global magnitude and changing impact of the Covid-19 crisis, there is an urgent need to consider its effects on entrepreneurship. Therefore, more and more businesses are now looking to improve their continuity plan to better prepare for the impact of COVID-19. Thus, the present study aims to investigate the effect and consequences of COVID-19 in entrepreneurial firms. With the purposive sampling technique's aid, data were garnered from entrepreneurs and small-business owners in the Vavuniya district with in-depth interviews. The majority of the informants interviewed disclosed that the COVID-19 devastated firms' productivity, demand, customers' loss, and, consequently, performance. Moreover, it has been found that the COVID-19 epidemic has given an open-door for entrepreneurs to conduct their business operations online.

Keywords: coronavirus, demand, entrepreneurs, performance and productivity

Introduction

Entrepreneurship plays a strategic role in economic development by accelerating economic activities and job creation. Human resource management is also a strategic and comprehensive function of the business, which enables employees to contribute effectively and productively to overall company benefit and accomplishment of organization's goals and objectives (Uyar & Deniz, 2012). Entrepreneurship is often related to creative and innovative actions, which are the missing link between investments in new knowledge and economic growth. By serving as a conduit for knowledge spillovers, entrepreneurship is an important mechanism permeating the knowledge filter to facilitate the spillover of knowledge and ultimately generate economic growth.



The Covid-19 epidemic has now reached a new critical phase where public health systems need to act decisively to contain new epicenters' growth outside China. The main emphasis is and should be on containing and mitigating the disease itself. However, the economic impacts are also significant, and many companies are feeling their way towards understanding, reacting to, and learning lessons from rapidly unfolding events. Unanticipated twists and turns will be revealed with each news cycle, and we will only have a complete picture in retrospect. Nevertheless, given the very different degrees of preparedness across companies, the further potential for disruption, and the value of being better prepared for future crises, it is worth trying to extract what we have learned so far (Lang & Carlsson-Szlezak, 2020). The COVID-19 pandemic presents a severe threat to people, businesses and economies across the world. Entrepreneurs must focus on how they can best protect their people, serve their customers and stabilize business continuity. Therefore, this study aims to explore and investigate the effect and consequences of COVID-19 on entrepreneurial firms.

Research questions

- to what extent has the COVID-19 influenced firms' operations?
- What are the consequences of COVID-19 in line with the entrepreneurial firms?

The present study's pivotal objective is to investigate the impact and consequences of COVID-19 epidemic on entrepreneurial firms and its functions. There is a vast number of research studies conducted and found contradictory findings in developed countries. Despite, this is the maiden qualitative study has been conducted more specifically in the northern region.

Theoretical Underpinning

“In Wuhan, China, a novel and alarmingly contagious primary atypical (viral) pneumonia broke out in December 2019. It has since been identified as a zoonotic coronavirus, similar to SARS coronavirus and MERS coronavirus and named COVID-19. As of 8 February 2020, 33 738 confirmed cases and 811 deaths had been reported in China” (Liu et al., 2020). According to the World Health organization (WHO), to date, some scientific publications provide initial evidence on whether the COVID-19 virus can be detected in the air and thus, some news outlets have suggested that there has been airborne transmission. It is a disease that is identified as a pandemic as it can affect a very large number of human beings living in an area. It has the potential of spreading very quickly from one person to many people (Opatha, 2020) and according to the WHO, at this time, there are no specific vaccines



or treatments for COVID-19. However, many ongoing clinical trials are evaluating potential treatments.

Entrepreneurship was essential if the investment, innovation, and structural changes required for economic development were to be achieved. But both on the supply and on the demand sides, entrepreneurship seemed to constitute a severe problem for the underdeveloped countries (Shane and Venkataraman, 2000; Uyar and Deniz, 2012). Entrepreneurship has been identified as the process of creating a new thing of value by devoting the necessary time and effort, assuming the accompanying financial, psychic, and social risks, and receiving the resulting rewards of monetary and personal satisfaction and independence. (Hisrich, 2005).

Methodology

To accomplish the research objective above, this study adopted a qualitative approach. Creswell (1998) qualitative methods should be applied when identifying motives and attitudes among employees. Qualitative methods are of particular use when the holistic research objectives interpret and understand meanings (McDaniel and Gates, 1999).

Instrument: *In-depth interview*

The study relies on an in-depth interview. The research interview's fundamental purpose is to discover the opinions, experiences, beliefs, and individuals' motivations on definite matters. Interviews, are whispered to provide a 'deeper' understanding of social phenomena. Therefore, most appropriate, detailed insights are required from individual participants (Gill et al., 2008).

Population and Sampling

The population for this study encapsulates nine small and medium businesses in the Vavuniya district. Thus, a total of nine(N=9) entrepreneurs were chosen for the study, based on the assumption that they possess the fundamental knowledge and understanding of the concepts of COVID-19 and its consequences on businesses. Garnering data is vital in research, as the data is destined to contribute to a better understanding of a theoretical framework (Bernard, 2002). Therefore, the study embraced a purposive sampling technique. Purposive sampling may also be used with both qualitative and quantitative research techniques.



Results and Discussions

Nine key informants were chosen for this study, where seven were males and the remaining two were females. They were exceptional informants per se, originated from differing age groups, years of experience, educational qualifications and gender. The highest number of informants fell between the 35-45 age group (n=4), followed by four informants (n=3) between 40-50 and the remaining two informants (n=2) were over 50 age group. The average years of experience were 12 years.

One informant revealed that,

“Before the epidemic situation, we were superior in our business and made enough profit to run our business. Due to the COVID-19, our business and its operations have been devastated. Moreover, we now strive to elicit ore performance”.

Informant-6

Since February 2020, a shocking disease called COVID-19 or Corona has attacked the people worldwide.

Another informant disclosed that,

“We struggle to run the business because we have no enough money to provide our employees' salary. We are at the stage of the shutdown. We undertook to obtain a loan from the bank, but they are not ready to issue”.

Informant-5

Businesses must navigate the financial and operational challenges of coronavirus while rapidly addressing the needs of their people, customers and suppliers

“COVID-19 epidemic has created a significant impact on business. Since we are a manufacturing firm, we encountered huge difficulties. We truly need support from the government, like financial facilities. Only then can we survive. Because, due to the lockdown, we have closed our operations for 4 months”.

Informant-4

Every industry is adapting to life during a pandemic.

“We introduced a new technology here for the first time on 2020 January. Thence, we remarkably carried out our functions smoothly. After the



infection of corona various, we lost our profit and productivity. Furthermore, we now make efforts to heighten our operation”.

Informant-1

The government can allocate to stabilize economies in freefall and restart growth.

One on the informant highlighted that,

“Unprecedentedly, COVID-19 has significantly created a miserable circumstance. We lost our customer and profit. We require financial assistance even a loan with less interest”.

Informant-7

Entrepreneurs encounter the insistence and difficulty of reviving their businesses.

“We have to develop recovery strategies to encounter unforeseen circumstances. Therefore, entrepreneurs should be given sufficient education, training and development to foster risk-taking behaviour, only then we can survive in the market”.

Informant-3

During times of epidemic, business operations, the intelligence engine of an organization are more important than ever.

“Owe value our customers. Due to the COVID-19 we could not reach our customers. Therefore, we introduced an online delivery system to reach our potential customers”.

Informant-8

The government can initiate by distinguishing between sectors that can safely navigate the pandemic, and others, such as those that were already in decline and were then severely hit by the crisis, may need structural change.

“The COVID-19 pandemic remains to evolve. Now is the time to shift focus to efforts that support a return to work, while addressing needed changes in the months ahead”.

Informant-2

Leaders are rapidly turning their attention to the Next, a period of unpredictable and possibly muted economic recovery with new competitive threats and opportunities.



“Society and economies worldwide are experiencing an unprecedented exogenous shock. Therefore, as an entrepreneur, we require to introduce creative and innovative practices”.

Informant-9

Conclusions and Recommendations

COVID-19 epidemic is likely to produce distressed situations, where stakeholders often seek additional information or resources to help rebuild their confidence. Because of the COVID-19 pandemic, all businesses and their performance have been ruined. Lucidly, firms have to formulate drastic countermeasures to encounter unforeseen circumstances further and be very conscious enough to confront the environmental uncertainties. To ensure business continuity, having an emergency scenario is essential, which embracing renovation and reinvention. In the current situation, it is vital to react as fast as possible to mitigate impacts and other risks and prepare the organization for the further development of the COVID-19 pandemic and its possible scenarios. Business continuity management covers infrastructure, cyber, employee, business, operational and communication risks, to manage an organization that has to face new challenges and risks and wants to ensure continuity of operations and production.

Moreover, Coronavirus (Covid-19) is a pandemic that has caused significant havoc around the world and presents some important opportunities for entrepreneurs to be innovative in the marketplace. During times of crisis, business operations, an organization's intelligence engine are more important than ever. More specifically, it has created worst situations; we found that it has also created positive consequences as well. Additionally, due to the COVID-19 epidemic, businesses are now adopted by the online business platform. This has assisted firms to mitigate the cost and ultimately reap competitive advantage.

Firms should assess the situation and develop a practical insolvency plan. Furthermore, it is mandatory to explore the path to enhance the available value. Entrepreneurs should take immediate steps to ensure employees' safety and well-being, embrace open, fact-based and consistent communication, and deal with any crisis, it is essential to do



things to prevent the spread of the disease. That includes creating awareness and promoting personal hygiene, washing hands/using hand sanitizers, limiting non-essential travel. The government can foster training and development and financial backup to entrepreneurs since they are the backbone of the country's economy. More specifically, reshape strategy for business continuity, build resilience in preparation for the new normal are the pivotal aspects of eliciting firm performance.

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Track 5: Knowledge Management and Project Management



The impact of knowledge sharing on performance: Evidence from Sri Lankan public sector employees

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Abstract

The importance of the way toward getting to and assessing knowledge, has been expanded with the use of new technology. Knowledge sharing has become a vital factor at the individual level as much as at the organizational level. Useful knowledge sharing in the case of an organization's employees makes a positive impact on accomplishing goals set by the organization. Knowledge sharing positively affects the employee's performance in order to achieve organizational goals. This study concentrates on the impact of knowledge sharing on employee performance in government organizations. The study's overall objectives are to recognize the impact of knowledge sharing on employee performance and identify the connection between knowledge sharing and employee performance in the state sector. This study uses individual (knowledge self-efficacy, enjoyment in helping others), organizational (management support, organization rewards, organizational culture) and technological (use of information and communication technology) factors as enablers of knowledge sharing process. As per the findings, Individual factors, Organizational factors and Technological factors relate positively to employee performance in government establishments.

Keywords: employee performance, knowledge self-efficacy, management support, organizational rewards and organizational culture

Introduction

Knowledge is being considered one of the most critical drivers of the economy. Knowledge is continuously generated throughout an organization. Firms must ensure that knowledge is managed most effectively to be successful and remain competitive (Sandhu et al., 2010). By knowledge sharing, organizations can enhance their efficiency, effectiveness and decrease the cost of training. From different researchers' points of view, the vital factor in developing and sustaining competition is knowledge (Fang, et al., 2007). Therefore, knowledge sharing is crucial and engaging people for knowledge sharing is useful for knowledge sharing (Alavi et al., 2002). Many researchers agreed regarding the dependency of knowledge sharing on the individual's different characteristics like his expertise, values, intentions, views, and motivational factors. From knowledge sharing perspective, it refers to the culture and environment of an organization vital to foster



knowledge sharing like different rewards which an organization connected with knowledge sharing (Bartol et al., 2002) support, motivation and encouragement from upper management for knowledge sharing (Mary MacNeil, 2004) and supportive leadership style (Taylor et al., 2004). The knowledge sharing process may be outlined as “a process that assists employees in exchanging knowledge and creating knowledge” (van den Hooff et al., 2004). Knowledge sharing includes on demand and supply of new knowledge (Ardichvili, et al., 2003). Van den Hooff et al., (2004) also suggested that the knowledge sharing process consists of the subsequent dimensions: Donation of knowledge and knowledge collection. Sharing of personal knowledge, skills, ideas, intellectual capital by individuals with others is called knowledge donating, whereas consulting with other employees and collecting their skills, ideas, intellectual capital to support one’s work is called knowledge collecting.

In current situations, management of the organizations believes that they have not enough knowledge about their job role and according to management perspective, there can be seen a massive lack of knowledge among junior level more than trained employees. During this regard, special practices for knowledge sharing are developed in several Organizations to help them achieve employee performance. The public sector organizations are supposed to develop strengths and overcome barriers in making the participative environment of knowledge sharing to extend their efficiency and be more proactive in delivering quality and superior services to the clients (Azhar, 2012). Public sector organizations offered various facilities in order to improve employees’ knowledge to ensure their continuous performance. Sharing knowledge increases organizational performance. Nevertheless, if there are no supportive organizational cultural elements for sharing individual knowledge, organizations have to face many difficulties such as new employees would take a long time to adapt to the existing system, employees would repeat the same mistakes many times and employees’ knowledge would exit with them once they leave the organization. These all result to delay in work, time consumption and finally, inefficiency and low productivity in the organizations. Therefore, it would be interesting to investigate the existing organizational culture of knowledge sharing in the Public sector. there is a little study on knowledge management and knowledge sharing in public sector organizations (McAdam et al., 2000). This could be due to the public sector’s status as non-profit organizations (Syed Ikhsan et al., 2004). Hence this study will investigate the impact of knowledge sharing on employee performance in public sector organizations. Besides, this study will provide information for any organizations to learn about knowledge sharing, factors affecting knowledge sharing, and strategies of



knowledge sharing. Further, this study's findings will be beneficial for the management to make effective decisions to make strong and valuable human assets in the organization.

Literature Review

There is no universally accepted definition of Knowledge (Russ, 2010). Knowledge is more than just information; additionally, it contains experiences, skills and insights (Huysman, et al., 2002). According to Al-Hawamdeh (2003), there are five necessary dimensions in knowledge management activities: knowledge capture, Knowledge creation, Knowledge use (leverage), knowledge sharing and knowledge retention. In the case of knowledge management, knowledge sharing is a vital factor (Al-Hawamdeh, 2003). Sharing knowledge is one of the processes in Knowledge management. It is “the process of transferring knowledge from a person to another in an organization” (Park et al., 2003). This transfer could be between individuals, from an individual to a group, within a group, between groups, sections, or departments to help each other accomplish different tasks and functions in organizations.

Knowledge sharing is fundamental to generate new ideas and develop new business opportunities through socialization and the learning process of knowledge workers. As a result, Knowledge sharing can affect the organization's long-term performance and competitiveness (Du et al., 2007). Knowledge sharing presumes a relation between a minimum of two parties, one with knowledge and the other that acquires knowledge. The first party should communicate its knowledge, consciously and willingly or not, in some kind or other. The opposite party should perceive these expressions of knowledge and make sense of them (Hendriks, 1999). The benefits of knowledge sharing typically derive from two levels: individual and organizational. At the individual level, knowledge management provides the opportunity for workers to enhance their skills by working together and sharing knowledge while improving their performance. At the organizational level, knowledge management provides two vital benefits: (1) Improves organizational performance through increased efficiency, productivity, quality and innovation, and (2) Better decision making, improving processes, data integration and broad collaboration. Reychav and Weisberg (2009) suggest that an individual in an organization involved in knowledge sharing can gain advantages, such as indirect performance increases, salary improvements, and a diminished intention to leave the organization. Bock, Kim and Lee (2005) worked on the factors that affect individual knowledge sharing objectives. They took the theory of reasoned action and supported



their argument that extrinsic motivators, social psychological-factors and organizational factors affect the individuals' knowledge sharing intentions. To perform well on the job, people are assumed to accumulate, adopt and share knowledge (Du. et al., 2007). According to Lee et al., (2005), there are five functions of knowledge management performance: knowledge circulation process: knowledge creation, knowledge accumulation, knowledge sharing, knowledge utilization and knowledge internalization. The main objective of the knowledge-sharing is to transfer knowledge from one person to another. For this purpose, individuals have to share their experiences with and from their colleagues and team members (Madsen et al., 2003). Social Network theory declares that networks across people are associated with performance-related results. People linked across groups are more familiar with alternative ways of thinking and behaving. (Burt, 2004). From information search viewpoint, unified and integrated networks encourage individuals to share their knowledge as they promote cooperation values, faith and norm (Coleman, 1988; Reagans et al., 2003). Job performance is directly related to obtaining the right information because actions for communicating and transferring conceptual and operational knowledge, experiences, and skills in an organization can speed up knowledge sharing (Ingram et al., 2002). As different opportunities rise, the people or groups of people who are mindful and able to get information and handle the new challenges can better perform at work (Gargiulo et al., 2000). Hence, the ability to work well with peers also improves individual performance. R and D projects have been also used to lighten knowledge sharing. The process of R and D can be considered as an important aspect in measuring knowledge sharing of a company (Du et al., 2007).

Methodology

The researcher used the quantitative research approach in the case of achieving objectives of this study. The conceptual framework, operationalization and hypothesis were developed based on prior studies. Primary data has been collected through an online survey questionnaire & correlation analysis and multiple regression analysis have been used as the main statistical tools in analyzing data.

The researcher used three independent variables: Individual factors (Knowledge self-efficacy, Enjoyment in helping others), Organizational factors (Management support, Organizational rewards, Organizational culture) & Technological factors (ICT use) and employee performances as the dependent variable based on prior studies. Variables were measured using Likert scale questions.



Table 1. Identification of variables and Operationalization

Variables	Indicators	Question No.
Individual Factors (Nguyen et al., 2016; Atif.M,2015)	Knowledge Self Efficacy Bandura, 1986; Bock & Kim, 2002)	2.1, 2.2,2.3, 2.4
	Enjoyment in helping others (Davenport et al., 1998; Ryan et al, 2000)	3.1, 3.2,3.3, 3.4
Organizational Factors (Nguyen et al., 2016; Atif.,2015)	Management Support (Connelly and Kelloway, 2003; Lee et al., 2005)	4.1, 4.2,4.3, 4.4
	Organizational Rewards (Bartol et al., 2002; Bock et al, 2005)	5.1, 5.2,5.3, 5.4
	Organizational Culture (Bock et al., 2005)	6.1, 6.2,6.3, 6.4
Technological Factor (Nguyen et al., 2016; Atif.,2015)	ICT use (Hendriks,1999; Ashrafi, R.et al 2008; Farooq, R. 2018)	7.1, 7.2,7.3, 7.4
	Employee Performance Working confidence (Nguyen et al, 2016 ; Atif.,2015).	1.1, 1.2,1.3, 1.4

Table 2. Hypotheses Development

H ₁ :	There is a significant relationship between employee performance and individual factors
H _{1a}	There is a significant relationship between employee performance and Knowledge self-efficacy. (Nguyen et al., 2016; Atif, 2015)
H _{1b}	There is a significant relationship between employee performance and Enjoyment in helping others. (Nguyen et al., 2016; Atif, 2015)
H ₂	There is a significant relationship between employee performance and Organizational factors
H _{2a}	There is a significant relationship between employee performance and management support. (Nguyen et al., 2016; Atif, 2015)
H _{2b}	There is a significant relationship between employee performance and Organizational rewards. (Al-Hawamdeh, 2002; Bock et al., 2005; Nguyen et al., 2016; Atif,2015)
H _{2c}	There is a significant relationship between employee performance and Organizational culture. (Syed Ikhsan & Rowland, 2004; Nguyen et al., 2016; Atif, 2015)
H ₃ :	There is a significant relationship between employee performance and Technological Factors
H _{3a}	There is a significant relationship between employee performance and ICT usage. (Nguyen et al., 2016; Atif, 2015)

According to the Department of Census and Statistics, the total state sector employees in Sri Lanka are 485,471. The researcher has selected 1000 employees (Covering the whole country) using a random sampling method and issued 1000 questionnaires, but just received 620 responses. The respondents were informed about the purpose of the research and how the data were to be used, right at the beginning of the study.

Results and Discussions

According to the profiles of respondents, the majority of respondents are females. Moreover, 21.21% of respondents are single employees and 78.79% of them are Married employees. In the case of educational qualifications of these respondents, 3.03% were passed only O/L, 22.73% employees were passed only A/L, 62.12% employees have a degree only, 6.06% employees



have only professional qualifications and also 6.06% employees have any higher qualifications such as Master's Degree. The most representative group of the respondents is workers who have worked 0-5 years (50%). 46.97% of employees have worked between 5 and 10 years, 3.03% of employees have worked between 10 and 15 years.

According to correlation analysis results, there is a significant relationship between Employee performance and knowledge self-efficacy at 0.01 significant level (confidence level- 99%) and there is a significant relationship between Employee performance and Enjoyment in helping others ($r = 0.615$, $p < 0.01$). The correlational matrix shows that there is a significant relationship between Employee performance and Management support ($r = 0.406$, $p < 0.01$), a significant relationship between Employee performance and Organizational Culture ($r = 0.451$, $p < 0.01$), and there is a significant relationship between Employee performance and Information and communication technology at 0.05 significant level. Based on these figures, all the hypotheses other than H2b have enough statistical evidence to accept.

Multiple regression analysis has been used by the researcher to identify the impact of independent variables to the dependent variable and the following models were tested (Table 4). According to the model 01 ($R^2 = 0.372$), the Impact of Knowledge self-efficacy towards Employee performance is 37.2%. The R^2 value of model 02 is 0.378, which means Enjoyment in helping others impact employee performance by 37.8%. Management support impacts employee performance by 16.5%. According to model 04 ($R^2 = 0.026$), the Impact of Organizational rewards towards Employee performance is 2.6%. R^2 value of model 05 is 0.203. That means Organizational culture impacts employee performance by 20.3%. R^2 value of model 06 is 0.040, which means Information and communication technology impact employee performance by 4%. Model 07 shows the impact of all six independent variables on employee performance statistically. The R^2 value of model 07 is 0.530, which discloses that the impact of knowledge self-efficacy, enjoyment in helping others, management support, organizational rewards, Organizational culture and Information and communication technology towards employee performance is 53%. On the other hand, the impact of other factors that have not been considered in this study towards employee performance in an organization is 47%.

Table 3. Regression Analysis, Model testing summary

Model	Predictors	R	R square	Adjusted square	R	Estimated error
1	Knowledge self-efficacy (KSE)	.610 ^a	.372	.367		.48928
2	Enjoyment in helping others (EHO)	.615 ^a	.378	.373		.48690



3	Management support (MS)	.406 ^a	.165	.158	.56436
4	Organizational rewards (ORS)	.161 ^a	.026	.018	.60943
5	Organizational culture (OC)	.451 ^a	.203	.197	.55118
6	Information and communication technology (ICT)	.200 ^a	.040	.033	.60501
7	KSE, EHO, MS, OR, OC, ICT	.728 ^a	.530	.507	.43181

a. Dependent variable – Employee performance

Conclusions and Recommendations

The study concluded a positive relationship between knowledge sharing and employee performance in public sector employees. The researcher Nguyen et al., 2016 also found that knowledge sharing links with employee performance. This study conducted based on individual, organizational and technological factors and study investigates the relationship among Knowledge self-efficacy, Enjoyment in helping others, Management support, Organizational rewards, Organizational culture, Information and communication technology and employee performance. Findings of this study disclosed that the people who possess knowledge, self-efficacy, Enjoyment in helping others, Management support, Organizational culture and Information and communication facilities enable them to have good performance at the organization. This study's findings will help develop knowledge sharing culture in organizations to achieve good employee performance. The present study was conducted only referring to the public sector organization, but these findings will be useful for the private sector organizations. Organizations should create forums where workers can engage in a friendly environment to share their knowledge, experiences, ideas, opinions, and useful information that will help personal development and benefit the organization. : The administration should support their employees for knowledge self-efficacy by providing proper feedback and recruiting staff who is more proactive, self-confident, and intrinsically motivated. This study showed that rewards (like bonuses, increment in salary, promotion and job security) have no significant impact on employee performance. Management should be aware of investing in different information technologies for quick interaction and communication and enable these technological investments to be available at every employment level or to every employee in the organization.

The study will satisfy the existing research gap in knowledge sharing in the Sri Lankan context up to some extent. Since knowledge sharing is vital for the public and private sector organizations, future studies could conduct research considering that sector. Furthermore, the study has been tested from a wide view, which is one of the main limitations of this study and future researchers could be tested the same phenomenon in a much narrower view, such as considering different sectors, different segments.



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A review of methodological choice: Research paradigm underpinnings

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Abstract

This paper focuses on removing the ambiguity regarding selecting the research methodology when embarking on a research project by the researcher in the social science phenomenon. Quantitative, qualitative, and mixed methods are the dominant methodologies in the social research milieu. Choosing an appropriate methodology is determined by the research paradigms (positivism, interpretive, transformative, and pragmatism). These paradigms are differentiated by the philosophical assumptions (ontology, epistemology, and research method). Therefore, the researcher should be aware of their philosophical assumptions because they inevitably shape the whole research project.

Keywords: positivism, interpretive, transformative and pragmatism

Introduction

Indeed, a methodology is a vital element for high-quality field research; it is a generic approach used by researchers to conduct the research study (Silverman, 2016). It is a systematic way to solve a research problem. Before 1980, the quantitative approach dominating the forms of research in the social science research milieu, which originated in the natural sciences such as Physics, Biology, Chemistry, Geology, etc., and it was concerned with investigating stuff which could be observed and measured in some way (Morgan & Smircich, 1980; Stephen & Hamza, 2015). Later on “paradigm wars” between quantitative and qualitative research proponents reached a new peak (Stephen & Hamza, 2015). Some researchers within the social sciences had argued that the quantitative approach becomes dissatisfaction for the inquire of the individual being studied (Morgan & Smircich, 1980). Consequently, of this argument, the researchers begun to discover alternative ways of researching the social science atmosphere; as a result of this, the qualitative method was developed and then interest in qualitative research increased (Creswell, 2015). Further, some of advocators in social science criticize both methods and suggest combining both the qualitative and quantitative approaches and offering ‘the best of both worlds’ (Dornyei,



2007). Then mixed method research has also been used in contemporary social science research.

Selecting the appropriate methodology for inquiring is essential because different research methods can answer the same research question, but it will produce the different results and inappropriate research strategy will produce a spurious result (Siti Fatimah, 2010). Therefore, this paper endeavors to offer a detailed understanding of the research methodology for doing a research study.

Literature Review

Stephen and Hamza (2015) state that all research studies are grounded on some underlying philosophical assumptions regarding what constitutes 'valid' research and which research method is appropriate for improving knowledge. Choosing the research methodology depends on the Research Paradigm that guides the research project. Guba and Lincoln (1994) documents that a paradigm is associated with the concepts of ontology (nature of truth and reality), epistemology (how to researcher know the truth and reality), and method.

Methodology

To identify how to select the appropriate research methodology for inquiring the research problem, this study has been chosen last 40 years of peer-reviewed journal articles, conference papers and book. These selected materials mostly discuss the philosophical assumptions and research paradigms but not more talk about the methodology choice clearly. Through the review, those contribute to the objective of this study.

Discussions

Research Paradigm is a set of beliefs and assumptions of different theories and practices used to carry out research projects (Cohen, Manion, & Morrison, 2007). The question regarding the research methods is secondary importance to paradigm (Guba & Lincoln, 1994) because the choice of research methodology depends on the paradigm that guides the research project (Stephen & Hamza, 2015). Figure-1 depicts Research 'onion' that adds that more value paradigm is the prior step than methodological choices in the research project. Paradigm is the first outer layer of the onion.

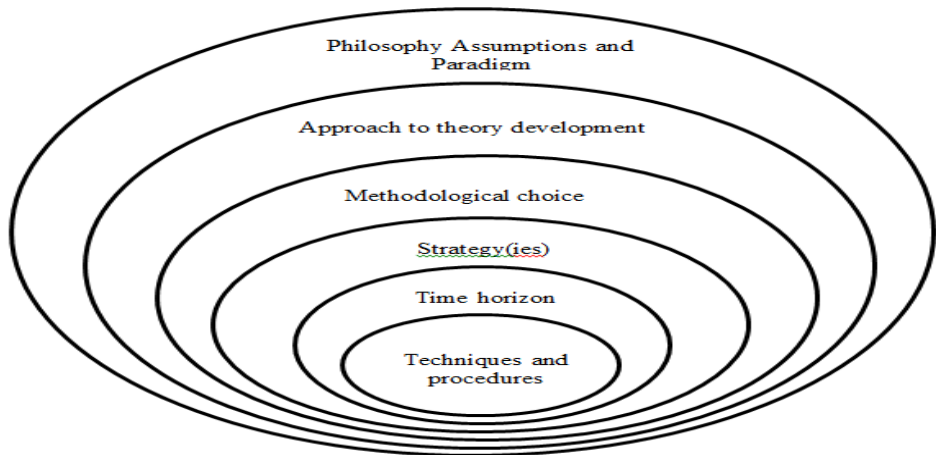


Fig 3. The research 'onion' Adapted from Research Methods for Business Students (5th ed.) (p.138), by Saunders, Lewis and Thornhill, 2011.

A lot of the theoretical paradigms are argued in the previous literature such as functionalist, positivist (and post-positivist), interpretive, constructivist, radical humanist, and radical structuralist, transformative, emancipatory, critical realism, postmodernism, pragmatism and deconstructivist (Arghode, 2012; Burrell & Morgan, 1979; Creswell, 2003; Creswell, 2015; Fazliogullari, 2012; Guba & Lincoln, 1994; Mackenzie & Knipe, 2006; Stephen & Hamza, 2015). However, most recent literature documented that there are four significant paradigms in social science phenomena: positivism (post-positivist), constructivism/ interpretive, transformative, and pragmatism (Creswell, 2003; Creswell, 2015; Mackenzie & Knipe, 2006). Different authors have used different terms for each paradigm (Mackenzie & Knipe, 2006). Therefore, reason confusion regarding how many research paradigms there are has arisen among the researchers when they embark on research projects.

These four paradigms are different by philosophical assumptions about science's nature (ontological, epistemological, and methodological aspects) (Fazliogullari, 2012; Mackenzie & Knipe, 2006). The views of social science's nature concerning the two extreme positions of the continuum: either an objective or a subjective approach to research (Burrell & Morgan, 1979). The objectivist approach in social science research has been developed from the natural sciences. Objectivism has been growing criticized as an unfitting approach to investigate social science phenomena. Subjectivism's proponents feel that subjectivism is more relevant to studying social science phenomena due to the complex nature of social science research, that is,



human beings. Later on, the subjectivism approach arose as critics argued, and continue to argue, that both natural and social sciences are disparate. Table 1 illustrates the comparison of the main paradigms about ontology, epistemology, and research methods.

Table 1. Comparison of the main paradigms concerning ontology, epistemology, and research methods

	Positivism	Constructivism/ interpretivism	Transformative	Pragmatism
Ontology	The reality is objective , perceived, external, independent and ordered; Universal true reality for instance researchers reject or fail to reject hypotheses.	The reality is subjective , complex, and socially constructed through culture and language; Reality is socially or experimentally based, local, and specific in nature.	Reality as complex and nominal; Socially constructed through political power relations; The realities are dominated and silenced by others.	Reality as complex, external and it is the practical consequences of ideas; Pluralist
Epistemology	Data, evidence shape knowledge. For instance researcher objectively collects data on instruments based on measures completed by observations recorded, thus developing numeric measures of observations; Measurable facts Law that needs to be tested or verified and refined.	The knowledge consists of mental structures that are surrounded by the relative agreements; Theories and concepts too simplistic; Focus on narratives, stories, perceptions and interpretations; New understandings and worldviews as contribution and collaboration (e.g researchers actively involve participants as collaborators).	Knowledge and truth is decided by dominant ideologies and intertwined with political agenda.	Focus on problems, practical applied research, integrating different perspectives to help interpret the data
Research methods	Deductive approach; Highly	Inductive approach; Small samples, in-	Deconstructive reading texts and realities	Range of methods: mixed,



structured and large samples, measurement; Quantitative methods of analysis, but a range of data can be analyzed.	depth investigations; Qualitative methods of analysis, but a range of data can be interpreted	against themselves; Range of data types, typically qualitative methods of analysis	quantitative, multiple, qualitative, action research
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Adapted from Creswell (2003); Creswell, (2015); Hitchcock and Hughes (1986) Mackenzie and Knipe (2006) ;Saunders et al. (2011)

Mackenzie and Knipe (2006) state that paradigms determine which methodology (qualitative/quantitative or mixed) and data collection would be the most suitable for research. Kuhn (1962) said that throughout the research, the researchers remain within a paradigm in which they are chosen. Positivist paradigm predominantly uses a quantitative methodology for data collection and analysis, while the generally interpretivist operate using a predominantly qualitative methodology (Bogdan & Biklin, 1998; Burns, 1997; Cohen & Manion, 1994; Creswell, 2015; Mackenzie & Knipe, 2006). The pragmatic paradigm operates using a predominantly mixed methodology (Creswell, 2003, p.12). Likewise, the transformative paradigm agrees to apply both quantitative and qualitative research methodology (Mackenzie & Knipe, 2006). Table 2 despite how research methodology cross paradigm boundaries.

Table 2. Paradigms and Methodology

	Positivism	interpretivism	Transformative	Pragmatism
Methodology	Even though this paradigm can use qualitative, but usually quantitative method dominate.	Qualitative methods dominate although quantitative methods can be used, too.	Qualitative, quantitative and mixed methods.	Qualitative and/or quantitative methods can be used.

Adapted from Creswell, (2015); Mackenzie and Knipe (2006).

Conclusions and Recommendations

The research is directed by the paradigms' philosophical assumptions (ontology, epistemology and research method), determining the methodology suitable for the research. The paradigms are different from these assumptions. And the paradigms determine which methodology is suitable for the research. In the contemporary world, there are three popular research methodologies used in social phenomenon research. Those are quantitative, qualitative, and mixed methods research methodology.



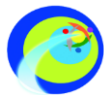
Quantitative and qualitative represent different ends on a continuum along with assumption i.e., highly objectivist (positivist paradigm) underpins more quantitative than qualitative methodology. In contrast, the other end of the continuum, the highly subjectivist (constructivism/ interpretive paradigm) underpins more qualitative than quantitative methodology. The mixed-method resides in the middle of this continuum (transformative and pragmatism paradigm) because it incorporates elements of both quantitative and qualitative methodologies. Neither of these methodologies is better than the other; the suitability of which needs to be decided by the assumption, paradigm, context, purpose and nature of the research study in question. Sometimes one can be alternatives to the other depending on the kind of study.

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Knowledge sharing behaviour among Sri Lankan public University undergraduates: An application and extension of the theory of planned behaviour

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Abstract

This study investigates the antecedents of knowledge sharing behaviour among the undergraduates in an emerging country context, using widely accepted socio-psychological theory. 251 usable responses were collected using questionnaire surveys from one of the State University in Sri Lanka. Multiple regression analysis using SPSS was employed for analyses. The findings showed that attitudes towards knowledge sharing, subjective norms and perceived behavioural control are positively associated with knowledge sharing intention. Further, knowledge sharing intention and level of Information Communication Technology (ICT) usage enhance the knowledge sharing behaviour. This study contributes to the theory of planned behaviour in knowledge sharing context. Practically, this study provides several recommendations to enhance knowledge sharing behaviours.

Keywords: knowledge sharing behaviour, knowledge sharing intention, theory of planned behaviour and undergraduates

Introduction

The concept of Knowledge sharing behaviour plays a vital role in a knowledge-based institution. Knowledge sharing has become a topical issue among researchers (Boateng et al., 2017). Scholars defined the notion of knowledge sharing as the learning process. For example, Connelly and Kelloway (2003) defined knowledge sharing as a set of behaviours that involve exchanging information among the members of an organisation. Ali (2009) defined knowledge sharing as exchanging and gaining knowledge through informal and formal channels by using technical instruments. Accordingly, knowledge sharing is considered the foundation of learning and research at colleges and universities (Kumar, 2005). Today's economy has shown the importance of knowledge and intellectual capital to organizations.

The studies on knowledge sharing behaviour predominantly focused on the Information Technology-related industries (Bartol & Srivastava, 2002;



Bresman et al., 1999; Chatzoglou & Vraimaki, 2009; Davenport & Prusak, 1998; George, 2004; Ipe, 2003; Kim & Lee, 2006; Kim, 2000; Ryu et al., 2003). In the meantime, the Universities are recognised as the knowledge-based institutions where knowledge is created and disseminated. In this regard, knowledge-sharing culture is necessary for undergraduate students in their learning process. (Ma & Yuen, 2011). Despite this, the research on knowledge sharing behaviour among University students is in infancy level. This is the main gap in the emerging countries' context. A lack of understanding of university students' knowledge sharing behaviour is a significant hindrance for higher education institutes and policymakers in designing the most appropriate strategies and policies to serve academics and students effectively. Therefore, the purpose of this study is to do an in-depth investigation into the knowledge sharing behaviour among university students in an emerging country context like Sri Lanka.

Literature Review

This section described the associations between attitude toward knowledge sharing, subjective norms, perceived behavioural control and behavioural intentions to share the knowledge. Further, the section also explained the associations between intentions to share the knowledge, ICT usage and knowledge sharing behaviour.

This study's theoretical foundation is based on the Theory of Planned Behaviour (TPB). The theory postulated that attitudes towards behaviour, subjective norms and perceived behavioural control enhance the behavioural intention, which in turn induce the behaviour (Ajzen, 1991).

Ajzen and Fishbein (1980) believe that attitude influences behavioural intentions. This relationship has received substantial empirical support (Bock et al., 2005; Kolekofski & Heminger, 2003; Kuo & Young, 2008; Pavlou & Fygenson, 2006). It seems that one of the essential aspects of knowledge sharing intention among undergraduates is an attitude toward knowledge sharing. Therefore, the first hypothesis is proposed:

H₁: Attitude toward knowledge sharing influences on knowledge sharing intention among undergraduates

Subjective norm is defined as a person's perception of whether the people who are important to him or her think that the particular behaviour should be performed by him selves or her selves (Ajzen & Fishbein, 1980; Pavlou & Fygenson, 2006). Subjective norm simply reflects participant perceptions of



whether the behaviour is accepted, encouraged, and implemented by the participant's circle of influence. It seems that there is a positive relationship between subjective norm and intention to share knowledge among undergraduates. Therefore, the second hypothesis is proposed:

H₂: Subjective norm toward knowledge sharing influences on knowledge sharing intention among undergraduates.

Previous studies postulated that perceived behavioural control toward knowledge sharing influences on behavioural intentions to share the knowledge (Blue et al., 2001; Lin & Lee, 2004). Further, the lack of perceived behavioural control may negatively affect the intention to share knowledge (Ryu et al., 2003). Based on the above discussion, the following hypothesis is formulated:

H₃: Perceived behavioural control toward knowledge sharing influences on knowledge sharing intention among undergraduates.

People's intention to share knowledge is a determiner of the desired behaviour (Ryu et al., 2003). As a significant element in the TPB framework, the intention to share knowledge can have a significant effect on knowledge sharing behaviour. Accordingly, we formulated the following hypothesis.

H₄: Knowledge sharing intention among undergraduates influences on their knowledge sharing behaviour.

Level of ICT usage and knowledge sharing behaviour

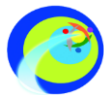
Information technology infrastructure facilitates people to share information and knowledge. ICT and its ability to spread knowledge across different units of an organisation may better understand the complex organizational environment (Coakes, 2006). In this regard, we formulated the following hypothesis.

H₅: Undergraduates' level of ICT usage influence on their knowledge sharing behaviour.

Research Methodology

Sampling and data collection

This is a cross-sectional study. The target population of this study was undergraduates in an emerging country context like Sri Lanka. Undergraduates following business management-related degree programs in one of the State University in Sri Lanka (i.e., University of Jaffna) were selected as the respondents for this study. We received 251 usable surveys from the respondents and used for analysis. We employed both online and



offline survey methods.

Measures

The measures developed to operationalise the research model's constructs were adopted mainly from past studies on knowledge-sharing behaviour (Bock & Kim, 2002; Lee, 2001; Ryu et al., 2003; Lin & Lee, 2004). All constructs were measured using multiple items, and all items were measured using a five-point Likert-type scale (Lin & Lee, 2004). The survey instrument was made available in English, which is widely used as the medium of instruction in the higher education industry in Sri Lanka. Before the actual survey administration, a pre-test was organised among 12 undergraduates. Slight modifications were made to the survey instrument based on feedback from the pre-test.

Results and Discussions

Two key research models were examined to test the hypotheses of the study. Multiple regression analysis was employed in this regard. The model one aims to investigate attitude, subjective norms and perceived behavioural control towards knowledge sharing on behavioural intentions to share knowledge. The second model aims to examine the influence of knowledge sharing intentions and ICT usage on knowledge sharing behaviour. The two models also used the personal demographic variables (i.e. gender, ethnicity and year of study) as the control variables. As per the Model one, attitude toward knowledge sharing ($\beta = .15, p < 0.01$), subjective norms toward knowledge sharing ($\beta = .30, p < 0.01$) and perceived behavioural control toward knowledge sharing ($\beta = .43, p < 0.01$) have significant influence on behavioural intentions to share the knowledge. The model one involving control variables explained 59.6% ($R^2 = 0.596$) of the variance (R^2) in knowledge sharing intention. Thus, H1, H2 and H3 were all accepted. As per the Model two, knowledge sharing intention ($\beta = .38, p < 0.01$) and ICT usage ($\beta = .48, p < 0.01$) significantly influence on knowledge sharing behaviour. The model two involving control variables

explained 57.6% ($R^2 = 0.576$) of the variance (R^2) in knowledge sharing behaviour. Hence, H4 and H5 were also accepted.

The findings exposed that attitude toward knowledge sharing, subjective norms toward knowledge sharing and perceived behavioural control toward knowledge sharing enhance the undergraduates' intentions to share the



knowledge. Further, undergraduates' knowledge sharing intentions and ICT usage enhance their knowledge sharing behaviour.

Table 1. Model Summary

Variables	Model 1	Model 2
Attitude	0.154**	
Subjective Norm	0.297**	
Perceived Behavioural Control	0.428**	
Knowledge Sharing Intention		0.378**
Level of ICT Usage		0.479**
Gender	-0.105**	-0.128**
Ethnicity	-0.070ns	-0.052 ^{ns}
Year of Study	-0.022 ^{ns}	-0.031 ^{ns}
Adjusted R ² Value	.596	0.576
F Value	62.389	170.828

Notes: **P<0.01, ns: not significant

Theoretical and practical implications

This study has both academic and practical implications. This study has several academic implications. Since universities are viewed as the knowledge-based institutions, the research on undergraduates' knowledge sharing behaviour is still in its infancy. This study filled this knowledge gap by investigating the antecedents of knowledge sharing intentions and behaviour among undergraduates in an emerging country context (i.e. Sri Lanka). It is also significant that we have applied the TPB to investigate the determinants of knowledge sharing intentions and behaviour. Further, our study has incorporated the role of ICT usage in enhancing knowledge sharing behaviour.

The current study has several insightful, practical implications for higher education institutions and governments, particularly for those in Sri Lanka. The findings suggest that attitude, subjective norms and perceived behavioural control towards knowledge sharing trigger knowledge sharing intentions, which drives knowledge sharing behaviour. Further, ICT usage also enhances knowledge sharing behaviour. To enhance the socio-psychological variables like attitude, subjective norms and perceived behavioural control towards knowledge sharing, higher education institutions (i.e., universities) and governments (i.e., ministry of higher education) can

arrange the workshops and seminars to stimulate such socio-psychological factors. Further, universities can design its curriculum based on the notions of 'knowledge sharing' and 'student-oriented teaching', which may help the undergraduates reinforce their attitudes and perceived behavioural control towards knowledge sharing. To this end, universities and government can



invest in information technology infrastructure to stimulate ICT usage among undergraduates. For instance, they can invest in centralised information system, advanced learning management system, and social media platforms.

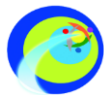
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3rd Research Conference on Business Studies (RCBS) – 2020

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Qualifying title statements of library catalogue of the University of Jaffna

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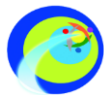
Abstract

Metadata is the primary element for bibliographic communications. Hence, metadata should be qualified for a fruitful exchange of knowledge. The study examines the statements of title-proper and other-title-information of the monograph catalogue maintained by the University of Jaffna for quality status. The statements of title-proper and other-title-information have been taken from the same catalogue records for the study. Their quality status has been examined by comparing the respective statements maintained by the Library of Congress. The quality issues have been identified for the statements of the title-proper and the other-title-information, which have been contributed by leaving extra space, spelling mistake, typographical error, missing a part of the statement, missing a complete statement, the inclusion of extra part with the statement, and inclusion of complete extra statement. However, Typographical error and missing a complete statement are the most significant issues in qualifying title-proper and other-title-information, respectively. The catalogue records of the University of Jaffna do not have a substantial-quality issue for the bibliographic communication concerned through title-proper and other-title-information statements. However, the statements of title-proper and other-title-information of the University of Jaffna should be validated against qualifying the records to enhance bibliographic communication status.

Keywords: cataloguing errors and catalogue quality

Introduction

The organisation of knowledge is a part of knowledge management. Information resources are the printed and digital media where knowledge is systematically codified. These information resources are organised by libraries using the techniques of cataloguing and classification (Igbini & Ikenwe, 2018). The catalogue for an information resource is prepared by transcribing metadata statements such as title, author, edition, publisher, copyright year, physical descriptions, etc. As a cataloguing management tool, Anglo-American Cataloguing Rules, Classified Catalogue Code are primarily used by the libraries. The rules stated in these tools explain how the punctuations and regulations should be used to make an understandable



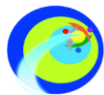
catalogue independent of the language of description and support the international exchange of bibliographic data. The catalogue of the Library of Congress is prepared strictly following the Anglo-American Cataloguing Rules (AACR) and regulations to avoid any kind of errors (Myall & Chambers, 2007; Shin, 2003). Hence, the LC catalogue could be used as a standard for evaluation studies.

The Library, University of Jaffna (UOJ) is also using the same rules (AACR) for transcribing the data elements of an information resource for preparing catalogues. Simultaneously, its library catalogue is originally prepared by the cataloguing librarians attached to its library. The originally prepared catalogues with human intervention are usually left with human-made errors. These errors and their distribution should be identified to correct them in existing catalogues and avoid them in future catalogues. The error-free catalogue will enhance the effectiveness of searching and retrieving bibliographic information from the Online Public Access Catalogue, and bibliographic communication of cooperative and union catalogues.

The comparison of UOJ records with the standard records would identify the issues on its quality. At this juncture, LC records can be selected in place of standard records. Further, examining the errors and their distributions in the title statement of information resources becomes foremost significant since the title statement is considered a mandatory element in the library catalogues. Hence, this study proposed identifying the categories of errors and their distribution appearing in the title statement of the library catalogue of the University of Jaffna and reasons for their existence to propose the methods of eliminating the same.

Literature Review

Several research studies have looked into the problem of quality in cataloguing. The quality in cataloguing or metadata is defined in various research communications. Shin (2003) defines the quality in cataloguing as the assurance of extending and accuracy of the bibliography while it is defined as “dynamic and dependent on the values and needs of cataloguing users,” by Sarah (2005). Apart from defining the quality in cataloguing, authors also studied the different aspects of the quality in the catalogue: For example, Marc (2016) argued that the quality of the bibliographic details of the catalogue should assure the *completeness, accuracy, and consistency* in representing correct source datasets.



Some other studies were conducted on quality assurance to overcome inconsistent data storage, search, and retrieval issues. Moreover, the study carried out by David and Thomas (2015) correctly reflects on the scope of this present study, which discussed how the quality control procedures and workflow in checking the errors in the bibliographic records could be established.

The importance of the metadata quality, evaluation of quality and methods for maintaining quality during cataloguing were also discussed (Park, 2009; Park & Tosaka, 2010). *Cataloguing errors* can be usually categorised into two groups as *general* and *specific*, (Park, 2009). Further, the cataloguers' mistakes and approaches to maintain the standards in the catalogue metadata are also documented (Park, 2009). Lam (2007) conducted a study to identify the error rates in the bibliographic records of monographs prepared using copy cataloguing and locate where the *error rates* highly populated when conducting outsourcing program. In the same study, Lam (2007) compared two sets of samples, one from the OCLC cooperative cataloguing archive and another from the University of Saskatchewan's in-house cataloguing records. However, studies conducted by Bruce and Hillmann (2004); Ochoa and duval (2006, 2009) discussed the quality metrics as *Completeness, Accuracy, Confirmations to expectation, Logical Consistency and Coherence, Accessibility, Timeliness, and Provenance*.

Apart from studies on diverse aspects of *cataloguing quality* or *errors* as seen above, few studies focused on *specific errors*. Jeffrey and Karen (1995) particularly examined the *Typographical error* corrected during copy cataloguing. The study found that 35.8 percent of the errors had been corrected during copy cataloguing. Walker and Kulczak (2007) evaluated the original catalogue of the University of Arkansas Libraries for document retrieval issues. This study examined 298 titles, and results revealed that 99.66 % records correctly correspond to the respective books for physical verification, while 27.50 % of records do not correctly respond to retrieval of respective books. Besides, 38.59 % of records required modifications in the titles.

Concerning quality assurance of catalogue, the literature reviewed highlighted *types of errors, error distribution, quality level in the catalogues, quality improvement, and normalisation of error rates*.

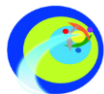


Table 1. Query for unmatched titles

```
SELECT 245a,245b,title  
FROM `UOJ-LC-Data-latest`  
LEFT JOIN `UOJ-Original-Data` on (isbn1=isbn)  
WHERE 245a != title
```

Methodology

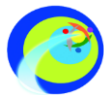
125,482 monograph catalogue records have been identified in the University of Jaffna (UOJ) Library system of 9th May 2020. The ISBNs of the records were selected as inputs to capture the corresponding records from the Library of Congress. Hence, the records with ISBN (n=52,705) have been selected for the study in the collection of records of the UOJ. Marccedit software was selected as a tool for harvesting records from the LC for the bulk ISBN inputs.

9,265 bibliographic records have been harvested from the Library of Congress (LC) for the inputs of 52705 ISBNs. However, multiple records for an ISBN input have been identified in the copied records (n=9,265) from the LC. After eliminating the ISBNs for which multiple records were retrieved, 7,235 numbers of ISBNs have been identified as appropriate inputs in retrieving a single record for a single ISBN from the LC. Out of 7,235 ISBN inputs, 5049 records have been retrieved from LC, while 2186 numbers of records have been reported lost due to random connection errors. Therefore, 5049 number of UOJ records would have corresponding records copied from LC. Hence, the total population of the study is 5049 in the number of records.

Subsequently, the records copied from the LC (n=5049) and records of ISBN inputs from UOJ (n=9,265) were managed in a MySQL database. Then, the query shown in Table 1 for collecting unmatched records from both collections was run to select the columns named 245a (titles) and 245b (other title information) from the table: UOJ-LC-Data-latest (records of LC), and “title” (title) from the table: UOJ-Original-Data (the records of UOJ). The selected column values were exported to an excel sheet. After that, investigations were made to identify the possible reasons for the unmatched conditions of the titles. The functions available in MS excel have been used to analyse the records.

Results and Discussions

From the total population (n=5049), 3966 numbers of title statements have been identified as unmatched. In the 3966 numbers of title statements, title-proper has been found in each UOJ and LC record. However, in 1934, 1712



numbers of records have been found with other title information (OTI) in LC and UOJ, respectively. The records have been copied from two different library systems of LC and UOJ. Consequently, dissimilarity in copied records from both systems was observed. The dissimilarities among two sets of records should be observed in a unified condition. However, the punctuations have been exported within the records of LC while not exported within UOJ. Hence, the punctuations have been removed from the LC records to compare with the UOJ records.

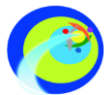
After removing the punctuations from the LC records, 1018 numbers of title-proper and 1929 numbers of other title information (OTI) have been left unmatched. This reveals 20.2% of title-proper and 38.2% of subtitles left with quality issues. Possible corrections have been identified for qualifying the title statements of the UOJ as detailed in table 2.

Table 2. Percentage of corrections against the total population

Field	Missing a part of statement	Typographical error	Inclusion of extra part with the statement	extra space	Spelling mistake	Missing a complete statement	Inclusion of complete
Title-proper	8.14%	4.44%	4.2 %	2%	0.7%	0%	0%
OTI	10.53 %	1.76%	0.71 %	17 %	6 %	7 %	2.5 %

The most profound issue in qualifying the title-proper is a portion of the statement is missing in the field (8.14%). The reason for this issue is that the UOJ library system has left the last parts of the lengthy titles during export of the records. Therefore, *missing a part of the data field's statement* cannot be taken as an essential issue in qualifying the records. In addition to this issue, leaving *extra space* have no impact on bibliographic communication since many information systems neglect the spaces during the indexing of data. Hence, the summation of percentage contributed by the other errors (9.34 %) such as *Typographical error*, *Inclusion of extra part with the statement*, *spelling mistake*, *Missing a complete statement* and *Inclusion of complete extra statement* would reflect on qualifying the statements of title-proper of the UOJ records as the overall issues.

Similarly, these errors contributed 17.43% in the statements of OTI. The quality issues identified for title-proper (9.34 %) and OTI (17.43%) would have considerably affected the effective bibliographic communication. The

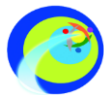


measures should be taken to enhance the UOJ records' quality by using systematic protocols, as discussed below.

An issue in qualifying the title-proper namely, *Typographical error*, took the value of 4.44%. The issue of typographical error can be rectified only by incorporating typing techniques during the data entry. 4.2% of corrections have been identified based on adding extra portions with the title-proper. The reason for the phenomenon is OTI has been added with title-proper treating OTI as complained of the title-proper. The meaningful inference of title-proper and OTI from the source can only rectify this issue. Either complete missing of a field or new extra field was not identified (0%) as an issue in the title-proper since the title's statement is treated as a mandatory field in the UOJ library system. In OTI, *extra space* is a profound issue (17 %) about the quality of the catalogue. The phenomena infer that OTIs have more word divisions than titles or cataloguers may be more inclined to create *extra space* in the latter part of a typing passion. In 10.53 % of records, portions of OTI are missing. The same are twofold, improper or alternative inference of metadata from the source or missing of lengthy portions during the export of records from the UOJ library system. Concentration should be drawn on inferring of OTI from the source to rectify this particular issue. Spelling corrections are identified as a quality issue in OTI records, though it enrolls lesser value for title-proper (0.7%). According to the UOJ library, application of spelling proof is not covered in the cataloguing guidelines, and this is the reason for the existing *spelling mistake* in the records. Further, 2.5% of issues on qualifying the OTI have arisen from the inclusion of unnecessary data in the field of OTI. The meaningful selection of OTI from the source will reduce this issue.

Conclusions and Recommendations

The profound issue in qualifying the title-proper is *missing a part of entry* of data in the field; it is only due to the library system's error in exporting the record. Though leaving *extra space* has been taken as an issue in qualifying metadata's statement, it would not impact bibliographic communication since most indexing systems neglect additional spaces. However, the other quality issues appeared on title-proper and OTI, such as *Typographical error*, *Inclusion of extra part with the statement*, *spelling mistake*, *Missing a complete statement* and *Inclusion of a complete extra statement*, make considerable impacts on bibliographic communication. *Typographical error* is the most significant issue in qualifying title-proper, which has been identified in 4.44 % of records. At the same time, *missing a complete statement* is the major issue in OTI, which has been identified in 7 % of

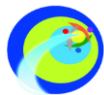


records. The *spelling mistake* has also been identified as a quality issue in OTI statements (6%), which should be avoided while feeding data into the library system. A spelling proof tool can be employed for the same by adding an extension for spelling proof into the internet browser. “Grammarly” is an example that can be added as an extension to the internet browser as a spelling proof tool. Techniques of typing and rules applied on the inference of title-proper and OTI should be systematically incorporated during the data entering to overcome the quality issues arisen from *Typographical error*, and the inclusion of *extra space* and incorrect inference of meaningful bibliographic data from the source.

The total contribution of errors on title-proper and OTI is 9.34 % and 17.43%, respectively. The readers usually execute searching by using a part of the title. Hence, these total contribution of errors does not impact on retrieving catalogued books in the identified percentage. Hence, the UOJ records do not have a serious quality issue supporting the search and retrieval of catalogued books using keywords that focus on Title-proper and OTI. However, the identified quality issues should be rectified by conducting validation to enhance bibliographic display and communication status, which would also be useful for supplying qualified records for cooperative and union catalogues. In addition to this, those issues should be avoided in future catalogues by revising the guidelines based on this study's findings. The records managed by the UOJ library system database are not populated with required punctuations in the database and the punctuations are automatically added by the library system only when displaying catalogue in the ISBD view. Hence, the punctuations were not included with the catalogue records exported from the UOJ library system. Hence, the applications of punctuations on the title-statements used by the UOJ library have not been possibly verified compared to the LC records could be considered a limitation of the study.

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A critical evaluation of resonant and dissonant leadership and their implications during the COVID-19 pandemic situation in Sri Lanka

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Abstract

There are various leadership styles practised by managers in different organizations in different situations. Leaders can develop multiple mechanisms to mitigate cognitive and behavioural risks and prevent future issues effectively. This research study investigates the resonant and dissonant leadership styles applied by managers in selected Sri Lankan public and private sector organizations during the COVID-19 pandemic situation, the consequences of applying each style and the implications. Reviewing the existing relevant literature using a mixed-method approach associated with secondary data and the personal interviews and participants' observation have been incorporated and 30 respondents in each sector were selected based on the purposive sampling method to derive the findings. Results revealed that resonant leadership style has dominance in the public sector organizations conversely, the dissonant leadership style exerts considerable influence on private sector organizations during the COVID-19 pandemic situation in Sri Lanka. Researchers believe that since it is a life-threatening problem faced by the people globally, the role of emotional intelligence among the managers also plays a vital role. Finally, it is recommended that the hybrid leadership associated with high resonant and low dissonant is appropriate and much effective for the Sri Lankan organizations during this situation for their successful survival.

Keywords: COVID-19 pandemic, dissonant leadership, emotional intelligence and resonant leadership

Introduction

The survival and thriving of every organization vastly depend on how far its employees are driven to the organizational goals. Therefore, effective leadership is the essence for every organization for coordinating all the efforts towards the organizational success. MacPhee et al., (2012) describe leadership as “the process of engaging and influencing others”. Leaders bring the weather as they can influence the mood of an entire organization. The purpose of such an influence is to achieve organizational goals. However, such influence does not always generate positive results during the interactions can feel either motivated or discouraged. Therefore, this can



lead to a drastic deviation and misinterpretation of the leader's original objectives and intentions.

Leaders who are high in emotional quotient (EQ) are known as “resonant leaders” and who are low in EQ are known as “dissonant leaders” (*ibid.*). Emotions are contagious and that a leader's emotions are a powerful driver of their people's moods and, ultimately, their performance. Therefore, the differences and implications of these leadership styles should be studied in organizational settings. While dealing with uncertainties, influencing people can be a heavy burden. Work from Home (WFH) due to the outbreak of COVID-19 pandemic situation has changed the working environment not only Sri Lanka but also the entire world and this situation could also impact the behaviour of leaders. In this circumstance, to evaluate managers' resonant and dissonant leadership styles and their implications during the COVID-19, the pandemic situation in Sri Lankan organizations is considered an appropriate research problem for this study. Based on the research study, the following objectives have been derived by the researchers.

- to make awareness of resonant and dissonant leadership styles.
- to study the implication of resonant and dissonant leadership in organizational settings.
- to study the implication of resonant and dissonant leadership during the COVID-19, pandemic situation in Sri Lanka.

Literature Review

Resonant Leadership

According to Uhl-Bien (2006), relationally focused leadership styles, including resonant leadership, are associated with positive work environments that promote employee engagement to result in greater work satisfaction and productivity. Resonant leaders are literally empathetic, passionate, committed, and can read individuals and teams accurately and empower respectful and civil climates that lead to quality relationships among leaders and staff by enabling their fellowmen to reach the best they can be (Boyatzis, 2008; Squires et al., 2010). Managers who integrate the resonant leadership are concerning in their everyday interactions, seeking feedback from staff even when it is difficult to hear, supporting and role modelling teamwork to achieve goals, actively mentoring staff toward optimum performance, and allowing them the freedom to make important decisions in order to develop effective working conditions that increase staff job satisfaction and lower turnovers (Cummings et al., 2005).



Resonant Leadership Styles

According to Goleman et al (2002), the following styles have been considered as resonant leadership:

- **Visionary Leadership:** inspire and move toward a common goal.
- **Coaching Leadership:** connects people's personal goals with the organization's goals.
- **Affiliative Leadership:** promotes harmony within the team by connecting people.
- **Democratic Leadership:** focuses on collaboration seeking input from their teams.

Dissonant Leadership

Goleman (1998) found that task-oriented leaders are the dissonant leaders, who lack emotional intelligence and tend to be negative, lack in empathy, operate more authoritatively and maintain greater social and emotional distance from employees by only focusing the growth of the organization. Dissonant leadership emphasizes on the accomplishment of assigned tasks, rather than on the development of productive relationships within the workplace (Xirasagar, 2008). Hibberd and Smith (2006) argued that Task-focused leaders tend to focus on the tasks to be completed rather than on the relationships between individuals within the organization. Relationally focused leaders, on the other hand, consider relationships rather than tasks to be the foundation for achieving positive change or outcomes.

Dissonant Leadership Styles

According to Goleman et al (1998), **Pace-setting Leadership** which focuses on performance and meeting goals, and deadlines as the top priority and **Coercive/Commanding Leadership** that uses an autocratic approach to leadership by commands, threat of punishment, and tight control have been considered as the dissonant leadership.

Emotional Intelligence

Goleman (1998) found emotional intelligence (EI) in achieving personal excellence by defining as abilities to motivate oneself in case of frustrations; to control impulse and delay gratification; to regulate one's moods and keep distress; to empathize and to hope. Four domains of the EI framework are emotional self-awareness, self-management, socio-political awareness, and effective management of relationships. Leaders can develop EI competencies and learn when and how to use each style depending on the situation at hand (*ibid.*).



Leadership during Uncertainties

Argyris (1991) argued that the environment of uncertainty (U-A-C-complexity: ambiguity and contradiction) could be an uncomfortable place for any authority. Successful leaders should bring to bear in such circumstances and assess the propositions' face validity with experienced practitioners. Their thinking shapes the broad issues, weighs the many variables and resolves the many contradictions, and their decisions have far-reaching impacts over large time frames (Harrison, 1996, Stroh & Miller, 1994). Management education has a responsibility to design learning experiences that provide the opportunity to practice dealing with uncertainty, ambiguity and contradiction in a non-threatening and less risky setting (McKenzie, 2009).

Research studies found the leadership styles of managers in uncertain situations. Line managers approach remote performance, communication issues, lack of collaboration and socialization, and sustained effort (Chen and Wu, 2015). Supportive leadership and co-worker relationships have been reported to impact employee resilience positively (Cooke et al., 2019). CEO Walmart Slack Stewart Butterfield focused on personal care in reassuring employees stressed overwork. “We got this,” he said. “Take care of yourselves, take care of your families, be a good partner.” (Walmart). During the COVID-19, Best Buy has defined a dual goal to protect employees while serving customers who rely on the company for increasingly vital technology. The company has made clear that employees should only work when healthy, and that those who feel sick should stay at home, with pay (Mendy & Stewart, 2020). The COVID-19 outbreak is a complex crisis made up of multiple trigger points—health, policy, the economy—and leaders should tailor their communications to the stage of the crisis their employees are experiencing, and to what they need most in the moment (Mendy & Stewart, 2020).

Further studies highlighted the practices of WFH which is now the norm and suddenly the newbie (with or without their choice) have been transformed into an inevitable force for organizational change. They are currently the leading force on organizational response to WFH, reiterating the argument that it is now the right time to introduce more strategic remote work policies (Choudhury, Larson & Foroughi, 2019).

Methodology

Knowledge production within the field of business research is accelerating at a tremendous speed while at the same time remaining fragmented and interdisciplinary. This makes it hard to keep up with state-of-the-art research



and be at the forefront and assess the collective evidence in a particular research area (Snyder, 2019). The research methodology chosen for this study is that of reviewing the existing relevant literature by using the mixed method of collecting the secondary data from the published media files in the websites in Sri Lanka, organizations' web sites, personal interviews with and participants' observation to increase the validity and reliability of the research findings. Researchers considered selected public and private sector organizations as two categories based on the purposive sampling method to get the findings. Three public sector organizations-Postal Department, Divisional Secretariat and Public Sector Banks and in the private sector, Private Sector Banks and selected Super Markets were considered in this since all of them are under essential service during the COVID-19 pandemic situation in Sri Lanka. Thirty respondents in each sector via personal and telephone interviewing from different districts and transcribed the interpretive method's information to derive the findings.

Results and Discussions

In Sri Lanka, there are public and private sector organizations affected by the COVID-19 pandemic period. The leadership in every organization and the government regulations imposed are the influencing factors for organizations' functioning.

The implications for Sri Lankan organizations during COVID-19 pandemic situation

Most of the Sri Lanka organizations in both the public and private sectors followed the regulatory imposed by the Health Ministry during the COVID-19 pandemic situation. Initially, the government passed the rule for locking down the schools in the education sector. After that, all higher education and institutions were informed, closing down their functions. During this time, the leadership of managerial in level has not impacted. Later, the government declared public holidays and WFH practices for all organizations. However, based on the organizational need and the management leadership, different experiences were gained by both the public and private sector organizations. Exceptionally, certain organizations like hospitals rendered their service in a full-fledged manner with all the health precautions.

Similarly, the postal department and divisional secretariats function with the minimal staff to carry out the essential functions. However, both the public and private sector banks carried out their functions with the rotation of staff. In the case of Supermarkets, they fulfilled people's essential needs via their



outlets and online home delivery in restricted areas with the staff residing in those areas. Later, during lockdown phases, the management is strictly concerned with the attendance of their employees.

Further, after the lockdown period, the government instructed the organizations to work at the organizations with one-third of the staff. However, specific organizations not followed these rules accordingly. In these organizations, the influence of either resonant or dissonant leadership was visible. In the above situation, the leadership in the private sector organizations was remarkable in a dissonant way since most of the employees were requested to report to work daily. Conversely, in the public sector, the heads of the organizations have been given the authority to decide the staff's attendance for each day. At this juncture, employees who are far away and who have the difficulties in travelling were given concessions by the departments' heads. It was observed in the public sector; most of the heads expressed the resonant leadership styles. However, there were exceptional departments in the public sector too. Similarly, in the private sector also, there are practices for resonant leadership.

Conclusions and Recommendations

This research study revealed the two different types of leadership- resonant and dissonant, highly involved with the EI of managers in various organizations in Sri Lanka during the COVID-19 pandemic situation. Relevant literature has been reviewed and the organizational practices have been found through the published media files, interviews with required personnel and the participants' observation. The research findings disclose that most of the managers/superiors in public and private sector organizations have practised the resonant leadership style. WFH practices confirm the findings of (Choudhury, Larson & Foroughi, 2019) and the styles described by Goleman et al., (2002). Further, certain organizations' leadership practices during the COVID-19 pandemic were dissonant since some of the employees exploited the privileges continuously. This concurs with the findings of (Mendy & Stewart, 2020). Therefore, researchers strongly recommend that pure resonant or dissonant style is not adequate for organizations during the COVID-19 pandemic situation in Sri Lanka and a hybrid leadership with more resonant with less dissonant would be successful for the practical survival of organizations. According to Ross Ashby's law of requisite, which explains resonance and dissonance need to be in an acceptable state of balance (Ashby, 1958). Further studies could be extended with quantitative techniques and multiple sampling methods in the future.



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Street illuminance level analysis towards responsive headlight automation

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Abstract

The vehicles' illuminations level in the road in the night is uncontrolled and beyond the bearable level these days. There are two different beam modes in vehicles, such as dim and high. The high beam mode makes additional illuminance to see through the road far distances in remote areas where the least traffic and pedestrians. The additional horizontal light beams of an approaching vehicle in an urban area with high traffic may cause temporary blindness of drivers and pedestrians. Therefore, the higher beams must be switched to dim mode within a certain distance of a pedestrian or an approaching vehicle. Usually, it is difficult to switch time to time manually in between those modes in reality. Therefore, this study investigates horizontal light illuminance and analyses to make an automated beam control module to be incorporated in the vehicle.

Keywords: illumination, remote areas and urban areas

Introduction

Recent improvements in passenger vehicles' facilities and features become crucial in manufacturing vehicles as they determine demand and marketing. These days, vehicle manufacturing companies are comparatively adopting many IoT based technologies in vehicles for convenient driving. The technological momentum of vehicles from fossil fuel to fully electric force more features to be embedded with smart technologies in vehicles. In the night, driving vehicles is a challenging task for drivers and passengers in a heavy traffic area due to visibility, drowsiness, and light luminance. Typically, modern vehicles' headlights come up with three different light sources such as halogen, xenon, and LED (*The 3 Different Types of Headlights: Which Is Best? - The Vehicle Lab*, n.d.). Further, the driver controls headlights in two different adjustment modes: low beam and high beam modes. The low beam mode provides low light illumination and is highly recommended by the motor traffic department, Sri Lanka, while driving vehicles in night. But high beams mode significantly increases the light illuminance level and makes temporary blindness to the driver who



comes in the opposite direction, leading to unforeseen road accidents at nights.

Further, the vision of a human eye can be categorized into three ambient light conditions: photopic, mesopic, and scotopic visions (*Molecular Expressions: Science, Optics, and You: Light and Color - Human Vision and Color*, n.d.). This research study mainly considers the scotopic condition to analyze the human vision under low light level (night). Scotopic vision uses the human eyes' rod cells to perceive the low light surroundings and make them appear in black and white. Also, the rod cells are most sensitive to wavelengths of around 498 nm (green-blue) and are insensitive to wavelengths longer than about 640 nm (reddish-orange).

The highest sensitivity of scotopic vision is found at a wavelength of about 507 nm and is shown in Fig. 1. Besides, a thorough analysis of human eye perception and street illuminance levels may improve convenient features on vehicle headlights illuminance control. This study analyses the street light illuminance and human eye response level to make automated responsive technology reduce light pollution in highly traffic urban areas. The investigation is planned in Vavuniya urban areas for horizontal illuminance level analysis to determine the street illuminance level towards responsive automation of vehicle headlights.

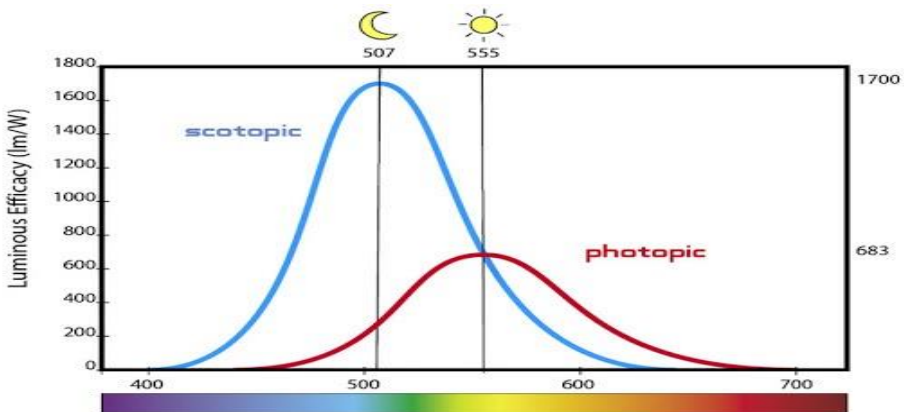


Fig 1. Luminous efficacy Vs Wavelength



Literature Review

A comparative study on the three generations of headlights (LED, xenon, and halogen) was performed by group of researchers with the help of Lux meter (Vrábel et al., 2018). The light intensity falling into the driver's vehicle's eyes in the opposite direction is measured with different headlight modes (Automatic, Dipped-beam headlights, and Long-distance headlights) for various distances (10 to 100m). Furthermore, they prefer the dipped-beam headlights mode for all three generations of headlights as the best choice. Anyhow they failed to measure the light intensity level for moving vehicles in their study.

Choudhary et al. (2014) proposed an automatic headlight management system using the LDR sensor. The opposite vehicle's headlight intensity is measured and based on the threshold value, the system automatically tackles the vehicle's headlight modes. Asaduzzaman et al. (2013) also proposed the same system, including the IR sensors, to take advantage of the fail-safe strategy. Another group of research people proposed an Adaptive Headlight System for accident prevention using Atmel AT89S52 microcontroller and stepper motors. The headlights are connected to the stepper motor and controlled based on the illuminance level received by the photodiode fixed in the vehicle (Shreyas et al., 2014). Although these systems are inexpensive the authors failed to analyse the light intensity level correlated with human eyes' visual perception.

Improvement of driver visibility at night by Ego Vehicle Headlight Control was developed by Sarathchandra et al., (2020) using image processing techniques. The author introduced a 3 x 8 LED array of the headlamp to control the light intensity. Images of the opposite vehicles' headlights are captured and processed using the Raspberry Pi camera. Further, the system automatically switches on and off the LED array based on the program's condition. But the authors missed considering the visibility factors of a human eye during the night journey.



A group of researchers proposed an anti-glare headlight system using an LED projector instead of traditional headlight systems. The illumination emitted by the projector can be divided into multiple tiny powerful beams and controlled separately by the programmable processor in their project. Further, they have used a camera to identify the oncoming vehicles and adjust the projector's beams without affecting the opposite driver even in high beam mode. Even though this is a novel approach, the ethical issues of using projectors in vehicles and the heat produced by them are not taken into consideration (Balasubramanian et al., 2011). This work aims to overcome the excessive horizontal illumination issues in the street in urban areas during night driving and provide a convenient solution to drivers and pedestrians by adopting medical and traffic ethics.

Methodology

The implementations run across various phases to provide a feasible solution to vehicle drivers and pedestrians. The strategy diagram of this work is clearly illustrated in Fig. 2.

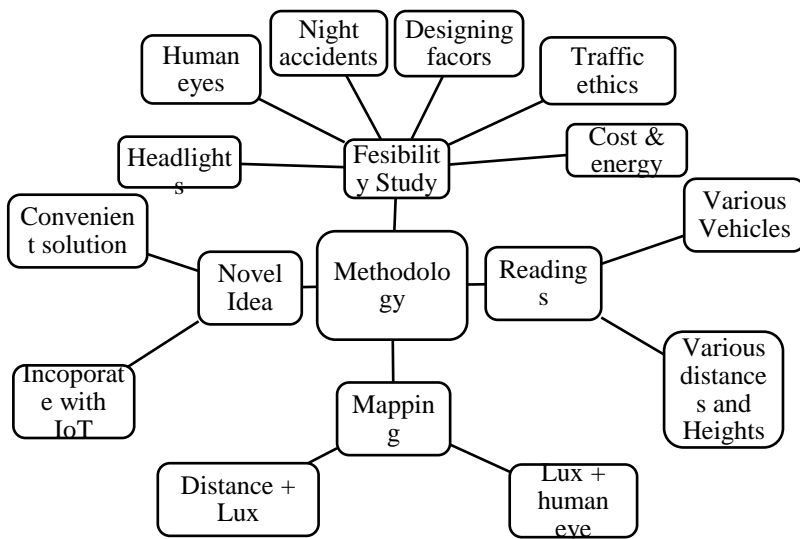


Fig 2. Strategy diagram

The research study has been initiated with collecting the existing technologies adopted in the headlights and the statistics of night accidents that are



occurring due to the high beam mode of the headlights. The analysis is planned with the measurement of horizontal illuminance level using a lux meter. The lux meter has been placed around 5 – 25 m away from the moving light source and around 1.2m height in an A grade road of Sri Lanka near

Vavuniya town. The measurement has been taken for different kinds of vehicles with the same distance and lux reading has been recorded. The Fig. 3 describes the reading of lux meter for various vehicle types with distances.

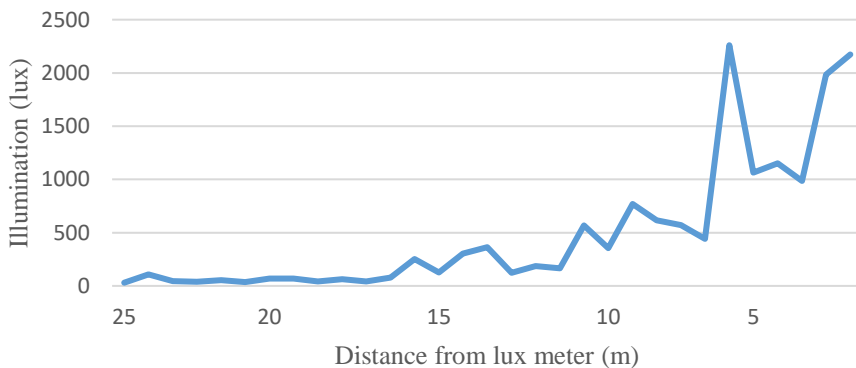


Fig 3. Distance Vs Illumination

Further, the human eye's visual perception level has been studied for comparison and assesses the impact of human visual perception in the street at night. Tables 1 and 2 describe the recommended vertical illumination levels for various types of streets and details of the human eye's visual perception levels in lux, respectively.

Table 1. Recommended vertical illumination levels for

Type of street/ road	Recommended illuminance (lux)
Walkways exclusively for pedestrians	5
Residential traffic areas for slowly moving vehicles (≤ 10 km/h)	10
Regular vehicle traffic (≤ 40 km/h)	10-20
Main urban streets	20
Urban roads	10-20



Rural paths and roads	2-5
Pedestrians passages, vehicle turning, loading and unloading points	50

Table 2. Human eye's visual perception levels

Illuminance (lux)	Activity
100	Casual seeing
150	Some perception of detail
200	Continuously occupied
300	Visual task moderately easy
500	Visual task moderately difficult
750	Visual task difficult
1000	Visual task very difficult
1500	Visual task extremely difficult
2000	Visual task exceptionally difficult

In the end, the headlight illumination level readings have been mapped with the human visual perception level and suggest convenient illumination levels for vehicles in high traffic areas to avoid night accidents. However, the horizontal readings are mapped by assuming those standard measurement levels given in the existing studies, even though it is measured vertically and in the surrounding. However, in reality, the horizontal standard measurements must be less than those valued referred to in Tables 1 and 2 as it is directly hitting the human eyes. Hence, a more in-depth detailed analysis can be done for further studies.

Results and Discussions

According to the night accidents that have been reported in Sri Lankan local news channels, most of the vehicles involved are dual-purpose motor vehicles and motor coaches (*Road Accident Archives / Sri Lanka News - Newsfirst*, n.d.). Therefore, this research study predominantly examines certain classes of vehicles such as B, C1, C, CE, D1, and D classified by the department of motor traffic, Sri Lanka (*Vehicle Classes*, n.d.). Further, A9 road is selected because it has been used by several passengers regularly, even at nights.

As shown in Fig. 3, when the approaching vehicle is between 10 to 25 meters away from the lux meter, the illumination results obtained have fluctuated from 30 to 500 lux. Further, it can be derived that the visibility in these distance ranges can be convenient for human eyes to observe the surroundings even at high beam headlight mode of approaching vehicles. Nevertheless, the illumination value reaches 2000 lux when the vehicle comes within 10 meters and this observation reveals the difficulty in vision based on the recommended



values given in Table 2. Therefore, this sudden boost in the illumination level leads to temporary blindness to the drivers or pedestrians and contributes to unexpected accidents.

Conclusions and Recommendations

Even though the night journeys are insecure, they are inevitable in some circumstances. Sri Lankan government takes several safety precautions to avoid night accidents in many ways, such as assigning traffic police, road signs, real-time monitoring through the camera, etc. But these efforts are insufficient to monitor all the main roads in Sri Lanka. Further, the vehicle with high beam headlight mode, which comes within 10 meters, may cause dangerous impacts to drivers and pedestrians, as illustrated in Fig. 3. Therefore, this research study proposes an automated headlight controlling system for the vehicles to control the modes of headlights based on the distances between approaching vehicles or pedestrians. An IoT based model can solve this problem easily.

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Risks and risk management of Kandy City Wastewater Management Project (KCWMP)

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Abstract

This research's objectives were to identify the risks related to the Kandy city wastewater management project and apply the risk assessment, risks prioritization, and risks preventive strategies to suggest appropriate mitigation measures, based on the risk management process. A structured questionnaire was prepared and gathered relevant data as primary information with a convenience sampling method. All the collected data and observed information based on risks identification were analyzed and explained the overall risk factors, using three dimensions; risk impact, risk probability and risk discrimination. The progress of risk prioritization and risk preventive action was evaluated by comparing the risk identification steps. According to the risk prioritization the significant risk types are identified as: resource delay, change project design according to the construction site, failure to meet cost estimate, the design is not fit for the purpose and low team motivation. To obtain the project's expected final quality, the major risks should be mitigated withby, choosing stable suppliers, providing resources on time, updating initial agreement, making design according to the project scope and project site, and making fixed-price contracts and motivating project members.

Keywords: project, risk assessment, risk management and risk prioritization

Introduction

Kandy City Wastewater Management Project (KCWMP) is directed towards finding a solution for prevailing the Wastewater issue in Kandy City. The Project attempt develops a wastewater collection system to the central part of the Kandy City, where the population density is very high. The collected wastewater will be treated at a Treatment Plant of capacity 14,000 m³ /day at Gannoruwa, the Main Pumping Station at Getambe and the Solid Sludge Disposal at Gohagoda, all of which will be significant new constructions.



(a)

(b)



Fig 1(a). Wastewater treatment plant

Fig 1(b). Pump station

The risk factor in constructing the Kandy city wastewater management project is very high because the construction objects are unique and built only once. The construction life cycle of the project is full of various risks. Risks come from many sources, including construction sites, documentation, technology, time, resources, temporary project teams appointed from different companies, etc. Moreover, the size and complexity of construction objects are increasing, which adds to the risks. This is also to the political, economic, and social conditions where the project is to be undertaken. Project risk can be defined as an uncertain event or condition that, if it occurs, has a positive or negative effect on at least one project objective, such as time, cost, and quality. The risks cause cost and time overruns in construction projects. Therefore, risk management in a project is crucial to succeed in the project and obtain sustainable project outcomes.

The study's general objective is to manage risks to mitigate the negative impacts of the Kandy City Wastewater Management Project. And the specific objectives are to identify the risk related to the implementation of the Kandy city wastewater management Project, analyze possible negative impacts based on the risk, and develop the risk management process for the project to mitigate the negative impacts.

Literature Review

Risk assessment is the identification of hazards that could negatively impact on a construction project. Risks are evaluated along three dimensions under risk assessment. They are impact, probability, and discrimination, a point value can be assigned to each risk using the formula (Ssempebwa, 2013):



Overall risk factor = Probability * impact /discrimination

Prioritizing Risks is done by using Probability and Impact Picture. The probability–impact picture offers a flexible format for depicting independent event risks, variability risks and ambiguity risks. When event risks are involved, it allows specification of a range for the probability of occurrence and a range for the impact should the risk event occur (Hwang et al., 2014).

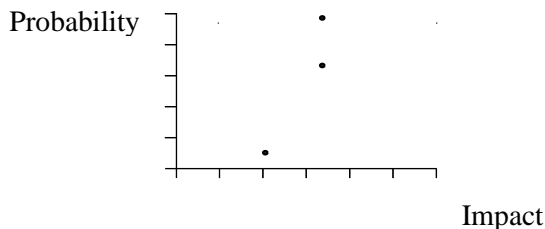


Fig 2. probability–impact picture

A preventive action aims to correct potential problems, which fixed the cause of current issues—it including four main strategies; risk avoidance, risk reduction, risk transferring and risk accepting.

Methodology

From nearly 1000 project actors, 80 project actors were selected as a sample, including project managers, site engineers, planning engineers, and laborers using a convenience sampling method. Primary data were gathered through a questionnaire survey and personal interviews with the project actors. A pre-tested questionnaire was used to administer the survey. Data were analyzed using both descriptive and inferential statistical tools, including Statistical Package for Social Sciences and Microsoft Excel. Mean, mode, median, pie charts, bar charts, and tables used for the data interpretation visually and summarize it. Wilcoxon sign rank test was also used as a non-parametric statistic tool.



Results and Discussions

By using the frequencies of risks impact, risks probability and risks discrimination, calculate the overall risk factor of the project. (Overall risk factor = Probability * impact /discrimination)

Table 1. Overall risk factor

Risk Type	Probability	Impact	Discrimination	Overall risk factor
Timeframe forecasts is inaccurate	3	3	3	3
Failure to complete the project in specified time.	3	4	1	12
Failure to meet the cost estimate.	5	4	1	20
Exchange rate variability	3	2	5	1.2
Construction occupational safety	1	2	5	0.4
Damage person or property	3	3	3	3
Lack of training	1	3	3	1
Low team motivation	5	3	3	5
Lack of knowledge & skills	3	3	3	3
Project member with a negative attitude	3	3	3	3
The conflict between project members	3	3	3	3
Lack of infrastructure	3	3	3	3
Soil problems	1	2	5	0.4
Environmental pressure	1	2	5	0.4
Lack of facilities & sanitation for project members	3	3	3	3
Low-quality infrastructures and services	3	3	3	3
Design is not fit for the purpose	5	4	1	20
Inflation	1	2	5	0.4
High rainfall	3	3	1	9
Misunderstanding about project	1	2	5	0.4
Resources Delay	5	5	1	25
Change project design according to the project/construction site	5	5	1	25
Project actor's turnover	3	3	1	9

According to the overall risk factor of a project, the highest frequencies of risks are resource delay, change project design according to the project scope as well as project site/construction site, the design is not fit for purpose, failure to meet cost estimate and failure to complete the project in the specific period.



By using Probability-Impact Picture, the risk prioritization was done. The most prominent risks related to the project are Resource delay (H), Change project design according to the project/construction site (H), Failure to meet cost estimate (G), Design is not fit for purpose (G) and Low team motivation (F).

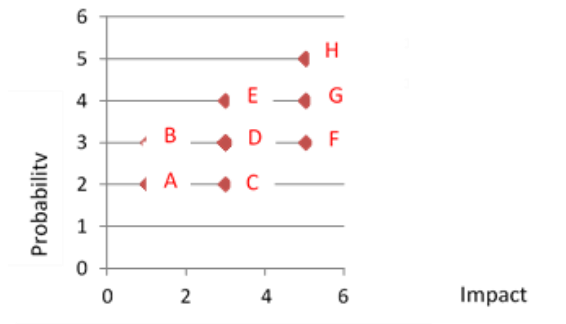


Fig.3. probability-impact picture

There are four main risks of preventive strategies in a risk management process. They are risk avoidance, risk reduction, risks transferring and risks accepting. To identify the risks preventive strategies, five-point scales are used. Strongly disagree (-2) to strongly agree (+2) is used as the scale. According to the one-sample Wilcoxon signed-rank test, significant strategies have a positive relationship with risk preventive action out of twenty-two risk preventive strategies.

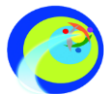


Table 2. Risks preventive strategies

Null Hypothesis	Mean	*T	P
Shortening the schedule equals	-2.00	-8.944	0.315
Changing the project strategies	.60	2.963	0.001**
Reducing the project scope.	-1.54	-8.024	0.153
Improving communication between stakeholders	1.59	8.044	0.000**
Changing the scope of the project activity	-0.93	-5.240	0.525
Extending the project schedule	1.23	6.846	0.002**
Safety training	1.56	8.032	0.004**
Simplifying process	-0.66	-3.415	0.253
Choosing a stable supplier	1.91	8.615	0.003**
Use of advanced technology or best practices	1.70	8.149	0.004**
Recruit skillful & knowledgeable persons as project actors	1.72	8.184	0.002**
Select well-trained person for the construction field	1.26	6.698	0.004**
Arrange awareness programs for the community	.88	5.414	0.003**
Supply insurance	1.64	8.080	0.004**
Making performance bonds	.80	4.332	0.000**
Provide warranties	1.31	7.724	0.003**
Making fixed-price contracts	.10	0.964	0.000**
Provide guarantees	1.27	7.789	0.001**
Making technology partnerships	-1.56	-8.032	0.519
Accept the positive impact of risks	1.66	8.110	0.003**
The project plan is left unchanged	.26	0.744	0.001**
Accept the weather risk and the time and cost are retentions by a particular organization	-1.42	-7.933	0.135

**Significant level is 0.05 *One Sample Wilcoxon Signed Rank Test

Conclusions and Recommendations

Within the main three types of risks related to the Kandy City Wastewater Management Project, the internal risks and project risks are the most prominent risk types than external risks. According to the risk prioritization the significant risks types are identified as resource delay, change project design according to the construction site, failure to meet cost estimate, Design is not fit for the purpose and low team motivation. To obtain the expecting final quality of the project, the significant risks according to the risk's prioritization should be mitigated with choosing a stable supplier, provide resources on time, updating the initial agreement, design made according to the project scope and project construction site, making fixed-price contracts and motivate project members.

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Effects of project risk management strategies on project performance

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Abstract

Risk is an unavoidable phenomenon that may potentially interfere with the successful completion of a project. It may affect positively or negatively to the cost, quality and duration of any of the projects. In traditionally, project managers consider negative risk management strategies, but lack of consideration is about positive risk management strategies. From the initial stage through completion, Project should have an adopted and updated risk management process to respond to the risk. The research aims to identify the risk management strategies and their effects on project performance by especially referring to the road construction projects of the road development authority in Sri Lanka. The researcher adopted the qualitative method and used interviews with responsible professionals and documentary reviews to collect necessary data and information. The research results mainly identified types of risks, risk management practices in the road construction project and risk management strategies. The financial risk was very high in the road construction project and lack of risk management practices and strategies. Professionals from the RDA should be adapted proactive and efficient action with responsible and tactful risk management teams.

Keywords: project performance, risk management strategies and road construction project

Introduction

Project risk can be defined as “an uncertain event or condition that if it occurs, has a positive or negative effect on one or more project objectives such as scope, schedule, cost and quality. A risk may have one or more causes and, if it occurs, it may have one or more impact” (PMI, 2013). In road construction projects often confront many uncertainties due to factors such as the presence of interest groups, resource availability, the physical, economic and political environments, statutory regulations. such risks have a significant effect on the outcomes of a road construction process. According to Wijekoon and Attanayake (2012), cost overruns are predominant in road construction projects in Sri Lanka. Moreover, most of the projects suffer from time overrun compared to the original (planned) project duration (Pathiranage&Halwatura,



2010). Furthermore, there is no one best way to deal with risk and different handling methods would have to be employed depending on the type and nature of the risk (Perera, Dhanasinghe, & Rameezdeen 2009). Therefore, definitely, it should have robust risk management strategies to confront encountered risk. By examining road construction projects in Colombo district, the researcher attempts to explore an exact answer for bellow mentioned research questions.

- What are the risks of road construction projects?
- What are the risks management strategies use in road construction projects?
- How does a risk management strategy influence on road construction projects' performance?
- How to establish better risk management strategies that will enhance project performance?

Thus researcher selected the outer circular highway project, central expressway project, port access elevated highway project owned by RDA in Sri Lanka to implement the research work. In Colombo districts, as the capital of Sri Lanka, many road construction, mostly highway and expressway projects, are implementing around all over the city through RDA. A number of projects were a failure to perform within the planned schedule and budget. Most of the projects are exceeded the allocated duration and budget. Therefore, it can adversely affect the performance for the road construction project because the project's success should be measured in terms of completing the project within the constraints of scope, time, cost, quality, resources, and risk (PMI, 2013). This study's primary purpose is to establish effective project risk management strategies on project performance in Sri Lanka. Specific objectives are to identify the risk on road construction projects, find out risk management strategies in road construction projects, determine the effect of risk management strategies on the performance of road construction projects, and establish better risk management strategies that will enhance the project performance.

Literature Review

Every project manager's desire is to execute and complete a project within the set budget, time, quality, and customer satisfaction requirements (Sibomana, 2015). Various project teams had different chances of managing the various risk (Gitau, 2015). Some significant risks could occur in more than one phase of the project life cycle, stressing the necessity of handling these risk factors



as a prerequisite for project success. Failure to involves parties in assessing, analyzing and responding to associated risks jeopardizes the success of the project. In the construction projects management context, risk management is a comprehensive and systematic way of identifying, analyzing, and responding to risks to achieve the project objectives. The risk management framework for construction projects can be improved by combining qualitative and quantitative methodologies to risk analysis (Banaitiene & Banaitis, 2012). Most construction employees involved in risk management are not fully aware of the available risk management technique applied in highway projects. Construction risk management must be given adequate attention to ensure a successful project that meets the expectation of project goals and objectives (Singh & Chugh, 2016). Controlling the project risks facilitates achieving the main projects 'objectives, such as on-time delivery and the products' satisfactory quality. Hence, every reasonable measure should be taken to implement risk management more effectively (Perera et al., 2009).

If the risk has a significant impact on the project, the best solution is to avoid it by changing the project's scope, or worst scenarios, cancel it (Gajewska & Ropel, 2011). Sibomana (2015) pointed out that risk avoidance, risk transfer, and risk retention were mostly performed; in the client's program phase; in the planning phase, jointly by the client and the consultant; in the procumbent and production phases mostly by the contractor. Gitau (2015) stated that the various project team members had different chances of mitigating the various risks, but the client had the best chance in managing most of the risks. Mitigation measures can be worked out in advance to ensure the probability of successfully completing the project within the stipulated time and cost. Therefore, it can be concluded that to eliminate/mitigate the risk in the project a proper recording, tracking and analysis is necessary (Patil & Gaikwad, 2015). Risk-sharing had proved to be more effective with dealing with utility agencies, neighborhood relations, and difficulty obtaining permits. The employer and the contractor shared those risks, including adverse weather conditions, changes imposed by the engineer, and inflation. (Perera et al., 2009) When risk cannot be transferred or avoided, the best solution is to retain the risk. In this case, the risk must be controlled to minimize the impact of its occurrence (Gajewska & Ropel, 2011).

Methodology

For is research, a qualitative research method has been chosen to provide an effective risk management strategyfor construction projects. Due to the limitation of the time, the researcher has targeted only three ongoing projects



of the RDA. Further to collect data, interviews were chosen to obtain the most accurate answers to facilitate further analysis.

Population and Sample Size

Table 1. Population and Sample size

Category	Central Expressway		Outer Circular Highway		Port Access Elevated Highway	
	Population Size	Sample Size	Population Size	Sample Size	Population Size	Sample Size
Project Directors	2	2	1	-	1	1
Engineers	7	1	2	1	1	1
Consultants	-	-	3	2	-	-

Results and Discussions

Primary data were collected from eight respondents of the selected projects of the RDA by using the interview method. Here the researcher analyzes all the gathered data under the descriptive method, and presented all the data by using the tabular and pictorial forms that make it easy to understand and analyze the result.

Effects of risks on project performance and strategies for risk management

75% of the respondents said due to the political, financial, foreign funds and compensation problems, lack of risk management methods, document failures, insufficient budget, public and labor safety, estimated time and cost will increase, and the project's quality decrease. According to the interviewer response, risk effects on performance; , respectively for the duration 100%, cost 62.5% and quality 50%.The use of insurance is the most common strategy which is used by RDA projects. Transfer the construction and design risk for the contractor by signing an agreement. Do the environmental analyses at the initial stage coordinate with NBRO, CEA and SLLRDC and risk analysis after the project is implemented. There are sixteen strategies found by the researcher, which is used by the RDA road construction project. Those are depicted bellow.



Table 2. Risk Management Strategies Used by RDA

Strategies used by RDA Projects	OCH	CEP	PAEH
Insurance	•	•	•
Use of agreements	•	•	•
Environmental analysis	•	•	•
Risk Analysis	•	•	•
Meeting	•	•	•
Transfer Responsibility of Construction and Design risk for the contractor	•	•	•
Follow the standard	•	•	•
Use of unsolicited proposal during the selection of contractors		•	
Observation			•
Surveys			•
Checklist analysis			•
Inspection			•
Lesson learned from previous projects			•
Allow training for the laborers			•
Follow the safety methods	•	•	•
Tolerance of the risk	•	•	•

Risk management documents in construction projects

There is low maintenance of the risk documents in road construction projects of RDA. An environmental assessment plan is commonly used in RDA projects as a Risk assessment document in the initial stage.

Table 3. Use of Documents for the Risk Management in RDA Construction Project

Documents	Frequency	Percentage
Environmental Assessment Plan	6	100%
Project Management Plan	3	50%
Cost Management Plan	4	66.67%
Quality Management Plan	4	66.67%
Safety Plan	4	66.67%
Bidding Document	2	33.33%
Risk Register	2	33.33%
Feasibility Reports	4	66.67%

Influence of strategies on project performance and difficulties when applying the strategies

Risk management strategies are effects on cost, duration and quality of the project. Mitigate and transfer actions are mostly used by RDA to manage the project risks. The researcher identified mostly used strategies in road construction projects of RDA as follows:

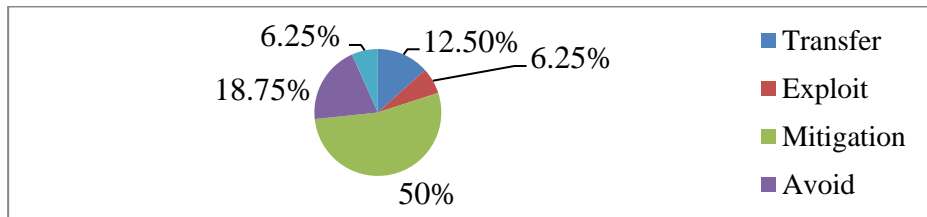


Fig 1. Risk Management Strategies used in Road Construction Project of RDA

Relationship between project risk management strategy and project performance

Everyone else said that there is a positive relationship between project risk management strategies and project performance. From them, 62.5% of respondents strongly agreed with the statement and 37.5% of the respondent agreed to the statement. Project risk management strategies are positive effects on project performance.

Conclusions and Recommendations

Road construction projects in RDA Sri Lanka have a number of risks for the project time, cost and quality, and the inevitable development of an appropriate risk management strategy to deal with them. In RDA road construction project has a traditional view of the project risk. Respondents did not give more weight for Positive risk or opportunities. However, according to research findings, some risks can also be an opportunity for the project, such as, foreign funds, dealing with utility agencies, and using new technologies. Furthermore, they did not follow the exact method for the identifications of project risk. Due to the political conditions and financial failure, the duration is exceeded most of the time than the estimated time in the RDA projects. RDA project does not follow the exact risk management process and does not maintain sufficient risk management documents in the projects. 100% of the project used an Environmental assessment plan to state the risks. The project safety manager is the person responsible for managing the risk, but it is also limited to the labor safety. The use of insurance is the most common action used by RDA projects. RDA Transfer the construction and design risk for the contractor by signing and agreements. Mitigate, transfer and avoid actions are the most used strategies by RDA to manage the project risks.



RDA should maintain the relevant risk management documents through the project life cycle. Thus it can be used as a lesson learned for future projects. Risk identification and analyzing should be beginning at the initial stage of

the project and it should be a continuous process initiated through the end of the project. When signing an agreement with stakeholders, especially between foreign funds agencies, expert judgment is an essential and tactful method. Instead of the project's traditional view, risk management strategies need to adopt a modern view of the project risk management strategies that mean strategies should be established to both positive and negative risk. RDA can use accept and exploit strategies to retain foreign country supports continuously. Acquire the native contractors and laborers to the project works will reduce the cost and it will benefit the country's economic stability. Finally, there must be a proactive and iterative risk management framework that focuses on both negative and positive project risk with the participation of knowledgeable, tactful and active professionals or experts to the handle of project risk for the enhancement of effective and efficient projects performance. From this study, the project team can clearly understand the importance of both negative and positive risk management strategies to confront project risks. The study also revealed the essence of maintaining the relevant project management documents on project progress. Thus project team can improve their project documenting the process as well. Through this study, RDA can identify their current level and issues of the project risk management process and they can improve that process according to this study revealed. Moreover, RDA can develop their perspective of project risk management strategies, increase the use of expert judgment, and create the project team with the commitment of tactful and active participants. Finally, this will be good guidance to adopt and implement the modern view instead of the traditional view of the project risk management process in RDA.

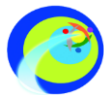
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Participatory Approaches in Community Development Projects: An exploratory study of NGOs in Northern Province

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Abstract

This study aims to investigate participatory approaches in community development projects in non-governmental organizations (NGOs). The primary data was obtained from 10 in-depth interviews with 10 NGO project managers in the northern province of Sri Lanka. Thematic analysis was used to identify participatory approaches in community projects. The study revealed that NGOs widely apply participatory approaches in the project initiation, planning, implementation and evaluation stages. Also, the study identified the following practices of participatory approaches in NGOs; Participatory meetings, teamwork, participation in fieldwork, participation in rural and needs assessments, cross-sectional walking, open discussions, community meetings, and participatory evaluation. The project managers emphasized that participatory approaches are very important for the project's success and sustainability in community development projects. However, they emphasized the following obstacles that hinder the effective application of participatory approaches such as political influences, different casts/groups in the communities, lack of technical knowledge among beneficiaries, and conflict between people in the community.

Keywords: community development projects, non-governmental organizations and participatory approaches

Introduction

The participatory approach is a development method where project stakeholders participate in the development process and are useful practices in community development projects to better identify community projects and plan, execute, and monitor projects (Sakalasooriya, 2013). Koralagama et al., (2010) emphasized that the best community participation is one of the key approaches to achieve sustainability in a project. Northern Province of Sri Lanka was severely affected by an internal conflict for thirty years until 2009. There were many NGOs that volunteered to improve the livelihoods of vulnerable communities that were affected by the lack of services of health, education, agriculture and infrastructure; However, previous researchers highlighted that community development projects do not produce the results



that the project expected in Sri Lanka (Piyasena & Fernando, 2016; Nanthagopan et al., 2019). Therefore, the study explores the participatory approaches of NGOs applied in community development projects and explores the level of applications and obstacles in the effective use of participatory approaches.

Literature Review

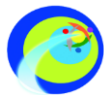
Participatory approaches are applied in different projects, such as the top-down, bottom-up, and stakeholder participatory approaches (Kadurenge, 2016). This approach revitalizes community development projects in developing countries. There are four types of participatory approaches depending on the circumstances. Such circumstances applied the following methods for development; Rapid rural assessment, Participatory rural assessment, Assessment and monitoring of participatory assessment and Participatory needs assessment (Koralagama et al., 2010). Community projects in different countries took various participatory approaches. Previous studies highlighted the participatory approach in initiating the effect of projects to the priorities that the community needs (Alam & Ihsan, 2012; Ikechukwu-Ilomuanya et al., 2016), in planning the effects for the empowerment of society, community mobilization and organization (Withanachchi, 2011; Ben-Meir, 2017), Effects of execution on self-management (Withanachchi, 2011); Ikechukwu-Ilomuanya et al., (2016). In Effect of monitoring and evaluation to obtain financial support and human resources support (Jamadar, 2015).

Methodology

This research is exploratory and the qualitative method is equipped in this study. The study applied in-depth interviews to explore participatory approaches in NGO community development projects. The purposive sampling technique is used to select the 10 NGO project managers from the 10 selected NGOs' community projects. The selected NGOs focus primarily on community development projects, such as livelihood development, pre-education, women's empowerment, and youth skills enhancement. The selected NGO managers have a wide range of project work experience and participate in participatory project approaches. Thematic analysis was used for data analysis.

Results and Discussions

The study explored the following participatory approaches (Table 1) that are applied in community development projects at the initiation, planning,



execution, and evaluation stage of a project. The finding highlighted that NGOs apply participatory approaches at all stages of the project. However, community participation is useful in the initiation and execution stages and, on the contrary, low in the planning and evaluation stages. Furthermore, the study revealed that the community contribution for self-physical and material is very high in projects and the financial and technical contribution is less in projects.

Table 1. Participatory Approaches in Community Development Projects

Details	Study Findings
Practices	Participatory meetings, teamwork, participation in fieldwork, participation in rural and needs assessments, transect walk, open discussions, community meetings and participatory assessment
Community Participation	In the initiation stage, the participation from the community is very high In the planning stage, the participation from the community is low In the execution stage, community participation is high In the evaluation stage, community participation is low.
Community Contribution	Self-physical - Yes / High Finance - No / Low Technical - No / Low Material - Yes / High Political influences
Obstacles in Practices	Different cast/groups in the communities Lack of technical knowledge among the beneficiaries The conflict between people in the community.

Conclusions and Recommendations

The study explored the participatory approaches which are widely applied in community development projects of NGOs in Northern province, Sri Lanka, that are Participatory meetings, teamwork, participation in fieldwork, participation in rural and needs assessments, transect walk, open discussions, community meetings and participatory assessment. The study also revealed that the participatory approaches applied by NGOs are very satisfactory, several obstacles hinder the efficient use of participatory practices, which are political influences, different cast/groups in the communities, lack of technical knowledge among the beneficiaries, conflict between people in the community. The study is undertaken in the northern province of Sri Lanka, it is the post-conflict area. Therefore, the results are highly transferable; the countries have a similar context.

The study recommends that participatory practices in community projects are crucial to correctly identify community projects and be successful in project planning and execution. Therefore, NGOs should identify the correct



practices to suit their projects' nature and consider reducing or avoiding community obstacles by developing appropriate strategies. The appropriate participatory approaches and efficient use of them are very crucial to the success of projects.

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Track 6. Marketing and Hospitality Management



Impact of celebrity endorsement on brand image among Sri Lankan adolescents: Special reference to Manmunai North of Batticaloa district

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Abstract

This paper converses with Sri Lankan adolescents' perceptions about how celebrity endorsement advertisements impact brand image. A quantitative survey method was constructed by issuing a self-administrated questionnaire among adolescents from 10 to 19 years in Manmunai North D.S of Batticaloa district. The convenience sample method was used to issue the questionnaires and 200 questionnaires were received back duly filled by the adolescents. Results revealed that celebrities endorsed advertisements are more attractive than the non-endorsed advertisements. Mostly, celebrities' attractiveness is a special attribute of celebrity endorsers, which is most memorable to adolescents in Sri Lanka. Moreover, the tested dimensions of celebrity endorsement show a positive relationship with the brand image. Moreover, overall celebrity endorsement shows a significant impact of celebrity endorsement on the brand image.

Keywords: adolescents, brand image and celebrity endorsement

Introduction

These days, grappling the customers' attention is the most challenging task for marketers due to knowledge enhancement among the public. They are questioning each aspect of products are available in the markets. Therefore, marketers should carefully develop a better approach that impulses the consumers' attention, creates their interests, provokes their desires, and activates their purchase over the brand. Propitiously, advertisement is a common path that communicates about all valuable features regarding respective products. Further, most marketers have utilized this technique as a medium of gathering recognition for their brand through the recognition and admiration of celebrities. Dimed and Joulvana (2005) said that Celebrity endorsement makes the advertisement more unforgettable and the organization in a short-time makes high brand awareness among a broader audience. Particularly, a favourable response generated to a particular brand because of its association with a celebrity may remain stronger over time if the brand receives significant exposure with the association with the celebrity. These celebrity endorsement advertisements should fulfill the special features



such as Attractiveness, Expertise, Trustworthiness, respect, and similarity unified in TEARS model and other attributes like Entertainment value and celebrity-product congruency. However, a marketer should concentrate more on this while entering into different segmentation as an adolescent segment. These days, adults are very smart and knowledgeable than any others. Mostly, adults in urban areas are more embracing of celebrities and more motivated to adopt from those references. Additionally, most adult viewers of some television shows and films perceive those performers as their friend, sister/brother, lover, role model, or god. When adults have this kind of strong feelings and admiration for celebrity, it creates a demanding strategy as celebrity endorsement advertisement among marketers to showcase their brand and grip attention over their brand image.

In the Sri Lankan context, most households have cable connection and dish antenna connection that created commitment toward foreign channels than Sri Lankan channels. Especially Tamil ethnicity in the Batticaloa district committed towards India channels and admired Indian celebrities' advertisements. This brings an advantage for multinationals to capture the market of Tamil ethnicity of Sri Lanka. Therefore, this trend in the usage of celebrity endorsement by marketers has engineered the researchers' interest to critically examine the impact of celebrity endorsement on brand image among Sri Lankan adolescents.

Problem Statement

Nowadays, most marketers deliver their products/ services to their desired customers through the shadow of celebrities. Celebrity is a person who has high eminence among the broad range of individuals considering higher visibility in their field. However, not all celebrity endorsement worked as much company imagined (Dissanayaka & Ismail, 2015). There is a necessity to measure celebrity endorsement advertisement's effectiveness by considering plenty of attributes under it. However, most previous studies that used only three attributes such as "attractiveness, trustworthiness and expertise." Further, some studies adopted the TEARS model. However, fewer studies included "celebrity-product congruency" as an attribute. Conversely, not much research was incorporated to use "entertainment value" as an attribute to measure the effectiveness of celebrity endorsement in Sri Lankan context. Thus, this study aimed to combine the TEARS model and entertainment value and celebrity-product congruency to measure the celebrity endorsement.



Further, Sri Lanka's adolescent segment is a vast segment that provides more profits to the marketers. Anyhow, there is not many studies which individually study about adolescent's perception regarding celebrity endorsement. Celebrity endorsement has a certain level of impact over the brand image. However, most of the in Sri Lanka focused on Sri Lanka research focused on celebrity endorsement on other concepts rather than brand image. Even though there is an effect of celebrity endorsement towards other concepts such as purchasing intention and customer loyalty, it is not worth getting the brand image because every y's company spends most of its money on endorsing celebrity and there is the necessity to evaluate its worthiness toward increasing the brand image.

Moreover, studies related to Tamil ethnicity and Tamil people's perceptions regarding celebrity endorsement are scarce in the research context. Therefore, it is necessary to explore the audience's mindset in particular ethnicity to trigger the marketers to grip the market. Additionally, Dissanayake and Weerasiri (2017) had mentioned in their study that there is a necessitating research gap in the Sri Lankan context to examine the impact of celebrity endorsement on brands. In this regards, this research involves analyzing the "Impact of celebrity endorsement on brand image among Sri Lankan adolescents."

Research Objectives

- to explore the impacts of celebrity endorsement dimensions such as trustworthiness, expertise, attractiveness, respect, similarity, entertainment value, and celebrity-product congruency on brand image among adolescents.
- to explore the impact of celebrity endorsement on brand image among adolescents.

Literature Review

Celebrity endorsement

Based on Mccracken (1989), Celebrity endorsement is an action undertaken by the famous person to use their status on selling a branded product/services to the general public. Shimp (2003) developed the model called "TEARS Model," which facilitates to determine the endorser characteristics; the acronym TEARS represents five separate attributes: trustworthiness and expertise are two dimensions of credibility, whereas physical



attractiveness, respect, and similarity are components of the general concept of attractiveness.

Attributes of effective celebrity endorsement

This study considered the TEARS model introduced by Shimp (2003), which includes five factors: trustworthiness, expertise, attractiveness, respect, and similarity. Further, it considered celebrity-product congruency (Kamins & Gupta, 1994; Chan, Ng & Luk, 2013) and entertainment value (Hung, Chan & Caleb, 2011) to measure celebrity effectiveness endorsement.

Trustworthiness

Trustworthiness is a special attribute related to morality, honesty and credibility. The target audience must trust a celebrity who carries a particular image and it must match with the product.

Expertise

Expertise means knowledge, skills and experience someone has in a particular field of interest.

Attractiveness

Attractiveness is a quality that creates interest, desire and affection over something or someone.

Respect

Respect is a quality of appreciation or esteem due to the endorser's general deeds.

Similarity

Shimp (2003) defined the similarity as a quality to which an endorser matches the target audience on some characteristics related to the endorsement relationship such as gender, and age.

Entertainment value

Entertainment value is defined as a kind of pleasure given by the celebrity to the public that creates casual admiration (Udo & Nwulu, 2015).

Celebrity-product congruency

Celebrity-product congruency refers to the right matching of the endorser's image and the endorsed product or brand.



Brand image

Brand image can be stated as a perception that comes to the consumer's mind when considering a particular brand. Based on Keller (1993), Brand image is perceptions about a brand as reflected by the brand association held in consumer memory.

As per previous studies, Kotler et al., (2005) stated that, when a company decides to use celebrity endorsement, its main focus falls into promoting its brand. Choosing the best celebrity for promoting a brand is one of the most critical decisions made by every company related to how consumers will perceive the brand (Pringle, 2004). Other research such as Agrawal and Kamakura (1995); Kamins et al., (1989) have shown that celebrity endorsement helps create a positive effect on the consumers' brand awareness, brand trust, and brand preference. Based on Anderson (1983) when a consumer thinks about a brand, their bond with the celebrity is animated to a certain level through spreading activation. Thus, negative information about the celebrity activates the celebrity's bond, which then activates the brand's bond to some degree and it allows reduced evaluation of the celebrity to transfer to the brand. Moreover, this finding was supported by the studies of Noffsinger et al., (1983) and Judd et al., (1991). According to the study of "Impact of Celebrity Endorsement on the image of the brand on Customer's mind" (Saeed & Bhatia, 2014), 83% of customers said celebrity endorsement affects the brand's image.

Methodology

In this Quantitative method of study, a close-ended questionnaire was used to assess celebrity endorsement's impact on brand image among Sri Lankan adolescents. However, particular reference has been made on adolescents who are living in the Batticaloa district. For this study, 220 questionnaires were issued based on a convenience sampling method to measure the study area. However, 200 questionnaires were received back duly filled by the adolescents.

Sampling

The study population of this study is defined as the adolescents who fall between the ages of 10 to 19 years in the Manmunai North Divisional Secretariat area of Batticaloa district, Sri Lanka. Furthermore, the sampling method of this study is convenience sampling under the non-probability sampling method.



Theoretical framework

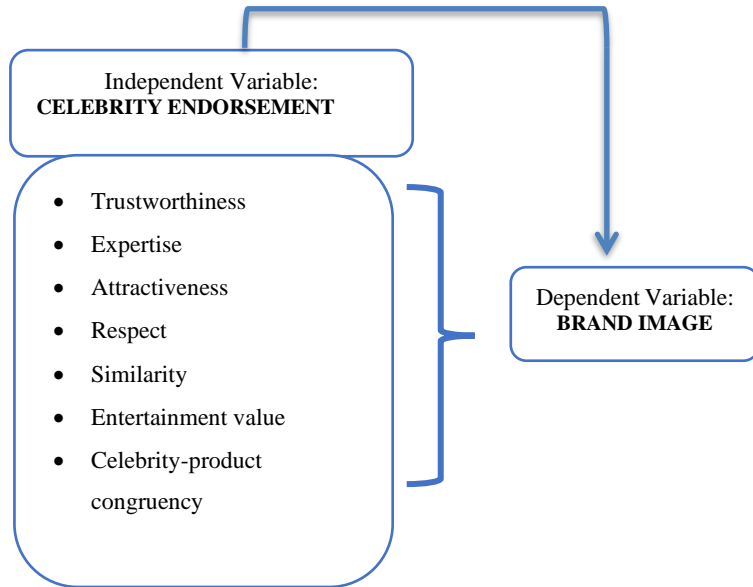


Fig 1. Conceptual Framework

Results and Discussions

Table 1. Model Summary of impacts of celebrity endorsement dimensions' on brand image

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.862 ^a	.743	.734	.18626

a. Predictors: (Constant), celebrity-product congruency, entertainment value, expertise, similarity, attractiveness, trustworthiness, respect

The multiple regression analysis was tested to explore the impact between variables. The result shows that 74.3% of the brand image variability can be predicted by the dimensions of independent variable such as celebrity-product congruency, entertainment value, expertise, attractiveness, trustworthiness, and respect.

Table 2. Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients		Sig.
	B	Std. Error	Beta	t	
Constant	.876	.161		5.455	.000
Trustworthiness	.093	.044	.118	2.124	.035



Expertise	.141	.042	.190	3.336	.001
Attractiveness	.152	.045	.169	3.340	.001
Respect	.243	.040	.336	6.022	.000
Similarity	-.053	.054	-.049	-.984	.327
Entertainment value	.071	.024	.132	3.009	.003
Celebrity-product congruency	.132	.035	.213	3.765	.000

a. Dependent Variable: brand image

The coefficient table shows that there is no significant impact of similarity on brand image. Because its significant value is more than 0.05. However, other dimensions such as trustworthiness, respect, similarity, entertainment value, and celebrity-product congruency positively impact brand image. Therefore, it can be concluded that the similarity in terms of age, gender and ethnicity between celebrities and adults was not there in Sri Lankan advertisements. Adolescents also believe that similarity between them with celebrities is not essential to be passionate toward the brands consumed by them.

Table 3. Model summary of impact of celebrity endorsement on brand image

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.846 ^a	.715	.714	.19320

a. Predictors: (Constant), Celebrity endorsement

Table 4. Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients		t	Sig.
	B	Std. Error	Beta			
Constant	.838	.140			5.980	.000
Celebrity endorsement	.845	.038	.846		22.310	.000

a. Dependent Variable: Brand image

The result shows that celebrity endorsement has a strong positive impact on brand image and 71.5% of the variability in the brand image can be predicted by celebrity endorsement. Further, every unit increase in celebrity endorsement can increase the brand image by 0.845. Therefore, the researcher can be concluded that, celebrity endorsement has a significant impact on brand image among Sri Lankan adolescents. Moreover, if the marketers around Sri Lanka concentrate more on celebrity endorsement and include useful contents with suitable endorsers, it will enhance the brand image.

Conclusions and Recommendations

According to the findings, it was concluded that marketers should consider more on advertisements to attract various geographical areas and target segmentation. Particularly in adult segmentation, celebrity attractiveness is



essential and the way they appear in advertisement means a lot to adults and that will impulse the adult to attract to the brand.

Likewise, a good reputation of celebrity, honesty while delivering the message and capability in their field of interests also has a concern in adults' minds while watching an advertisement. Therefore, it is important that companies make sure the celebrity endorser should match the product being endorsed by them and should possess all the best qualities with similar features with adults to enhance the brand image among adolescents in Sri Lanka.

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Online banking functionality and customer satisfaction: Empirical evidence from Northern Province Sri Lanka

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Abstract

In today's advance technological era, every Financial Organization is agreed to cover their wide range of transactions through online or internet environments. Mostly Banks are spent a vast amount of money on impressing their customers and capturing new customers. The present study undertakes how online banking functionalities are determining customer satisfaction. To reach that purpose, the present study involved a quantitative approach concerning the design of surveys and the population—Northern Province is selected as a research sample. The researcher used specifically and the SPSS software version 20.0 had been used for the data analysis purposes. Based on this main study finding is that Convenience, Ease of use, as well as Fee & Charge, privacy, security and speed significantly contributed to customer satisfaction and also Accessibility, Content and website layout and design are not much contributed significantly in customer satisfaction. Furthermore, final some recommendations are given by the author. It also gives more support and direction to future work.

Keywords: customer satisfaction, functionalities, Northern Province and online banking

Introduction

The banking sector in Sri Lanka has been started in 1939 and since then the banking sector has adopted many advances in computing (Perera & Priyanath, 2018). Presently banking environment is become as growing one due to advance technological innovations. They tend to introduce online banking as a tool for current customers who continuously use banking services and attract new customer base (Nimako, Gyamfi & Wandaogou 2013). Previously all banks are done their process via manual facilities. It is kind of a burden for bankers because it consumes a lot of money and costs. Later on, bankers found the manual system is not enough to handle massive customer's transaction & operations. Therefore, it was decided to change the manual process to an electronic one. Furthermore, now banks allow customers to get financial services through electronic delivery channels



because it will turn down the company and individual time and money.

Internet has played a fundamental role in transforming banking services into e-services (Wu, Tao & Yang, 2012). The ultimate aim of any industry is to improve the customer's satisfaction because customer satisfaction is the key to improving customer retention and firm profitability. This study attempted to explore the impact of online banking functionality on customer satisfaction in the Sri Lankan bank industry, with references from the Northern Province. Given that relevant research on customer satisfaction in the online banking functionality context is limited, this study investigates the impact of online banking functionality on customer satisfaction in Northern Province. In line with, this study is focused on answering the questions of “What extent online banking functionality impact customer satisfaction in the Northern Province online banking customers?” and “Is there any association between online banking functionality and customer satisfaction?”

Literature Review

According to Sritharan (2013), reliability, responsiveness, assurance, empathy, tangible, and communication contribute to service quality and have a positive relationship with customer satisfaction. Some scholars have shown that many international internet users demonstrate similar behaviors and preferences across nations (Quelch & Klein, 1996). Some studies have examined the issues on the evolution of e-banking (Sohail & Shanmugham, 2003). Some have investigated customer preferences of e-banking (Sohail & Shanmugham, 2003).

Methodology

This study found that the influence of online banking functionality on customer satisfaction—a particular Reference from Northern Province in Sri Lanka. Thus, the targeted population is a licensed commercial bank customer in the Northern Province. Mostly we have selected Bank of Ceylon, People's Bank, Commercial bank, Hatton National bank and Sampath bank at Northern Province in Sri Lanka. Author and questionnaires used the convenient sampling method also used to found user's perception. Totally 400 questionnaires issued to customers among that only 380 questionnaires was received and used for analysis purpose. The various analytical methods were also used by the author. Literature surveys are based on various published and unpublished research, journals, books, and newspaper articles.



Hypotheses of the study

- H₁: There is a significant relationship between Accessibility in online banking functionality and customer satisfaction.
- H₂: There is a significant relationship between Content & website layout in the online banking functionality and customer satisfaction.
- H₃: There is a significant relationship between Convenience in online banking functionality and customer satisfaction.
- H₄: There is a significant relationship between Design in online banking functionality and customer satisfaction.
- H₅: There is a significant relationship between Ease of use in online banking functionality and customer satisfaction.
- H₆: There is a significant relationship between Fee & Charge in online banking functionality and customer satisfaction.
- H₇: There is a significant relationship between Privacy in online banking functionality and customer satisfaction.
- H₈: There is a significant relationship between Security in online banking functionality and customer satisfaction.
- H₉: There is a significant relationship between Speed of delivery in online banking functionality and customer satisfaction.
- H₁₀: There is a significant impact on online banking functionality on customer satisfaction.

Discussions

This research's theoretical underpinning is based on literature from the e-banking relating to commercial banks within the banking industry. Service marketing scholars have long since recognized the crucial characteristics of service intangibility, inseparability, heterogeneity, fiduciary, and perishability, lack of transfer of title. The recognition of such characteristics has led researchers to recognize the key role of service marketers in improving service delivery and accessibility to shed light on the important role of marketing within service sectors, especially in banking services. The empirical conclusions drawn from this research are multifaceted and as a result, it is vitally vital that bank managers pay attention to the influences of customer satisfaction. Therefore, researchers are encouraged to place more focus on the impact influences stemming from the online banking or e-banking functionality and its impact on customer satisfaction, especially in Northern Province of Sri Lanka. This current research's ultimate scope focuses on the influence of online banking functionalities on online banking customer satisfaction. According to the study, customer satisfaction is contributed by online banking functionality significantly. In addition to that, Content &



website layout, Ease of use, as well as fee and charge, privacy, security and speed significantly contributed to customer satisfaction and also Accessibility; Convenience and design are not contributed significantly in customer satisfaction. Moreover, this work attempt to give an effective contribution to online banking functionalities on customer satisfaction in banks is located in Northern Province. The research also supports to understand the service marketing discipline area. The factors relating to convenience, ease of use, fee and charge, privacy, security and speed were found from this study to predict online banking functionality on customer satisfaction. Accessibility, Design, and Content and website layout are not much important functionality for adoption on online banking in Northern Province.

Conclusions

This research seeks to make an original contribution to knowledge by investigating the impact of e-banking factors on customer satisfaction outcomes in the Banking Sector in Northern Province and research contributes to the services marketing discipline in finding out the role of online banking in enhancing customer satisfaction and loyalty. Finally, this study found the online banking functionality influences customer satisfaction. This study also supported academics and management for their decision-making purpose. Especially in Sri Lanka context, the banking industry provides huge support for Sri Lankan economy because they are providing financial transaction facilities via online or offline, offering new employment opportunities for Sri Lankan younger people. Finally, they are involved with corporate social responsibility activities (CSR). So, this study provided huge support to bankers because after thirty years civil war, most banks are involved with a variety of online banking facilities for their customers. Online banking functionalities are fundamental to enhance the efficiency of online banking facilities. Based on this study, customers can also perform as a rational customers & bankers can perform as profitable ventures. Future research should also investigate whether the model could be used for a comparative study between the service sector and the industrial sector, testing the differences and effects of electronic functionality factors in both sectors.

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3rd Research Conference on Business Studies (RCBS) – 2020

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Green consumer values: Consumer's lifestyle towards eco-friendly products and purchase intention in the Fast Moving Consumer Goods (FMCG) sector

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Abstract

Green consumer values are an upcoming trend in today's developing world since most people are highly concerned about the concept "go green". The main reason behind that is that present customers pay more attention to eco-friendliness and become more environmentally responsible than past decades because it creates the sustainability of the environment. Over the past few decades, the consumers' green consumer values were not highly considered concept even in fast-moving consumer goods (FMCG) sector. This paper aims to better understand the effect of green consumer values on the consumers' purchase intention in the FMCG sector. It tries to build on consumer lifestyle literature to gain more insights on how these green consumer values, including environmental and health consciousness, affect consumer lifestyle and purchase intentions. The sample consisted of 152 respondents representing consumers in Colombo district. The structured questionnaire and partial least squares path modelling (PLS) were used to collect and analyse it. The tested hypothesis on consumer lifestyle was not statistically significant with purchase intention and other two hypotheses on environmental consciousness and health consciousness were statistically significant. The study's findings imply that managers in the corporate world can use this study to increase their competitive advantage as people are presently very concerned about environmental issues. When applying green values, the companies have to comply with the consumers' needs and wants. Consumers want to recognize themselves with green compliant companies and are willing to pay more for a greener lifestyle. For this reason, green values are not only an environmental protection tool but also a marketing strategy. Further research using both consumer and marketers viewpoints is needed to confirm the present results to better assess possible green value-added process differences.

Keywords: environmental consciousness, green consumer values, health consciousness consumer lifestyle and purchase intention

Introduction

Customer's consciousness towards environment and health is one of the numerous topics nowadays due to environmental issues such as global warming, reenergized, water pollution and health problems spreading through over the world recently. Today, the most significant problems associated with



environmental issues and health concerns are the consumer's consumption pattern (Wills & Stafford, 2016). In order to make a world with lack of pollution, the consumer should be more environmentally responsible and the awareness of the consumers should be enhanced than past because environmentally responsible and health-conscious consumer plays a significant role in achieving sustainable and healthy world Therefore customers tend to buy eco-friendly and healthy foods even the prices are high (Tzschentke, 2008). With the increment of awareness towards environmental issues, organizations tend to review the environmental impact of their operational activities and products (Ling, 2013). Furthermore, the business on green products such as organic food items has started to grow in the fast-moving consumer goods (FMCG) sector. That can be considered as a sustainable growth as a country. However, the increment of awareness about environmental issues and eco-friendly products usage has also grown globally (Rashid, 2009). The global concern about the environment due to increasing deterioration and media exposure has led to the development of eco-friendly products and a growing environmentally conscious marketplace. The business on green products such as environmentally friendly and healthy foods has started to grow in the consumer market (Ling, 2013). The number of restaurants and stalls which sell organic food items such as “Helabojun” food courts conducted by the Agriculture department in Srilanka has increased rapidly. However, with the enhancement of environmental issues and eco-friendly businesses, consumer concern towards eco-friendly products increases considerably.

Over the past few decades, the consumers' green consumer value were not a highly considered concept. However, due to the increasing environmental pollution, water scarcity, poor management of waste, biodiversity loss, and other environmental issues, the concept green consumer values become a more trending concept today. Most of the researchers have conducted their researches based on green marketing and purchase intention. Nevertheless, in most studies, green marketing is based on the green marketing mix and the link between the marketing mix elements (Morel & Francis, 2012). They have not considered green consumer values such as environmental consciousness and health consciousness impact on green FMCG products' purchase intention. Furthermore, some researchers (Fraj & Martinez, 2006; Kim & Chung, 2007) have identified the positive relationship between green consumer values and purchase intention. However, they have not revealed how the consumer lifestyle impacts the purchase intention of green FMCG products. According to (Morel & Francis, 2012), they have revealed consumer attitudes towards the eco-friendly products in the FMCG sector, but they have



not stated how the green consumer values impact the consumer lifestyle. Even though most of the researchers have conducted their research based on green consumer values, they have not specially identified the impact of the main green consumer values such as environmental consciousness and health consciousness on the consumer's purchase intention through consumer life style.

Previous research has done their research in the context of the wine market, organic food, and organic personal care products (Thach & Olsen, 2004; Michaelidou & Hassan, 2008; Kim & Chung, 2007) are only few kinds of research conducted for the FMCG sector. Moreover, another one of the important gaps identified by the researcher is that the researches based on the main two concepts such as, green consumer values and purchase intention are published highly in the western context and there are only a few researchers have conducted in the Srilankan FMCG sector based on the above concepts. Therefore, limited studies have been done to understand the impact of green consumer values on purchase intention through consumer life style in FMCG sector. Based on the gaps mentioned above in the green consumer values, the following research question was formulated: How does the green consumer values impact the consumer's purchase intention in the *FMCG sector through consumer life style*?

Theoretical considerations and empirical evidence

Purchase intention

According to Mirabi et al., (2015), 'Purchase intention is a kind of decision-making that studies the reason to buy a particular brand by consumer'. Further, factors such as attitudes, knowledge, and value have gained focus in much research when considering consumer purchase intention. In addition to those factors, green marketing practices have gained much attention, and most people tend to be concerned about green consumer values and purchase environmentally friendly products. The social intention of the consumer is directly affected by the attitudes of the customer. Moreover, in the organic food context, attitudes are concerned with purchase intention (Michaelidou & Hassan, 2008). The theory of purchase intention is a suspension of the theory of reasoned action made necessary by the original model's limitations in dealing with behaviors over which people have incomplete volitional control. The theory of reasoned action cannot deal with behaviors that require resources, cooperation, and skills in response to the criticism about the model (Chiou, 1998).



Environmental consciousness

Environmental attitudes, environmental concern, socio-demographic characteristics, personality, environmental knowledge, and environmentalism are some of the variables commonly used by researchers to explain the degrees in the environmental consciousness and pro-environmental behavior of consumers (Sharma & Bansal, 2013). In the last decade, there has been an increase in awareness within society concerning social and environmental issues, prompting firms to examine the responsibilities placed on their shoulders. As a result, a growing number of firms have incorporated sustainability into their strategies and operations. Buysse and Verbeke (2003) argued that firms associated with a broad range of stakeholders tend to proactively execute environmental strategies. Moreover, a positive correlation was found between primary and secondary stakeholders and environmental strategies. Thus, the way that managers perceive environmental issues depends on the demand for a broad range of stakeholders (Huang & Kung, 2011). The idea of environmental consciousness relates to how the clients utilize their scarce resources and satisfy their limitless wants by respecting the environment (Chen & Chang, 2012; Limbu, 2012). To put into viewpoint, Polonsky (1994) defined environment-friendly activities as “all actions planned to create an aid any interactions proposed to gratify human wants and needs, such that the pleasure of these wants or needs happens, with the least negative effect on the ecosystem” (Misra & Panda, 2017).

Health consciousness

The theoretical framework of the Health Belief Model is used to explain and predict health behaviors by focusing on attitudes and beliefs, and is one of the most widely used frameworks to understand health behavior. Studies have applied the Health Belief Model constructs to explain health behaviors such as preventive screening, vaccination, and contraception use (Wills & Stafford, 2016). Consumers have become more conscious of the nutrition, health, and quality of their food, and healthiness has become an essential criterion for food purchases. Therefore, the demand for organically grown produce has increased. The increasing number of studies reveals that a consumer’s health concern is the most commonly stated motive to choose organic foods (Chen, 2009). “Health consciousness” refers to consumers’ understanding of health status changes and the degree of emphasis on health requirements. Many consumers believe that organic food contains higher levels of nutrients. Past studies have shown that consumers that buy organic food are more responsible for their health. Health and food safety are the two chief reasons



consumers opt for organic products (Hsu, 2015). Health conscious consumers tend to discount messages about functional food's health value and show preferences for organic food. In contrast, skepticism towards health claims has a higher negative homogenous impact on functional, organic, and conventional products' perceived healthiness compared to health consciousness (Degutis, 2017).

Consumer lifestyle

"Lifestyles" can be defined as "the consistent patterns that people follow in their lives, including how they spend their time and money and are identified through people's activities, interests, and opinions of themselves and the world around them" (Sharma & Bansal, 2013). Many marketing professionals link attitude and personality to lifestyle. It can be greatly influenced by socio-cultural changes, such as concern over health, environment, aesthetics, life-balance, and many other issues. Two examples of wine lifestyle linkages that can be found in the literature are wine as part of a healthy lifestyle and wine as part of a luxury lifestyle (Thach & Olsen, 2004). Values and lifestyles are psychographic variables that provide clear direction to identify ecological consumer segments. In this case, the researcher finds the research that utilizes psychographic variables to define the ecological consumer profile and declared the relationship between the variables and ecological behavior (Fraj & Martinez, 2006).

Green consumer values

Green consumers are defined as those who tend to consider the environmental impact of their purchase and consumption behaviors. As such, consumers with more vital GREEN values will tend to make decisions consistent with environmentally sustainable consumption (Haws & Winterich, 2013). According to Bailey et al., (2016), green can enhance understanding of consumers' green attitudes and intentions. Green consumption values impact how Indian consumers respond to advertising and public relations stimuli, as green influences perceptions of green brand trust, attitudes toward green marketing communications, and green brand support and purchase intentions. According to Straughan and Roberts (1999), they exhibit low levels of green lifestyle behaviors. Also, only a low positive relationship appears to exist between consumers' environmental value and their green lifestyle behavior. Moreover, Thai consumers' green lifestyle behavior is mainly driven by their egoistic and social-altruistic values.



Methodology

The research strategy used the conclusive research design in descriptive research where the necessary data are collected through a single cross-sectional design. Using the conceptual framework as illustrated in figure 1, the researcher explained how much the independent variable can impact the dependent variable. Under this research design, the study attempts to test the following hypotheses; H1: There is an impact of environmental consciousness on consumer lifestyle, H2: There is an impact of health consciousness on consumer lifestyle, and H₃: There is an impact of consumer lifestyle on consumer purchase intention. This study focuses on the fast-moving consumer goods (FMCG) sector in Sri Lanka and data were collected from both males and females who visited the places where the eco-friendly products are sold in the Colombo district. The items on a scale to measure the environmental consciousness (06) were adopted from Straughan and Roberts, (1999), health consciousness (05) adopted from Ahadzadeh et al., (2018), consumer lifestyle (05) adopted from Thach and Olsen, (2004) and purchase intention (05) were adopted from Hsu (2017).

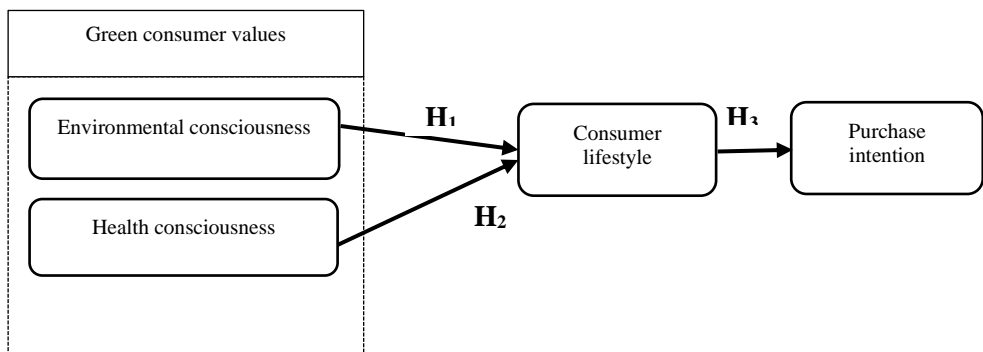


Fig 1. Conceptual Framework

The data collection had happened during from August 2019 to December 2019. The achieved sample consists of 152 questioners. The overall response rate was 36%. This study, therefore, uses PLS to process the data because of sample size is somewhat small. Demographic data analysis has done through the SSPS and 82 respondents were male and that was 53.9%; 70 were females that was 46.05%. The education level of the respondents was as follows, 30 respondents were passed the ordinary level that was 19.73%, 58 were passed the advance level that was 38.16%, 42 were graduates that was 27.63%, .10

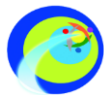


were postgraduates that was 6.58%, and 12 having other educational qualifications that were 7.89%.

Results and Discussions

This study applies Lohmoller's (1989) extended the PLS algorithm and bootstrapping to evaluate the PLS path model. The overall percentage of explained variance (R^2) is 0.55 for purchase intention. All the hypotheses in the theoretical model are positive and statistically significant in the expected direction except the consumer lifestyle. Even though inter-functional coordination statistically not significant, there is a positive relationship. Hypothesis 1 states there is a positive influence of environmental consciousness on consumer lifestyle. Data support this hypothesis ($\beta=0.68$, $t=6.37$, $p < 0.000$) in harmony with the postulated theory, results show that a firm's magnitude of environmental consciousness has a positive and statistically significant effect upon consumer life style. Hypothesis 2 states there is a positive influence of health consciousness on consumer life style. This hypothesis is supported by the data ($\beta = 0.616$, $t = 7.11$; $p < 0.000$).

The finding indicates that the effect is in the expected direction and that the effect is positive and statistically significant. Hypothesis 3 states there is a positive influence of consumer life style on purchase intention. This hypothesis is partially supported by the data ($\beta = 0.20$, $t = 1.46$; $p < 0.14$). The finding indicates that the effect is in the expected direction and that the effect is statistically not significant. The study mainly examines the impact of green consumer values on the FMCG sector's purchase intention, Sri Lanka. It is imperative to consider green consumer values by any organization and how green value-added activities lead to the customers' purchase intention. After all, that is the most suitable way to achieve the organization's goals and objectives while earning fair profits and maintaining profitable relationships with customers. There is a positive impact from all these behavioral components and except for consumer life style all others are statistically significant. So, green product manufacturers should be more focused to improve or enhance consumer life style. This study's finding can provide valuable information for the people managing the FMCG sector to review their measure of environmental consciousness, health consciousness, consumer life style, and purchase intention. Conclusion this provides details to the managers to more focus on providing efficient service strategies by organizing awareness programs and adding values to the customers to face a competitive advantage. According to the study, the policymakers and the government can get the information to develop the industry guidelines and procedures to gain more income through the industry and service expansion.



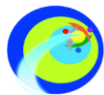
They can provide the institutional facilities/training to enhance the value addition to the customer service and face the competitive advantage as the industry compared with other countries. Policies should be more industry-friendly because the FMCG sector is highly important to improve consumers' living standards with country potential.

Conclusions

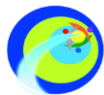
This study has conducted only for the FMCG sector to measure green consumer values' impact on purchase intention. So this is industry-specific. The effect of qualitative factors had not to capture in this study. Also, this study considers only customers in the Colombo district in Sri Lanka. When selecting the sample, this study was limited to the Colombo district and hundred and 152 consumers selected. Those are the critical limitations in this study. Future researchers can overcome those limitations, especially they can use the qualitative factors and the quantitative factors. Researchers who are interested in further study can study the qualitative factors because in this study, they use only quantitative factors. The study is also believed to provide good guidelines for the researchers for further study of the impact of green values on purchase intention, including the different mediating variables.

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Customer service encounter satisfaction of supershop: A study on Dhaka City

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Abstract

Customers are the king for any business, whether it is manufacturing or service-oriented in nature. In the modern age, an organization focuses on designing the service focusing its current customer. Evaluation of Service Encounter Satisfaction of a customer is essential to develop long-run competitive position over the rivals. This study's main objective is to measure how different service encounters contribute to customer satisfaction based on the super shop of Dhaka city. This study is quantitative. Both primary and secondary data has been used to conduct the study. The study's sample size is 110 customers of Super shop who regularly purchase from Dhaka city. Primary data has been collected through a structured questionnaire which has prepared as per Likert scale 5-point methods. The questionnaire has been designed based on three specific hypotheses. SPSS version 23 has been used to analyze the primary data. In this study, descriptive statistical tools like mean, standard deviation, standard error mean, population, sample. have been used. T-test has been used to test the hypotheses. The study reveals that super stores' customers are not satisfied with the initiative taken by authority on post-service encounters.

Keywords: Customer Satisfaction, Service Encounter, Superstore

Introduction

Nowadays Super Store is a popular concept in Bangladesh, especially in the city and divisional areas. Superstores introduced a whole new window in the shopping of daily necessities. They offered quality products at a stable price in a safe and clean environment to survive and achieve profitability.

In the modern era, a popular place for shopping is supermarkets that are a self-service environment. All the supermarkets want to build a good relationship with their customers and are looking for more costumers. They want to track customer satisfaction in the supermarket surroundings that is very important (Aghaei et al., 2012).



Customer service experience is the sentiment associated with a company's ability to provide positive experiences to their customers. Services range from one-on-one interactions where a support agent resolves a customer issue, to exchanges with the brand on a more public scale. In commerce, customer experience is the product of an interaction between an organization and a customer throughout their relationship (Thompson et al., 2004).

Service encounter is any discrete interaction between the customer and the service provider relevant to a core service offering, including the interaction involving the provision of the core service offering itself. This interaction can occur in 3 stages of getting services. These stages are showing bellow with table;

Table 1. Service Encounter through Service Experience

Pre-Core Service Encounter	Core Service Encounter	Post-Core Service Encounter
<ul style="list-style-type: none"> ➤ Communication ➤ Information Search <ul style="list-style-type: none"> ✓ Access to Competitor Websites ✓ Access to Third-Party Websites ✓ Offline Online Recommendations ➤ Initial Contact <ul style="list-style-type: none"> ✓ Face to Face ✓ Telephone ✓ Internet ➤ Onboarding Activities 	<ul style="list-style-type: none"> ➤ Core Interaction <ul style="list-style-type: none"> ✓ Employees ✓ Other Customers ✓ Technology ➤ Environment 	<ul style="list-style-type: none"> ➤ Service Recovery Efforts ➤ Customer Feedback <ul style="list-style-type: none"> ✓ Post transaction surveys ➤ Reviews ➤ Crowdsourcing for new service Development ➤ Recommendation
Service Experience		

Research Problem

The research on service encounters of superstores is absent in Bangladesh. We have seen a customer benefit from three specific stages of service like pre, during and post shopping stage. Most of the organization focuses on during stages to satisfy customers. The satisfaction at the other stages is much essential than during stages. This study has been conducted focusing on the three stages to know about the satisfaction on the said three stages focusing on supper shop.

Objectives of the study

The main objective of the study is to measure how different service encounter contributes to customer satisfaction. Along with the main objectives, the study will also meet the following supportive objectives:



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- to identify the encounters which will mostly contribute to customer satisfaction.
- to identify the limitations in service encounter to satisfy the customers.
- to suggest the measures which can remove the negative impacts of different encounters.

Literature Review

Service encounter is the face-to-face interactive relation between a service provider and service recipient during service consumption. It is also considered as the core of service marketing, having a considerable impact on service quality control, service delivery systems and customer satisfaction. (Dolen et al., 2002). Service encounter is a period during which a consumer directly interacts with a service. Service encounter is the dyadic interaction between a customer and service provider (Surprenant et al., 1987).

The marketing mix is defined as the controllable variables that an organization can coordinate to satisfy its target market (McCarthy et al., 1987). Because of the distinguishing characteristics of services, it has been suggested that service firms have additional variables beyond the traditional "four P's" that can satisfy target markets (Gronroos, 1984). There are three key players in marketing exchange relationships. These are the company, the customer and the employee. The three players can be depicted as vertices in a triangular framework (currently referred to as the literature as the "triangle model of services marketing," with three possible dyadic links (Kotler, 1994).

Methodology

Nature of the study

This study is mainly quantitative in nature to measure the Customers Service Encounter Satisfaction based on primary data from the customers who deliberately shop from different Super shops.

Study area

The area of the study is Dhaka city. Primary data has been collected from the customers directly through a pre-defined close-ended questionnaire. Here customers mean who frequently shop from different super shops in Dhaka

Population, sample design and size

In this study, the customers who purchase from the super shop are considered as population. Different service providers of the super shop are also



considered as the institutional population. The sample respondent of the study is 110. These sample size has been taken by applying the purposive method and the questionnaire has been distributed randomly.

Data collection method

In this study, both Primary and secondary data have used. Primary data has collected from the respondents through the questionnaire. Secondary data has been collected by studying different articles, journals, newspapers, websites, books.

Questionnaire

A structured questionnaire has developed to conduct the study. The questionnaire has developed as per Rensis Likert 5-point basis. The 5 points are Strongly Satisfied, Satisfied, Neutral, Dissatisfied and Strongly Dissatisfied. These 5 points are converted with numerical values, respectively 5,4,3,2 and 1 for the analysis.

Analysis of the collected data

The collected data has analyzed with SPSS version 23. Descriptive statistics, including mean, standard deviation and standard error mean and one tail t-test, have been done to analyze respondents' perception. Here, the test level is considered as three and the confidence level is considered as 95%.

Hypotheses of the study

The study has conducted basing on the following hypothesis:

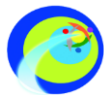
- H₁: There is no significant difference in customer satisfaction in Pre-core Service Encounter stage.
- H₂: There is no significant difference in customer satisfaction during shopping stage.
- H₃: There is no significant difference in customer satisfaction on the Post Service Encounter stage.

Results and Discussions

The analysis of the collected primary data is presenting bellow:

Table 2. Customers satisfaction on the Pre-core Service Encounter
(Descriptive Statistics)

Particulars	N	Mean	Std. Error	SD
Super Shop ensures easy communication process	110	3.71	0.088	0.929
Adequate customer service providers	110	3.64	0.096	1.009
Customers get necessary information in stores	110	3.40	0.076	0.804



Customers get necessary information via phone calls, online	110	3.00	0.107	1.125
Adequate sources to get reliable information	110	3.43	0.291	3.054
Valid N	110			

The above table shows that the mean value of customers perceptions on “*Super Shop ensures easy communication process*” is higher (mean=3.71, SD=0.929) among the five variables where the mean value of customers perceptions on “*Customers get necessary information via phone calls, online*” is lower (mean=3.00, SD=1.125). The table also shows that, the customers’ response for all variables is greater than average value 3.00, indicating that customers are satisfied with Pre-core Service Encounter.

Table 3. Customers satisfaction on the Service Encounter of core stage (Descriptive Statistics)

Particulars	N	Mean	Std. Error	SD
Comfortable and satisfactory Shopping environment	110	4.07	0.074	0.786
Available helpful salespersons for a quick shopping	110	3.55	0.095	1.000
Superstores have adequate technical devices to easy access	110	3.35	0.101	1.063
Quick, easy and transparent billing systems	110	3.45	0.087	0.915
Less time-consuming shopping	110	3.67	0.090	0.949
Hassle free shopping	110	3.71	0.105	1.109
Valid N	110			

The above table shows that the mean value of customers perceptions of “*Comfortable and satisfactory Shopping environment*” is higher (mean=4.07, SD=0.786) among the five variables where the mean value of customers perceptions on “*Superstores have adequate technical devices to easy access*” is lower (mean=3.35, SD=0.101). The table also shows that the customers’ response to all variables is higher than the average value of 3.00, indicating that customers are satisfied with Service Encounter of during shopping or core stage.

Table 4. Customers satisfaction on the Post Service Encounter (Descriptive Statistics)

Particulars	N	Mean	Std. Error	SD
Service recovery efforts	109	3.10	0.070	0.744
Customer feedback systems	110	2.74	0.089	0.942
Customer reviews and recommendations	110	2.54	0.088	0.925
Complaint management Systems	110	2.82	0.085	0.897
Post-Service Interactions	110	2.88	0.076	0.798
Valid N	109			

The above table shows that the mean value of customers' perceptions on “*Adequate service recovery efforts*” is greater (mean=3.10, SD=0.741)



among the five variables where the mean value of customers perceptions on “*Customer reviews and recommendations are appreciated positively*” is

lower (mean=2.54, SD=0.925). The table also shows that, the customers’ response for all variables is lower than average value 3.00 except “*Adequate service recovery efforts*”, indicating that customers are not satisfied with Post Service Encounter.

Table 5. Survey Data

One-Sample Statistics				
Hypotheses	N	Mean	SD	Std. Error Mean
Hypotheses-I	110	3.44	0.778	0.0742
Hypotheses-II	110	3.63	0.671	0.0640
Hypotheses-III	110	2.82	0.606	0.0578

Table 6. One-Sample Test

One-Sample Test						
Hypotheses	t	df	p value	Test Value = 3		
				Mean Difference	95% Confidence Level Lower	Upper
Hypotheses-I	5.955	109	.000	0.44182	.2948	.5889
Hypotheses-II	9.956	109	.000	0.63788	.5109	.7649
Hypotheses-III	-3.113	109	.002	-0.18000	-.2946	-.0654

*p=0.05

The table-5 shows that the mean value of customer satisfaction on “*Super shop’s Pre-core Service Encounter is satisfactory to the customers*” is 3.44 and the SD is 0.778. On the other hand, table 6 shows that t value is 5.955 and the p-value is 0.000. It represents that the hypothesis is accepted that customers are satisfied with the Pre-core Service Encounter of Super shop’s service. It is also noticeable that, the mean value of Customer satisfaction on “*Super shop’s Service Encounter is satisfactory during shopping (core stage) to the customers*” is 3.63 and the SD is 0.671. On the other hand, table 5 shows that t value is 9.956 and the p-value is 0.000. It represents that the hypothesis is accepted: customers are satisfied with the Service Encounter of Super shop’s service during shopping or core stage.

On the other hand, the mean value of Customer satisfaction on “*Super shop’s Post Service Encounter is satisfactory to the customers*” is 2.82 and the SD is 0.606. On the other hand, table 5 shows that t value is -3.113 and the p-value is 0.002. It represents that the hypothesis is rejected. Customers are not satisfied with the Post Service Encounter of Super shop’s service.



Conclusions and Recommendations

Customer's needs are diversified because every customer is unique in terms of tastes, choices and habits. Due to the excessive busy life, the demand for supper shops is increasing day by day. Peoples are becoming dependent on supper shops for daily household shopping. Customers are getting better service and also quality products at reasonable price from this super shop. However, with the quality products and services, the customers also have some implied needs from the supper shop. Like other organization, the supper shop also requires to satisfy its customers. This study has found that the customers of supper shops are satisfied with the service of pre and during shopping stage service but they are not satisfied with the post-stage. The Supper shop authority needs to concentrate on the post-stage needs of customers to hold them as future customers. Otherwise, the growing dependency of customers on the super shop may not be continued. Based on the findings, the researchers suggest the following initiatives to the authorities of supper shops;

- i. Supper shops' authority should focus on creating a long-run relationship with current and future or even lost customers. To build such relations, the authority may focus on Post Service Encounter satisfaction to the customers. The authority should maintain Post-Service interactions satisfactory to the customers for making them, future customers.
- ii. Supper shops' authority needs to ensure feedback from the current customers about products/services. They also can develop complaint management systems which will handle the customers complain about the service.
- iii. Supper shops' authority can accept the customer reviews and recommendations positively. A modern digital mode like facebook, mail, or even websites. can be used for the purpose. Efficient manpower can be appointed to handle customer reviews and recommendations.
- iv. The Superstores need to ensure all types of technical devices at the stores available. This will help customers to protect the risk and hazard of bearing cash.

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Does social media advertising enhance consumers' purchase intention?

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Abstract

This study investigates the effects of social media advertising features on consumers' purchase intention in the context of Bangladesh. Data was collected from 318 social media users through an online questionnaire survey and analyzed using Partial Least Squares-based Structural Equation Modeling (PLS-SEM). The study found diverse results; specifically, interaction and eWOM have a significantly favorable influence on brand image, while entertainment does not. Likewise, entertainment, interaction, and eWOM are effective in creating brand awareness. An improved purchase intention of consumers is found because of the brand image; however, brand awareness was incapable of improving consumers' purchase intention. Furthermore, the study also estimated an indirect (mediation) analysis and found that brand image has a significant mediating role in the relationships between interaction and consumers' purchase intention, while brand awareness does not. The findings will expand the current knowledge of similar studies, and policy-makers can use it in practice. The implications and future research directions are also outlined.

Keywords: brand awareness, brand image, eWOM, interaction and purchase intention

Introduction

Social media has become increasingly popular worldwide, as billions of people are connected in real-time through it. It finds a place for itself in all aspects of our lives from personal to business deals where marketing and advertising activities are significantly increased in the social media platform to interact with customers as its fans are growing fast (Alalwan, 2018). It has changed traditional methods of searching for information and purchasing brands, which has generated new social and economic consequences as firms and practitioners spend a considerable amount of money, time, and resources in social media advertising (Seo & Park, 2018). However, the increased number of fans and followers is not guaranteed whether they contribute to enhancing consumers' purchase intention required to transform these fans into a customer.



Despite the increasing importance of social media advertising, studies have primarily given attention to improve brand awareness and brand image (Seo & Park, 2018). These studies have mainly focused on social media components' effects on consumer and brand loyalty (Yadav & Rahman, 2018; Godey et al., 2016; Ismail, 2017). However, the contribution of the effects of social media advertising features on consumers' purchase intention in extant literature to date remains unexplored (Kim & Ko, 2012; Alalwan, 2018). Therefore, this study investigates the effects of social media advertising features on consumers' purchase intention in the context of Bangladesh. The rest of the paper presents a literature review followed by a conceptual framework, research methods, findings, conclusions, and recommendations.

Literature Review

Social media advertising features

This study mainly focused on three social media advertising features (i.e., entertainment, interaction, and eWOM) that may contribute to building consumers' purchase intention. Entertainment in media channels refers to its quality of being amusing for media users (Eighmey & McCord, 1998). It is considered a result of fun and enjoyment experienced through social media (Agichtein, Castillo, Donato & Gionis, 2008). Previous studies acknowledged that the entertaining features of social media advertising have a significant influence on building brand image and brand awareness (Seo & Park, 2018; Bilgin, 2018). Interactivity is considered as one of the most critical antecedents in online platforms and social media sites. Social media interaction means exchanging communication contents between brands and customers through social media platforms (Gallaughier & Ransbotham, 2010; Kaplan & Haenlein, 2010). Literature also figured out that interaction plays a significantly positive role in building brand image and brand awareness (Seo & Park, 2018; Bilgin, 2018). Likewise, Alalwan (2018) further claimed a significantly positive link between interaction and consumers' purchase intention.

eWOM refers to the extent to which consumers pass information and upload content in social media (Godey et al., 2016). Consumers can evaluate products through social media advertising and, in turn, enhance e-WOM (Brown, 2011). It generates more substantial credibility, empathy, and more relevance due to consumers' ability to convey a message on brand-related information to their contacts without having restrictions (Kim & Ko, 2012). eWOM is a widely used antecedent in social media literature, and this



produces a strong influence to create a brand image and brand awareness (Godey et al., 2016; Seo & Park, 2018).

Brand image and brand awareness on purchase intention

Purchase intention is a combination of consumers' interest in and the possibility of buying a product. It is also considered a probability that lies in the customers' hands who intend to purchase a particular product (Grewal, Monroe & Krishnan, 1998). However, brand awareness replaces a brand's strong indicators such as name, sign, symbol, and slogan, while the brand image is the brand's position in the consumer's mind beyond these signs. Brand awareness addresses the level of consumer recognition, acceptance, and recall of a brand in any case (Percy & Rossiter, 1992). However, brand image is used as an alert for recalling brands; therefore, the brand image may have real and virtual associations in consumers' minds (Blackwell & Miniard, 2006). Previous studies further claimed that both brand awareness and brand image have a significantly positive effect on consumers' purchase intention (Seo & Park 2018; Bilgin, 2018).

Conceptual Framework

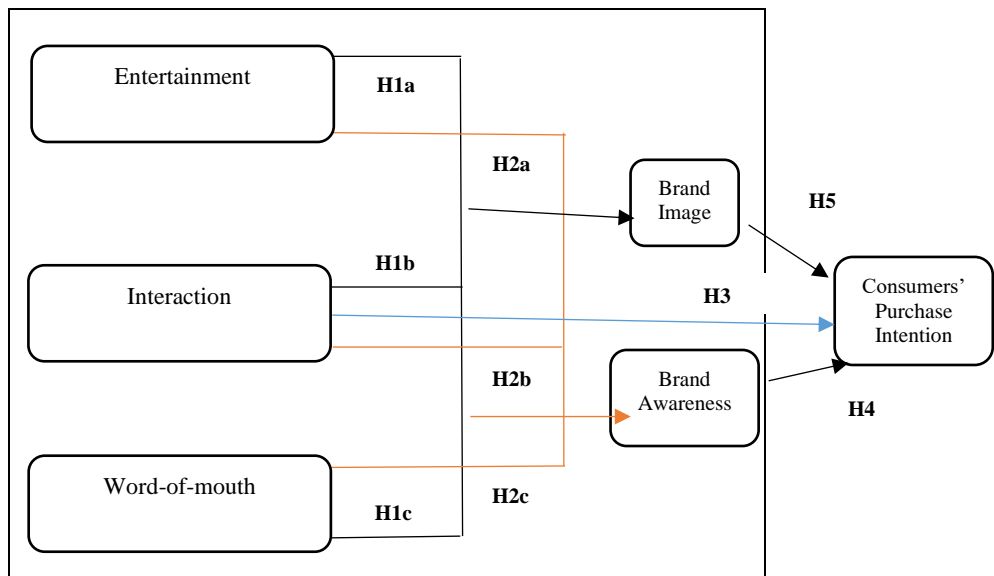


Fig 1. Conceptual Framework



Hypotheses of the study

- H₁: Social media advertising features ([a] Entertainment, [b] Interaction, and [c] e-WOM) have a significantly positive influence on brand image.
- H₂: Social media advertising features ([a] Entertainment, [b] Interaction, and [c] e-WOM) have a significantly positive influence on brand awareness.
- H₃: Interaction has a significantly positive influence on consumers' purchase intention.
- H₄: Brand awareness has a significantly positive influence on consumers' purchase intention.
- H₅: Brand image has a significantly positive influence on consumers' purchase intention.
- H_{6a}: Brand awareness significantly mediates the relationships between interaction and consumers' purchase intention.
- H_{6b}: Brand image significantly mediates the relationships between interaction and consumers' purchase intention.

Methodology

A quantitative survey was carried out by collecting data to test the significance of the conceptual framework's proposed relations. The measurement items on the used constructs were adopted from previous related studies (Alalwan, 2018; Kim & Ko, 2012; Seo & Park, 2018). A six-point Likert type scale ranging from strongly disagree (1) to strongly agree (6) is used to analyse each measurement item. The data collection was carried out from consumers of the social media users online and received 318 usable responses, and performed Partial Least Squares-Structural Equation Modelling (PLS-SEM). This was done by performing factor loading, composite reliability, average variance extracted, and Fornell and Larcker's (1981) and Heterotrait-Monotrait (HTMT) criterion using different suggested threshold values. The bootstrapping and blindfolding procedures were further performed to test the significance of the model. The effect size of the estimated relation and the structural model's predictive relevance was also performed in this study (Hair, Hult, Ringle & Sarstedt, 2017; Ringle, Wende, & Becker, 2015).

Results and Discussions

Measurement Model

The factor loading, composite reliability (CR), and average variance extracted (AVE) were performed to establish the convergent validity (Fornell&Larcker,



1981) (also see Table 1). The test results exceeded different threshold values; thus, the convergent validity met all three requisites.

Table 1. Assessment of Item Reliability

Construct	Item	Loadings	CR	AVE
Entertainment	ENT1	0.85	0.87	0.77
	ENT2	0.90		
	INT1	0.69		
	INT2	0.79		
Interaction	INT3	0.78	0.86	0.56
	INT4	0.74		
	INT5	0.74		
eWord-of-Mouth	WOM1	0.87	0.85	0.73
	WOM2	0.85		
Brand Image	BRI1	0.70	0.84	0.57
	BRI3	0.77		
Brand Awareness	BRA1	0.89	0.86	0.67
	BRA2	0.88		
	BRA3	0.68		
Consumers' Purchase Intention	CPI2	0.86	0.90	0.75
	CPI3	0.89		
	CPI4	0.85		

The item BRI2 and CPI1 were deleted for the low score. CR= Composite reliability, AVE= Average variance extracted. Discriminant validity was further assessed by using the test suggested by Fornell and Larcker's (1981), and HTMT criterion (also see Table 2 and 3). The HTMT method indicates that the threshold value of below 0.90 between two study constructs is acceptable to establish discriminant validity. The HTMT_{.90} means that the result is below the recommended critical value of 0.90 for each group-specific model estimation. Thus, it also met the tests of discriminant validity.

Table 2. Square root of the AVE and correlation of coefficient

	Fornell and Larcker Criterion					
	BRA	BRI	ENT	INT	CPI	WOM
BRA	0.82					
BRI	0.67	0.76				
ENT	0.36	0.33	0.88			
INT	0.45	0.56	0.42	0.75		
CPI	0.50	0.59	0.36	0.43	0.87	
WOM	0.45	0.51	0.36	0.45	0.51	0.86

Note: Bold diagonal values represent the square root of the AVE, and the off-diagonal value represents the correlation of coefficient.

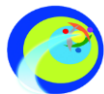


Table 3. HTMT Results

	BRA	BRI	ENT	INT	CPI	WOM
BRA						
BRI	0.89					
ENT	0.48	0.45				
INT	0.57	0.71	0.54			
CPI	0.60	0.74	0.46	0.53		
WOM	0.64	0.73	0.55	0.63	0.70	

Note: Discriminant validity is established at HTMT 0.90

Structural Model

The bootstrapping procedure was used to test the path relations in the structural model utilizing 5000 subsamples that ensure the significance of the path relations between the used constructs (Hair et al., 2017). The results (Table 4) illustrate that the direct effects of INT and WOM on BRI, ENT, INT, and WOM on BRA, and BRI on CPI, and an indirect effect (mediation) of INT on CPI through BRI were positive and significant. Therefore, hypotheses H1b, H1c, H2a, H2b, H2c, H5, and H6b were supported. However, the direct effect of ENT on BRI, INT, and BRA on CPI, and an indirect effect of INT on CPI through BRA were negative and insignificant. Thus, hypotheses H1a, H3, H4, and H6a were not supported.

Next, the structural model's predictive relevance was further evaluated by using the blindfolding procedure (Hair et al., 2017; Ringle et al., 2015). The proportion of variance in the endogenous construct was assessed by using the coefficient of determination (R^2), which was predicted from the independent variables. The structural model also assessed the cross-validated predictive relevance by using the criterion of Stone-Geisser's (Q^2). Besides, the effect sizes (f^2) that specified the extent of the relative effect of a particular independent variable on a dependent variable were substantial (Chin, 2010) (also see detail in Table 4).

Table 4. Results of the Structural Model

Direct Effect	Beta	S.E.	t-value	p-value	Decision	f^2	R^2	VIF	Q^2
H1a: ENT -> BRI	0.06	0.06	1.01	0.16	Not Supported	0.00		1.267	
H1b: INT -> BRI	0.40	0.05	7.54**	0.00	Supported	0.19	0.40	1.379	0.22
H1c: WOM -> BRI	0.31	0.05	5.76**	0.00	Supported	0.12		1.308	
H2a: ENT -> BRA	0.15	0.06	2.61**	0.01	Supported	0.03		1.267	
H2b: INT -> BRA	0.27	0.06	4.63**	0.00	Supported	0.07	0.30	1.379	0.19
H2c: WOM -> BRA	0.28	0.06	4.59**	0.00	Supported	0.08		1.308	
H3: INT -> CPI	0.05	0.06	0.91	0.18	Not Supported	0.00	0.43	1.298	0.30
H4: BRA -> CPI	0.11	0.07	1.57	0.06	Not Supported	0.01		1.920	
H5: BRI -> CPI	0.33	0.06	5.36**	0.00	Supported	0.09		2.227	



Post-hoc (Mediation)	Beta	S.E.	t-value	p-value	Decision
H6a: INT -> BRA -> CPI	0.03	0.02	1.48	0.14	Not Supported
H6b: INT -> BRI -> CPI	0.13	0.03	3.93**	0.00	Supported

**p < 0.01, *p < 0.05, S.E. = Standard error.

Conclusions and Recommendations

This study was attempted to investigate the effects of social media advertising features on customers' purchase intention in the context of Bangladesh. It provides valuable insights into the social media advertising components and the mediating role of brand image and brand awareness on the relationships between interaction and consumers' purchase intention. The study also presented a comprehensive framework to study social media advertising and consumers' purchase intention. This study's outcome can benefit social media practitioners, policy-makers, and the other related stakeholders.

This study has two fundamental limitations that provide opportunities for further studies. Firstly, it examined the effects of social media advertising features as a whole, the other study on the social media advertising features of a specific product would produce more customized results. Secondly, only one social media advertising feature (i.e., interaction) was used as an independent component, where the other two (i.e., entertainment and eWOM) can be tested in future studies.

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Corporate Social Responsibility (CSR) activities and brand equity of Dialog Axiata PLC, Sri Lanka

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Abstract

The concept of corporate social responsibility is an emerging concept and widespread notion among business communities and other aspects in recent decades. The Sri Lankan telecommunications industry has undergone several rounds of consolidation over the years. Mobile telecommunication covered a wide area of the population in Sri Lanka. Although, few types of research are conducted in Sri Lanka related to corporate social responsibility on brand equity especially in the mobile telecommunication industry. This study aims to analyze the effect of dimensions of CSR and Brand equity of Dialog Axiata PLC in Sri Lanka. Four dimensions – Economic responsibility, legal responsibility, ethical responsibility, and philanthropic responsibility – are considered independent variables of this study and Brand equity of the company is considered the dependent variable of this study. The data were collected from the 100 students of the Faculty of Business Studies, Vavuniya Campus and were entered into the SPSS – 20. Regression analysis used in this study for findings. The present study's findings indicated that the four dimensions of the CSR significantly affect the brand equity and positively correlated. Further, the result indicated that Ethical responsibility has positively associated with Brand equity than the other dimensions.

Keywords: brand equity, economic responsibility, ethical responsibility, legal responsibility and philanthropic responsibility

Introduction

The concept of corporate social responsibility is an emerging concept and widespread notion among business communities and other aspects in recent decades. In today's competitive marketplace, corporate social responsibility will take significant consideration in the business world. Corporate social responsibility is not a new concept for business practices. Hafez (2018). Global and local organizations started to pay great attention to corporate social responsibility activities. In a competitive environment, the brand can play a vital tool in winning market position and building loyal customers. In the Sri Lankan context, few organizations start to follow corporate social



responsibility practices. The Sri Lankan telecommunications industry has undergone several rounds of consolidation over the years. Mobile

telecommunication covered a wide area of the population in Sri Lanka. Although there are few types of research conducted in Sri Lanka related to corporate social responsibility on brand equity, especially in the mobile telecommunication industry (Shibly & Hilal 2015), this research attempted to comprehensively fill the gaps. The present study's research question is; what extent the dimensions of corporate social responsibility influence the brand equity of the Dialog Axiata PLC in Sri Lanka. The objectives of the study are to analyse the effect of dimensions of corporate social responsibility on brand equity, to measure the relationship between dimensions corporate social responsibility and brand equity and to discuss what dimensions of corporate social responsibility have significantly associated with brand equity.

Literature Review

Salmones et al., (2005) measured customers' perceived CSR in four directions – economic, legal, ethical, and social – and investigated its impact on the overall evaluation of service and corporate brand loyalty. The results obtained after surveying 689 mobile telephone service users from Spain showed that perceived CSR indirectly influences corporate brand loyalty via the overall valuation of the service. Impact of various CSR dimensions, as perceived by customers, on brand loyalty researched through 1,464 mobile telecommunication customers from Romania's urban areas. As a result, the authors stated that customer perceived CSR of mobile telecom companies has a positive and significant impact on brand loyalty, the most influential dimension regarding companies' CSR responsibilities towards their customers.

Patrick and Agbemabiese (2015) empirically investigate “the influence of CSR awareness on consumer purchase intention of a telecommunication network in Ghana”. Through this study, CSR activities performed by MTN were health-related activities, economic empowerment activities and related educational activities and these are very significant CSR practices that help build brand equity and attract marketing value for MTN. Also, he mentioned, “CSR activities performed by MTN were rated as a higher factor that influences consumers to stay and repurchase of the network” in his research study. Kumar (2014) discussed the topic of “CSR Influence on Customer Relational Outcome: A Study of Indian Telecom Industry.” This research study analyzed the customers of all mobile service providers in the Delhi



NCR region by using 214 responses. The findings indicated that CSR positively influences on both customer satisfaction and customer loyalty.

Shibly and Hilal (2015) indicated in their study that corporate social responsibility has a positive relationship with brand equity in the Sri Lanka Telecommunication PLC. However, the study did not found the relationship between the dimensions of corporate social responsibility and brand equity. Hence the study considered four dimensions of corporate social responsibility on the brand equity of Dialog Axiata PLC.

Hypotheses of the study

- H₁: Dimensions of corporate social responsibility have a higher effect on brand equity.
- H₂: There is a significant relationship between dimensions of corporate social responsibility and brand equity.
- H₃: There is a significant association between dimensions of corporate social responsibility and brand equity.

Methodology

For this study purpose, 100 final year Students identified from the Faculty of Business Studies, Vavuniya Campus of the University of Jaffna and the convenient sampling technique was used in this study. The Philanthropic responsibility, Ethical responsibility, Legal responsibility, and Economic responsibility Carroll (1991) considered independent variables and brand equity considered ad dependent variable of this study. Data is entered and analyzed using SPSS version 20. Reliability, Validity, Correlation analysis, Regression analysis and Pearson's Chi-square test were done in this study.

The first reliability of variables was measured in this study. For measuring the reliability, Cronbach alpha was calculated. The Cronbach alpha of the variables of this study is 0.944. It is greater than the cut-off rate of 0.70. The KMO and Bartlett's tests were measured for the validity of data. The study indicated that all variables' adequacy is 0.787 and significant. It is indicating that the values of adequacy are Meritorious.

Results and Discussions

For testing hypothesis 1, the multiple regression analysis was used to the effect of dimensions of corporate social responsibility on brand equity. Table 1 explains the model summary to identify the model fitness. The model indicated that adjusted r² is 0.977. It shows that 97.7% of brand equity



represented by the corporate social responsibility’s dimensions in the Dialog Axiata PLC in Sri Lanka and the F statistics of the study also at a significant

level. The results are indicated in Table 1 and Table 2. Further, the results indicated that the corporate social responsibility dimension have a significant effect on the brand equity of the Dialog Axiata PLC. The results are illustrated in Table 3. Hence, hypothesis 1, dimensions of corporate social responsibility have a higher effect on brand equity, is supported in this study.

Table 1. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.989 ^a	.978	.977	.064

Table 2. ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	17.048	4	4.262	1056.934	.000 ^b
	Residual	.383	95	.004		
	Total	17.431	99			

a. Dependent Variable: CSR

b. Predictors: (Constant), P, L, ECO, E

Table 3. Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	
	B	Std. Error	Beta			
(Constant)	.118	.065		1.799	.075	
Economic	.278	.015	.401	18.403	.000	
1	Legal	.181	.017	.181	10.871	.000
	Ethical	.276	.016	.377	16.965	.000
	Philanthropic	.228	.014	.287	15.809	.000

a. Dependent Variable: CSR

For testing the hypothesis, the correlation analysis measured in this study. The correlation analysis of independent and dependent variables is illustrated in Table 4.

Table 4. Correlation Analysis

		ECO	L	E	P	BE
BE	Pearson Correlation	.756**	.420**	.719**	.596**	1
	Sig. (2-tailed)	.000	.000	.000	.000	

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

Based on the results indicated in Table 4, the correlation relationships between economic responsibility, legal responsibility, ethical responsibility and philanthropic responsibility and brand equity have positively significant at $p < 0.01$ (0.756, 0.420, 0.719 and 0.596 respectively). Hence, hypothesis 2



is supported in this study. For testing hypothesis 3, there is a significant association between corporate social responsibility dimensions and brand equity, Pearson's Chi square test was done in this study. The results are

illustrated in Table 5. The results indicated that the Chi square of the three dimensions except Legal responsibility of corporate social responsibility significantly associate with the Dialog Axiata PLC's brand equity in Sri Lanka at 2 degrees of freedom. Nevertheless, Legal responsibility has significantly associated with brand equity at 1 degree of freedom. Further results indicated that Ethical responsibility has positively associated than other dimensions with brand equity.

Table 5. Pearson's Chi Square Test

Dimensions	χ^2	DF	P Value
Economic Responsibility	86.56	2	0.000
Legal Responsibility	66.27	1	0.000
Ethical Responsibility	95.31	2	0.000
Philanthropic Responsibility	38.89	2	0.000

Conclusions and Recommendations

This study's main objective is to analyze the influence of the dimensions of corporate social responsibility on brand equity of Dialog Axiata PLC in Sri Lanka. The results of this study indicated that 97.7% of the dimensions have positively effect on the brand equity of the Company. Economic responsibility and Ethical responsibility have a higher positive relationship with the Brand equity than that of Legal responsibility and Philanthropic responsibility. The results are supported by the findings of the prior researchers (Shibly&Hilal, 2015). Further, the study's findings indicated that Ethical responsibility has highly associated with brand equity than the other dimensions. The study recommended that the organization continue special Corporate Social Responsibility (CSR) practices like donations, reliefs, community support programs and health enhancement programs during COVID 19 periods and invest education support programs, green environment programs, rehabilitation programs, women empowerment programs, talent development programs. The researchers need to compare the CSR and Brand equity with other telecommunication service providers in Sri Lanka in their future studies.

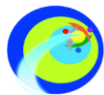
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Linking social capital and people's involvement in the tourism context of Sri Lanka: Special Reference to the Mirrisa, Galle district

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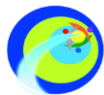
Abstract

The study aims to identify the association between Linking Social Capital (LSC) and People's Involvement (PI) in the tourism context. LSC is one of the essential factors that influence PI in tourism activities. While the local people link them with government authority, Non-Government Organizations (NGOs), financial institutions, tourism industries, donor agencies, and experts, they can acquire financial and non-financial assistance to involve in local tourism activities, and they can get the support from the Decision Making and Problem Solving (DMPS) of tourism planning and development. Data were collected from 65 respondents through self-administered questionnaires with a 1-7 Likert scale. The mean values of the independent and dependent variables were calculated and correlation analysis was employed in SPSS to identify the association between LSC and PI. The results revealed that there is a positive association between LSC and PI in the tourism context. Therefore, it can be emphasized that LSC enhances the PI in local tourism activities.

Keywords: lining social capital, people's involvement and sustainable tourism industry

Introduction

The Social Capital (SC) is a scientific study of human interaction, the body of knowledge of human behavior, human involvement, and sharing information to achieve the predetermined objectives. SC determines sustainable tourism development (Hwang, 2012). SC includes community links with financial institutions and stakeholders involved in the tourism industry (Grant, 2001; Thammajinda, 2013; Hwang, 2012). LSC refers to the local people's connections with government and private organizations to acquire the resources for economic activities (Woolcock, 1998). Besides, linking capital



is a community connection with voluntary organizations (Sabatini, 2008). In Sri Lanka, there are many potentials for community-based tourism, namely; Ella, Mirisha, Heeloya, Pollonaruwa Town, Happutale, Rekawa Development Foundation, Muthurajawela Marsh Centre, Turtle Conservation Project, Arugam Bay Community Eco Guides Association, Walawe Jungle River Boat Safari, and Walathwewa Community Tourism Initiative.

Consequently, LSC study is missing in the development areas, and LSC is a gateway for the local people to acquire resources (financial assistance, technical advice, and capacity building to get involved in the income generation (Woolcock, 2011). Significantly, people's connection (linking) with relevant stakeholders enhances PI in the tourism industry since local people at the grass-root level get the opportunity for funds, advisory services, technical support and skill development (Thammajinda 2013; Hwang, 2012). Therefore, this study is more significant because there are limited LSC and PI studies in the tourism context. Further, this study will support tourism stakeholders and policymakers in preparing an appropriate development framework for sustainable tourism development in poverty areas. Further, the study's objective is to identify the correlation between LSC PI in the tourism context.

Literature Review

Ekanayake (2006) argued that people's link with external organizations, namely; government institutions, NGOs, donor agencies, volunteer organizations and financial institutions, helps find the resources to get involved in economic activities that contribute to the poverty eradication in the rural areas. Further, Woolcock (2001) argued that LSC is the vertical relationship that is the local community links with the political and legal institutions, which are essential to acquire the resources to get involved in economic activities. Also, LSC enhances access for resources to be involved in achieving common goals in the community (Woolcock, 1998). Consequently, community links with national governments and NGOs are to the grassroots community to get involved in the tourism industry (Claiborne, 2010). Community links with external organizations like funding agencies and government organizations facilitate to acquire financial and expert assistance to encourage the PI in tourism activities (Macbeth, Carson, and Northcote, 2004). Besides, Haywood (1998) explained the community participation as the collective share of the residents, government officers, development agencies, and business holders in decision making and problem-solving in tourism planning and development. Furthermore, Sabatini (2008)



found that LSC connects the local people with civil society organizations and helps carry out advocacy activities through collective action. Consequently, Jeong (2008) found that the success of tourism planning and development is influenced by the PI in local areas. Further, PI in decision making is essential in sustainable tourism development (Claiborne, 2010). Further, LSC induced participation in local tourism activities (Macbeth, Carson & Northcote, 2004). Besides. If the people trust the other people in residence, they would like to participate in the decision-making process of tourism development (Hwang, 2012). Consequently, LSC has strong positive associations with PEI (Involvement in tourism business and tourism-related services) and involvement in DMPS of local tourism activities (Shanmuganathan, Nalin, Gamini & Chandralal, 2020).

Methodology

This is descriptive and explanatory research. A convenience sampling method was used to identify the study area. Mirrissa is in the Galle district of Sri Lanka where community-based tourism is well developed. 65 respondents were getting involved in the tourism business, namely: transport, tour guides, restaurants, cool bars, homestay services, and souvenir businesses selected for the study. Data were collected in January 2020 through respondents administered questionnaires. The respondents were asked to give an opinion about their tourism involvement by rating the numbers varying from 7 to 1, which denotes very highly agreeable to the low level of agreeable, respectively. LSC is the independent variable that included five indicators (People's link with government organizations, tourism industries, financial organization, NGOs and Travel/tour organizations) and the mean values of indicators were calculated. Likewise, PEI (Personal Involvement in tourism activities) and PI in DMPS in tourism activities are the dependent variable, and each variable's mean values were calculated. Data were analyzed in SPSS version 23 and the correlation analysis was employed to identify the association between independent and dependent variables.

Results and Discussions

The mean values of the independent variable (LSC) and dependent variable (PI) were calculated and correlation analysis was employed to examine the correlation between LSC and PI. LSC includes five indicators: People's link with NGOs, government authorities, hotel and tourism industries, financial institutions, and donor agencies. PI includes two indicators: Personal Involvement (PEI) and involvement in DMPS. Results revealed that (as shown in table 1), there is a strong positive correlation between LSC and PEI



{p values is less than 0.05 (0.02**)}. Likewise, a strong positive correlation between LSC and DMPS {p values is less than 0.05 (0.01**)}. Accordingly, if the LSC increases, PEI in tourism activities also increases. Further, if the LSC is high, PI in DMPS of the tourism affairs also high.

Table 1: Results of correlation analysis

		PEI	DMPS
LSC	Person Correlation	0.02**	0.01**
	Sig. (2-tailed)	0.992	0.850

**Correlation is significant at 0.05

Conclusions and Recommendations

The study's ultimate objective is to examine the correlation between LSC and PI in a tourism context. The results show that there is a strong positive association between LSC and PI. Besides, people's links with government, financial institutions, tourism industry, experts, and NGOs enhance local people's resources to get involved in tourism activity. Likewise, people's link with external organizations motivates people to get involved in the decision making in tourism planning and development, and solving tourism-related issues. This study recommends that tourism policymakers and development agencies should prepare an appropriate development framework that ensures the link of local people with government authorities/NGOs and tourism industries to acquire resources and other assistance to enhance the PI in tourism activities (PEI) and DMPS of local tourism affairs which are essential for the sustainable tourism development.

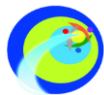
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Analyzing the relationship between destination attributes and satisfaction of tourists who visit Rathnapura district

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Abstract

Rathnapura is one of the leading districts in Sri Lanka. Also well known as gem city in the country with a lot of well-known attractions and lesser-known attractions available in the area. According to the primary survey, even though there is a high volume of arrivals to significant attractions, other areas are not popular among foreign tourists. Therefore, the study was conducted to identify tourists' demographic profile, determine the relationship between destination attributes and tourist satisfaction, identify the most significant destination attribute, and make recommendations to improve tourists' satisfaction. For this quantitative research study, 100 foreign tourists who visit the Rathnapura area were selected as samples. The convenience sampling technique is used by the researcher. Both primary and secondary data were collected and analyzed by SPSS version 21. According to the findings, Accessibility, Amenities, and Accommodations create a weak positive relationship with tourist satisfaction. However, Attraction in the Rathnapura area creates strong positive relations with tourists' satisfaction. It is suggested to develop accessibility with good internal transportation, infrastructure, and other services. The accommodation sector needs to be improved further by providing value for money, service quality, and accommodation facilities development. It is also important for public and private promotional activities to develop Rathnapura as a major tourist destination.

Keywords: accessibility, accommodations, amenities, attraction, and tourist satisfaction

Introduction

Physical and administrative boundaries of destination directly affect destination management. Management of tourism products generated destination. On the other hand, the destination can be defined as a central place to decide about taking a trip (World Tourism Organization, 2014). The travel intention of tourists is motivated by destination. Available facilities in the destination are generated decision about the trip in a tourist's mind. Sri Lanka is one of the population destination in the world tourism industry. After the Easter attack, Sri Lanka became the best destination according to the lonely planet website. In the 2019 year, SLTDA identified more than one



million tourist arrivals in Sri Lanka. Rathnapura is one of the main districts in Sri Lanka. Also well known as gem city in the country and lot of well-known attractions and lesser-known attractions available in the area known as Saman Dewalaya, Bopath fall, Rathnapura National Museum, Adams peak, Waulpane limestone cave, Pahanthudawa fall, Silogama Community base tourism village, Sankapala Ancient Temple, Kalthota Duwili fall,. According to the Sri Lanka Tourism Development Authority (2018), 211,810 foreign tourists visited Udawalawa National park. The number of visitors is second only Yala National Park. It means a high volume of foreign tourist's interest udawalawa. Also, more than fifteen thousand foreign tourists reached to Sinharaja rain forest. SLTDA Registered tourist accommodation rooms between 500 to 1000 and 3 registered restaurants are available in Rathnapura District (SLTDA, 2019). Despite the high volume of foreign arrivals recorded for the Udawalawa National Park area, other attractions are not very popular among tourists. When considering tourist arrivals to the Rathnapura National museum in 2013 to the 2018 year, the number value is 442. Therefore, the study was conducted to find the answers for "is there a relationship between destination attributes and the satisfaction of tourists who visit Rathnapura District?". The objectives of this study are to identify the demographic profiles of tourists who visit the Rathnapura area, to determine the relationship between destination attributes and tourist satisfaction in the Rathnapura area and to identify the most significant destination attribute and make recommendations to improve tourists' satisfaction.

Literature Review

Destination is a cluster that includes products, services, activities, and experiences along the tourism value chain and a basic unit of tourism analysis. Also, destination collaborates with various stakeholders. It builds a network for a large destination by developing its intangible image and identifying its market competitiveness (World Tourism Organization, 2017). According to Chin et al., (2018), tourists highly believe that the quality of accessibility and accommodation quality is vitally linked with tourist satisfaction. Also, highly satisfied tourists will revisit intention to the rural tourism destination. Host community's favorable attitudes enhance the relationship between accommodation quality and tourist satisfaction (Chin, Law, Lo & Ramayah, 2018). Tourists with disabilities respond to the needs of tourists with disabilities, not only in accommodation outlets but also in transportation, museums, recreation areas, restaurants. Also, they were not satisfied with transportation. Accessibility and its infrastructure facilities play a vital role in satisfaction (Dimou & Velissariou, 2016). Study findings confirmed in Gili

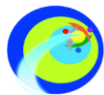


Ketapang Beach attraction and amenities facilities influence tourist satisfaction (Ismail & Rohman, 2019).

Multidimensional factors such as an eclectic range of natural resources, built attractions, culture, activities, amenities, and accommodation should be available in the destination to absorb the attraction of tourists because it should be effectively positioned on the tourist mind (Pike, 2005). A set of products, services, and attractions to create a specific place for tourists, which can be explained as the destination. Attraction and accessibility create a high volume of influence with tourist satisfaction in Chiang Mai as a tourism destination. In Thailand, people's hospitality, friendliness, welcoming characteristics, and its uniqueness, good food, and accommodation prices, transportation and infrastructure mainly affect satisfaction (Suanmali, 2014). Tourist satisfaction in Galle destination, Sri Lanka depends on accessibility, attraction, climate, events, and relaxation. To develop destination brands in Galle, there is a need to enhance natural landscape attraction, activities, and other performance (Kodithuwakku, 2018). Tourist attractions such as cultural, archeological, gastronomy are the main reasons to select the destination. Also, tourist accommodation depends on high tourist satisfaction. Facilities of accommodation and other essential services create a proper loyalty path via satisfaction (Andreea, 2018). According to Sukiman et al., (2013), even though some issues occurred, Accessibility effect with the majority of tourist's satisfaction. Moreover, tourist satisfaction affects available facilities such as shopping while traveling. According to Robustin et al., (2018), Amenities, Attractions and accessibility create a significant affect effecton the satisfaction of tourists and encouragement for destination loyalty.

Methodology

The research site was identified as the Rathnapura area. The researcher used a quantitative research approach. The total population was tourists who visited the Rathnapura district in the last quarter of the 2019 year. Samples included 100 foreign tourists who participated in tourism-related activities in the Rathnapura area. Also, a convenience sampling technique is used. Both primary and secondary data were collected. Primary data collected from questioners was based on five-point Likert scale levels. Accessibility, Attraction, Amenities, and Accommodations are identified as independent variables, and Tourist satisfaction is identified as the dependent variable. The collected data were analyzed by SPSS version 21.



Conceptual Framework

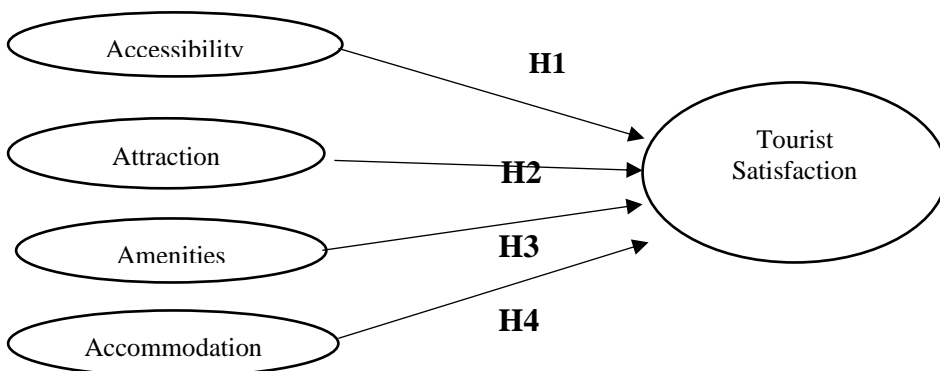


Fig 1. Conceptual Framework

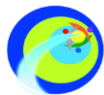
Results and Discussions

According to tourists' demographic profile, most of 52% of them are from European countries. 14% of both American and Asian country tourists and 11% from Australia. There were 44% Male respondents and 56% Female respondents. 58% are in the 20 – 29 age group. 30 – 39 age group represented 18% of tourists. The rest are more than 40 years old. 68% of the tourists are married. 48% are graduated and 11% had postgraduate levels. The rest of them are undergraduate, diploma, and secondary school level. 82% came for the first time to Sri Lanka and the rest were more than once.

Table 1. Reliability and Validity

Variables	Cronbach's Alpha	KMO and Bartlett's Test
Accessibility	0.724	0.713
Attraction	0.755	0.796
Amenities	0.796	0.692
Accommodation	0.812	0.785
Tourist Satisfaction	0.838	0.801

KMO and Bartlett's test is used to measure the validity of this questionnaire. Acceptance range for this test minimum of 0.5. Based on Table 01 values, all variables are valid. Generally, less than 0.6 Cronbach's alpha values are considered low and when considering study findings, all variables are reliable. Pearson's coefficient of correlation value, 0 is perfect independence, +0.3 weak positive, +0.7 is a strong positive. According to Table 02, there is a weak positive relationship between Accessibility and Tourist Satisfaction, between Amenities and Tourist Satisfaction, and between Accommodation



and Tourist Satisfaction variables. However, it illustrates a strong positive relationship between Attractions and Tourist Satisfaction. This means the attractions available in the Rathnapura area can be used for further destination development.

Table 2. Correlation and Hypothesis test

Variables	r	P value	Significant or Not	Accepted Hypothesis
Accessibility - Tourist Satisfaction	0.375	0.000	Significant	H1
Attractions - Tourist Satisfaction	0.700	0.000	Significant	H2
Amenities - Tourist Satisfaction	0.677	0.000	Significant	H3
Accommodation -Tourist Satisfaction	0.671	0.000	Significant	H4

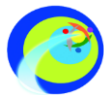
ANOVA table is an integral part of the SPSS coefficient output because it shows whether independent variables have affected the independent variables. ANOVA table significance value is less than 0.05 (Field, 2009). According to the study results, the accepted hypothesis are:

- H₁: There is a significant relationship between Accessibility and Tourist Satisfaction.
- H₂: There is a significant relationship between Attractions and Tourist Satisfaction.
- H₃: There is a significant relationship between Amenities and Tourist Satisfaction.
- H₄: There is a significant relationship between Accommodation and Tourist Satisfaction.

According to the Model summary, R Square is 0.587. Researchers used R Square to calculate the variance percentage of the dependent variable from independent variables. When a tourist sample is considered, the researcher was able to find that there was 58.7% of the variance in the Tourist satisfaction (dependent variable) interpreted by the independent variables (Accessibility, Attraction, Amenities and Accommodations).

Conclusions and Recommendations

This study is conducted to find “is there a relationship between destination attributes and tourists' satisfaction who visit Rathnapura District.” Also, one study objective is to determine the relationship between destination attributes and tourist satisfaction in the Rathnapura area. According to findings, Accessibility, Amenities, and Accommodations create weak positive relationships with tourist satisfaction. However, attractions in the Rathnapura area create strong positive relations with tourist satisfaction. Also, available attractions in the Rathnapura area high significant with Tourist satisfaction.



There needs to be the development of accessibility facilities in the Rathnapura district, such as road networks, good internal transportation facilities, road maintenance, parking facilities. It is recommended that responsible authorities develop infrastructure and other services in the area to develop as a significant tourism destination. The majority of tourists are interested and aware of the Udawalawa National park and Sinharaja Rain forest. However, lesser-known attractions need to be promoted in the international tourism market. Destination Management Companies, Travel agencies. can take responsibility. The accommodation sector needs to improve by providing value for money, service quality, and accommodation facilities development. Also, the public sector can arrange training sessions for private accommodation providers to develop service quality. Other facilities (amenities) need to be improved.

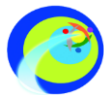
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The relationship between motivation and retention in the homestay business in Ella

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Abstract

The homestay concept creates a unique experience for the guests. It also empowers homestay operators to get additional income and create job opportunities. Ella is a popular destination for homestay tourism in Sri Lanka. This study is conducted to find Socio-cultural, Economic and Environmental Motivations for homestay operators in Ella -Sri Lanka. The researcher used the quantitative method. This study is based on primary and secondary data. Primary data was collected through five-point Likert scale questionnaires and 80 homestay operators were selected for questionnaire data collection. The researcher used simple A simple random sampling technique. According to findings, there is a strong positive relationship between Economic Motives and Motivation to retain business and a strong positive relationship between Social Motives and Motivation to retain business. However, there is a weak positive relationship between Environmental Motives and Motivation to retain business. Homestay is a potentially easy solution for the demand for accommodation facilities for tourism. Policymakers can expand the homestay concept into developing small-medium enterprises (SME sector) in the tourism industry in Sri Lanka. As well the government can facilitate to encourage growing numbers of homestay entrepreneurs.

Keywords: economic motives, environmental motives, homestay and social motives

Introduction

The homestay concept seeks to empower individual households to directly earn an income from tourism, using the potentials for the local people. A homestay is a form of tourism where it enables visitors to stay with the host families. It exposes local traditions and culture for tourists. It is sometimes used by people who wish to improve their language skills and become familiar with the local lifestyle (Bavani et al., 2015). As of the end of September of the 2019-year, 520 homestay operators were registered under SLTDA, with 1,574 room capacities available in the country (SLTDA, 2019). Homestay operators have a good perception of homestay concepts and they want to be a part of tourism by providing homestay accommodations. In business, people are mainly focused on monetary and material objectives. Also, a homestay as a business, it has motivated operators by an assortment of aspects. Such as operators have a sense of pride in their culture, lifestyles,



surroundings and it is an opportunity to interact with people from other countries.

Ella is a popular destination for homestay tourism. Furthermore, homestay is a potential segment for Sri Lankan tourism. Before COVID 19 pandemic, Ella was one of the best destinations popular among homestay travelers. There was a rapid variation of socio-cultural, economic, and environmental enhancement. Homestays in Sri Lanka had become popular in the Sri Lankan tourism industry since 2011. The number of registered homestay operators was gradually increased year by year until before COVID 19 pandemic. Even though a Homestay business mainly focuses on monetary and material objectives, various factors act as motives for people to enter and run homestay business. In the last quarter of the 2019-year researcher conducted this study to find out “Socio-cultural, Economic and Environmental Motivations homestay operators in Ella -Sri Lanka.”

Research Objectives

- to investigate the motivational factors behind homestay operators.
- to determine the relationship between motivation factors and retain to homestay business.

Literature Review

Homestay refers to a visit to somebody’s home in a foreign country that allows visitors to rent a room from a local family to learn local culture, lifestyle, or language. It is a living arrangement offered by a host or host family that involves staying in their furnished house or suite. A homestay guest would be staying in home-like accommodation with shared living spaces, facilities, and amenities. Utilities and meals are usually included and the length of stay could be daily, weekly, monthly, or unlimited unless specified otherwise by the host (Raju, 2015). In the Malaysian context, a homestay program is a form of lodging alternative offered to tourists visiting a village. In this program, the tourists can stay with the host family and experience the family’s daily routine.

Furthermore, it also encourages direct or indirect involvement of the local or surrounding community (Leh & Hamzah, 2012). Homestay provider is a local family that offers their house as an accommodation unit. Also, homestay is alternative tourism where tourists will stay with the host’s family in the same



house and experience the family's everyday way of life and the local community (Association of Southeast Asian Nations, 2016).

Participation in the homestays has strengthened that the sense of pride of local people regarding culture, lifestyles, and surroundings provided opportunities to interact with people from other countries (Wangchuk, 2007). It says that monetary gain has been cited as the major factor among others that motivated homestays' providers to participate in the tourism business. Homestay has the potential to create a positive impact on the local community. Economically, socially motivate peoples to homestay business. Also, homestay affects the protection of the environment. According to the findings, sustainability and motivation create a significant relationship with homestay operators (Mohamad et al., 2018). The homestay program in TanjungPiai allows conserving the nature while ensuring scenic beauty, maintains and without pollution. It illustrates the increment in tourist arrivals due to nature. Malaysia can have many positive impacts and benefits from it (Salleh et al., 2014).

Nowadays, Tourism has become a major foreign income earner in the Sri Lankan economy. Therefore, the Sri Lankan tourism industry has to think beyond traditional norms and be involved in product development to make the visits exciting. Since one of the key objectives of tourism is economic development at the mass level, SLTDA has encouraged industrialists to focus on getting the community involved in the value chain and new value creation. One good example is the “homestay programme” that is gaining momentum. Similar initiatives like visits to community-based activities such as farming, fishing, handicrafts, festivals, religious and cultural programmes, sports, bird watching, wildlife. are being promoted (Ministry of Economic Development, 2011). There is a variety of factors acting as motives for people to enter and run homestay business. Even though a business mainly focuses on monetary and material objectives, a homestay as a business has motivated operators by an assortment of aspects, such as the source of income, business prospects, persuasion and experience, the appeal of the area, personal appeal and the availability of resources (Ranasinghe & Rathnayake, 2016). Moreover, staying at homestay unit/ Bungalow tourist ultimately contributes to uplift the livelihood of small & rural community, which will add value to the tourist (Sri Lanka Tourism Development Authority, 2015).

Methodology

The researcher used a quantitative method for the study. The research site was the Ella destination area. Homestay accommodation providers in the Ella area



are identified as the study population. This study is based on two significant data sources: primary and secondary data to utilize maximum output on the study. Primary data was collected through self-developed five-point Likert scale questionnaires from homestay operators. E publications, web pages, journal articles, reports etc. are used as secondary data. 80 homestay operators were selected for questionnaire data collection. The researcher used simple random sampling techniques. To determine study objectives, validity, reliability, coefficient correlation, ANOVA tests were conducted.

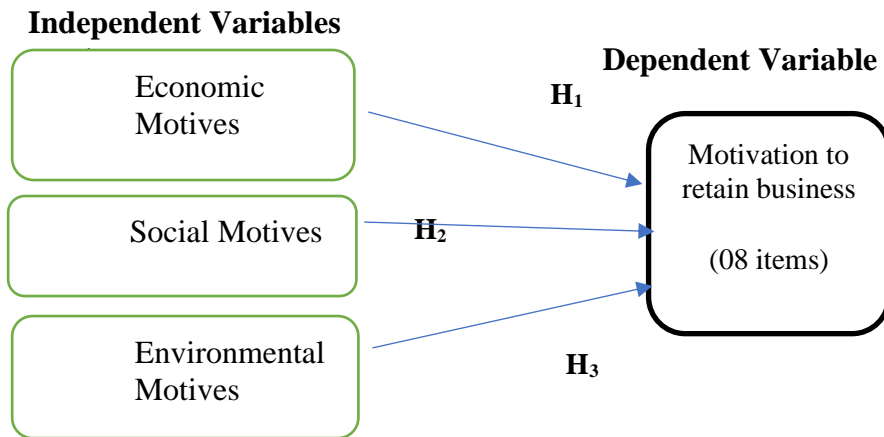


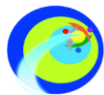
Fig 1. Conceptual Framework

Results and Discussions

According to a descriptive analysis of the respondents, 70% of them were male and the rest were females. 51.3% of in above 51 age group. 31.3% 40-49 age group. 12.5% and 5% accordingly in the 30 -39 and 20 – 29 age group. 37.5% of them are doing only homestays and 18.8% are public, 17.5% are private and 26.3% are self-employees. 3.8% of them had primary education. 17.5% passed GCE O/L and 33.8% are passed GCE A/L and the rest of them had a diploma or degree. 23.8% of them have conducted homestay units for more than four years. Rest conducted less than four years ago.

Table 1. Descriptive statistics of the respondents

Measure	Options	Frequency	Percentage(%)
Respondent Gender	Male	56	70
	Female	24	30
Age	20 -29	4	5
	30 – 39	10	12.5
	40 – 49	25	31.3
	Above 50	41	51.3



Employment	Self-employed	21	26.3
	Private	14	17.5
	Public	15	18.8
	Only Home Stay	30	37.5
Education Level	Primary	3	3.8
	Passed O/L	14	17.5
	Passed A/L	27	33.8
	Diploma	18	22.5
Duration of Homestay Operation	Degree	18	22.5
	Less than 1 year	13	16.3
	Between 1 and 2 years	18	22.5
	Between 2 and 3 years	18	22.5
	Between 3 and 4 years	12	15.0
	More than 4 years	19	23.8

To test the validity of the measures, the KMO and Bartlett's test was used by the researcher. Kaiser (1974) recommends a bare minimum of .5 and that values between .5 and .7 are mediocre. Values between .7 and .8 are good. Based on Table 02 values, all variables are valid. Therefore, Cronbach Alpha should exceed 0.7 to get the reliability of the variables. Based on Table 02 values, all variables are reliable.

Table 2. Reliability and Validity

Variables	No of Respondents	Cronbach's Alpha	KMO and Bartlett's Test
Motivation to retain business	80	0.800	0.837
Economic Motives	80	0.723	0.682
Social Motives	80	0.882	0.765
Environmental Motives	80	0.853	0.791

According to Table 03, there is a strong positive relationship between Economic Motives and Motivation to retain business. The value is 0.757. Also, there is a strong positive relationship between Social Motive and Motivation to retain business with 0.78 value. But there is a weak positive relationship between Environmental Motives and Motivation to retain business (0.421).

According to the table, alternative hypotheses are accepted. Thus are,

- H₁: There is a significant relationship between Economic Motives and Motivation to retain business
- H₂: There is a significant relationship between Social Motives and Motivation to retain business
- H₃: There is a significant relationship between Environmental Motives and Motivation to retain business



Table 3. Correlation and Hypothesis test

Variables	Correlation	P value	Significant or Not	Accepted Hypothesis
Economic Motives and Motivation to retain business	0.757	0.000	Significant	H1
Social Motives and Motivation to retain business	0.780	0.000	Significant	H2
Environmental Motives and Motivation to retain business	0.421	0.000	Significant	H3

When considering the model summary of this study, Adjusted R Square is 0.652. This means there is a 65.2% variance in the motivation to retain business interpreted by economic, social, and environmental motives. The following equation can be interpreted based on the coefficient correlation value.

$$\text{Motivation retain to business (Homestay)} = 0.504 + 0.292 \text{ EM} + 0.382 \text{ SM} + 0.1 \text{ Env.M}$$

Conclusions and Recommendations

This study was conducted to find out Socio-cultural, Economic and Environmental Motivations of homestay operators in Ella - Sri Lanka. One objective is to investigate the motivational factors behind homestay operators. According to the literature of previous studies, Economic, Socio, and Environmental motives are highlighted. Another objective is to determine the relationship between Socio-cultural, Economic, Environmental motivation, and retain business. According to reliable and valid data collected from homestay owners in the Ella area, there is a strong positive relationship between Economic Motives and Motivation to retain business and a strong positive relationship between Social Motives and Motivation to retain business. However, there is a weak positive relationship between Environmental Motives and Motivation to retain business. Three accepted hypotheses explained a significant relationship between Social, Economic, Environmental motives, and motivation to retain business.

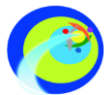
Homestay is a potentially easy solution for the demand for accommodation facilities for tourism. Badulla and Kandy district peoples are highly narrow dawn with homestay operation. The government can conduct promotional activities by focusing on homestay tourists. Also, in this new normal situation is highly important to introduce a new product of homestay. Presently



'Healthy Homestay' campaign and safe community-based tourism is a more suitable strategy for the Ella area. Also, provide an interest-free loan scheme for the homestay operators increase motivation to the business. The government can launch loan schemes. Again, arrange training sessions for homestay operators is another recommendation. Also, in Ella area environment need to protect further because ad hoc homestay constructions are ruining scenic beauty in the place. Moreover, policymakers can expand the homestay concept into developing small-medium enterprises (SME sector) in the tourism industry in Sri Lanka. As well the government can facilitate to encourage growing numbers of homestay entrepreneurs.

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Potential of enhancing agro-tourism in agrarian land Gurubeula Matara, Sri Lanka

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Abstract

There are various forms of activities and resources linked with the agricultural sector towards agro-tourism. Since the tourism sector has been emerging as one of the country's key economic contributors, a link between tourism and agriculture would be mutually complementary for both sectors while rendering potential benefits to the rural farming community. Therefore, this study's objective was to explore an existing case of agro tourism with the intention to find out innovative elements of agro tourism, catalyzers, and obstacles that come in the process of agro-tourism development. The case study methodological approach was applied in this research utilizing interviews and mixed-mode methods, combining in-depth, semi-structured interview questions. Over the years, the step by step progression of tourism activities in Gurubeula was an evolutionary process for which the external influences were minimal. Innovations came from within that is interlocked with the existing system well. There is much potential for agro-tourism development at the site and the incorporation should be done with care with the least disturbance to the system. Further case studies regarding agro tourism will expose unique characteristics of individual cases that will enrich the knowledge base for a local model of agro – tourism development.

Keywords: agrarian land, agro-tourism, case study and rural development

Introduction

The agricultural sector is an economic mainstay and primary national employer in Sri Lanka. Agriculture contributes to 7% of Sri Lanka's Gross Domestic Product (GDP) in 2018 (Economic & Social Statistics in Sri Lanka, 2019:3). However, when Industrial activities have expanded 'agriculture's position as the primary economic engine has been eroded. Compared to the GDP contribution of 26.1% from the industrial sector this is a lesser contribution. However the agricultural sector synthesizes 33% of employment in the country (*Ibid*, 2019:3). This is a higher value compared to 18.3% from the manufacturing sector. This signifies that the employees in the agriculture sector get less per capita income than the manufacturing sector.



These disadvantaged people live in rural areas where agriculture is the mainstay of economic activity. Achieving higher growth in agricultural productivity is a necessary part of economic transformation; it is the only way for the agricultural sector to release labor to other, higher-value-added sectors while maintaining modest growth in rural/agricultural household incomes. In this background, it is necessary to find innovative avenues to enhance income generation in the agricultural sector. Agrotourism is an evolving sector in Sri Lanka, which is still in its infancy. How to make use of this sector more sustainably has still not been explored well. Therefore, this study's objective was to explore an existing case of agro tourism to find out innovative elements of agro tourism, catalyzers, and obstacles that come in the process of agro-tourism development.

Literature Review

Agri-tourism or farm tourism is a type of rural tourism and is highly recognized as a means of farm diversification and an alternative source of farm income (Colton & Bissix, 2005; Byrd & Gibson, 2004). Brumfield and Mafoua (2002) have described agritourism as a "direct marketing activity, that may provide special opportunities to growers to reduce risks via diversification in a competing and urbanizing economic environment, which may share quasi-fixed inputs (e.g., information, machinery, labor, etc.) with other enterprises and enhance business efficiency and profitability." Moreover, agritourism is increasingly used as a diversification strategy to uphold a more diverse and sustainable rural economy and to protect farming incomes against market fluctuation (Phelan & Sharpley, 2010), and it is expected to yield several economic as well as non-economic benefits to farmers, visitors, and communities. In this sense, agri-tourism has been suggested to help family farms stay in business, protect the agricultural heritage, enhance the productivity of farm resources through their recreational use, and even to improve the economic situation of local communities (Nickerson et al., 2001; Ollenburg and Buckley, 2007, Veeck et al., 2006; Wilson et al., 2006). From the farm unit perspective, agritourism is claimed to raise farm revenues and to help other entrepreneurial goals of the farmer, such as the improvement of their quality of life (Barbieri, 2009; McGehee & Kim, 2004; Nickerson et al., 2001; Ollenburg & Buckley, 2007). At the farm level, agri-tourism improves the value of the 'farmer's products through its involvement with the social and cultural context (Nilsson, 2002) and also at the regional level; it can help with rural development by creating new job opportunities and new value-added products. The positive influence of agri-tourism on the local system is shared between diverse economic sectors, as tourist spending relates not only to farms but also to restaurants, crafts,



commerce, and other firms located in the region. Furthermore, the immediate boost made by tourist spending creates multiplying effects in the local economic system as a whole (Fleischer & Tchetchik, 2005).

Further, agri-tourism can sustain the history and culture of agriculture and the environment by preserving open spaces on farms (Bruch, 2008). However, in Sri Lanka, agro-tourism is at an infant stage and is poorly organized. In most of the farms, infrastructure facilities are not sufficiently available. Therefore, the provision of necessary infrastructure such as road facilities, clean water, and electricity is very important. Moreover, there is low awareness of agro-tourism and its attractiveness with farmers and other stakeholders. Making them well aware of agro tourism and creating a positive attitude towards agro-tourism opportunities is essential to have agro-tourism operations. Although farmers have basic knowledge and skills in farming, they are lacking in business management skills, namely entrepreneurship, management skills, and interpersonal and communication skills etc. Therefore, education and training in these areas are very much crucial for successful agro-tourism operations. However, enterprises included in the business should not be subject to the same hazards or not to the same degree, if this strategy is more effective in risk management (OECD, 2009b). It has diverse agro-climatic conditions suitable for growing different types of crops, fruits, vegetables and trees. Sri Lanka's complex paddy cultivation systems (developed over 2,500 years), huge and ancient irrigation tanks, many tea and rubber plantations, milking cattle on dairy farms, having a go at plucking tea leaves using the traditional bag-on-the-back' method, rubber tapping under expert guidance, or even working in many scenic paddy fields (plowing using bullocks, work on paddy nurseries, transplanting seedlings in muddy fields) of Sri Lanka are just some examples of its diverse agricultural developments (Advisory Panel on Community Based Sustainable Tourism in Sri Lanka, 2008).

Methodology

The potential of enhancing agrarian land in agro-tourism development is examined through a single case study, utilizing Grubeula, Matara, as an area of concentration. As some researchers have pointed out, case studies can be precious as they can expand practical understanding, sharpen critical judgment, and are incredibly valuable for research on the enhancing agrarian land of tourism (Bramwell, 2011). This exploratory study utilized the mixed-mode method, combining in-depth, semi-structured interview questions. This method was selected as the researchers wanted to understand the role of enhancing agrarian land in agro-tourism development. A case study is increasingly recognized as a valuable research strategy for studying tourism



(Xiao & Smith, 2006). A case study design is concerned with the detailed examination of a single case. It is commonly associated with qualitative research techniques, though it can be used in quantitative approaches. The case study can seek to explore a topic where there has been little prior knowledge or understanding. The key element is the definition of the case could be an individual, an organization, an event or geographical area. With relevance to this research, prior knowledge is sparing. As there are fewer agro-tourism-related places in the country the research base is almost non existing. In this background, the study of individual cases in case studies would be the most relevant form of research to begin exploring the practice of agro-tourism in Sri Lanka. Stake (1995:11) defines a case study as studying the particularity and complexity of a single case coming to understand its activity within an important circumstance. Burns (1997:365), in the case study focus of attention, is the case in its idiosyncratic complexity not on the whole population of cases.

In selecting a case, therefore, you usually use purposive judgmental or information-oriented sample techniques. It provides an overview and in-depth understanding of a case(s), process and interactional dynamics within a supply but cannot claim to make any generalization to a population beyond cases similar to those studied. In this design, you are attempting not to select random sample but a case that can provide you with as much information as possible to understand the case totality. When studying an episode or an instance, you attempt to gather information from all available source to understand it in its entirety. If the focus of your study is a group or community, you should spend sufficient time building a good rapport with its members before collecting information about them. Though you can use a single method of in-depth interviewing, using multiple methods to collect data, such as obtaining information from secondary records, gathering data through observation, and collecting information through focus groups and group interviews, is an essential aspect of a case study. However, it is important that you continue to consider the case as a single entity at the time of analysis. Case study research has much strength. It clarifies our thinking and links abstract ideas in specific ways with the specific case we observe in detail. It also enables us to calibrate and adjust our abstract concepts' measures to actual lived experience and widely accept the standard of evidence. First, as we become very familiar with the in-depth details of specific cases, we can create/ build new theories and reshape current theories, complex cases or new situations.



Discussions

The case studied in this research is Grubeula, an agrarian land developed as agro-tourism destination. It is situated in Morawaka, in Matara of Southern Sri Lanka. For a tourist it is an hour and a half drive from Galle along the Matara-Deniyaya road. The agrarian land is twenty-eight archers and one person owns it. The land has been descended from generations of the Abeywickrama family. The legacy of this historical piece of land started to change in a novel direction from in the 1990s. When the administrators decided to develop the land to enhance financial gains, they recruited a new staff headed by Mr. S.M.P.MPK Padmalal as the land manager since 1998.

In the initial period, there were many efforts taken to uplift the productivity of agricultural activities. Novel avenues have been introduced to increase income. One such effort was to produce free laid eggs. They were able to rear a hundred chickens per each acre and ultimately, it was two thousand eight hundred chickens for the twenty-eight acres. They have maintained the authenticity of their production with many difficulties. However, the chickens were succumbed to death by an infection. As the chickens were moving freely in the land, it was tough to control the infection. Being honest and authentic has been not in favor for them most of the occasion in their development process. A significant hazard in Grubeula land's history was the destruction of it during flood in 2003. At any difficult time, they have not abandoned their policy of organic farming. But they failed to sell their products via super-markets and small shops. After all, they could not face the market competition from non-organic vegetables that had a good outlook. The most immense courage they had to continue with organic farming was administrators' steady policy that persisted. The primary mode they have used to resurrect their organic farm through these hazards is community education via tourism activities. Mr. Sampath, the regional agricultural instructor in the area, interfered in educating people, especially school children, through the education programme conducted in Gurubeula farm. They launched programmes for school children. They visited Grubeula two days per week in the region. The students were educated on the health aspects of organic food and its other benefits. The visit was enriching with demonstrations and activities.

Along with those, an out-let was started near the main road to sell the farm's product. It has been a success. Diversification of products was also initiated and cows were reared for milk. Selling fresh milk was also a challenge because there were many myths about drinking fresh milk, such as it induces



"flam'. The educational programme again utilized to take the healthy message of fresh milk to the people. Free distribution of milk for the visitors coming to visit the Grubeula was such an effort. Distribution has also been extended to the maternity clinics and school seminars. That project also was a success and they had good acceptance from the community. The milk product diversifies into yogurt and ice- cream. The high quality and reliability made it popular among people. The outlet has been expanded more to incorporate diversified products. Building a restaurant attracted tourists more and provided more facilities to increase visitor time. With the enhancement of tourist activities, they have added other tourism elements like an auditorium, natural swimming pool. They had added an advantage in promoting tourism. The farm is situated near a great natural tourism Attractions, the Sinharaja rain forest, Nilvala River, Morawak mountain and Gongala. They have a guest room facility and provide tour packages to these places as well. We have conducted nearly 10 informal interviews with visitors to Gurubeula. Most of them have visited the place on their way to several other tourism destinations towards Deniyaya. The natural pond has been the most attractive place in Gurubewula as it was rated by the interviewees. This implied that the activities that provide entertainment and fun can serve as sources of additional income and potential attractors. The visitors have also appreciated the food stall for its authenticity and they named it a rare opportunity of that type. Following table shows the currently functioning activities and several other potentials that have been identified concerning tourism promotion at Gurubeula.

Table 1. Functioning activities and several other potentials tourism promotion at Gurubeula, Matara

Activities	Currently available activities	Potentials
Agro-based activities	Agro tours, farm tours/ farm demonstrations	participation in farming activities (pick, cut, gather or grow on your own), stocked ponds for fishing, wine tasting and cattle rides Farm/Ranch stays,
Cuisine and accommodation	unique dining experiences Bread and breakfast, agro-catering business, organic foodstuff facilities to consume farm products in the farm	picnic areas cookery classes and cookery demonstrations
Entertainment and educational activities	Nature trails, watching wildlife, kayaking,	hiking, boating, museums/ heritage, festivals and special events (range from food and craft to nature, flowers, art, heritage and cultural themes) fairs, Starting diploma course on Agro-tourism
Selling of farm products On-farm direct sales	Sale in special events Direct and indirect sales of value-added products	U-pick operations or roadside stands Off-the-farm direct sales - 'Farmers' markets, county and state fairs,



Supplementary
products and
activities

Natural swimming pool

Sale of village-based handicraft
activities related to local enterprises
Wildlife
photography

Compiled by authors from Kizos and Isoifides (2007) and Beus (2008).

The evolution of agro-tourism in Grubeula has been started not as external enforcement but as an internal requirement. There are some decisive factors for establishing and developing agro-tourism ventures such as sites near tourism attractions / natural attractions, physical resources and infrastructure, safe and clean environment and sanitary facilities, strong networks and partnerships, strong networks and partnerships, marketing opportunities and marketing plan human resource, diversification of activities skills and awareness, government incentives, directions and institutional support. About Gurubeula, most of these decisive factors were in operation to establish the agro-tourism ventures except government incentives, directions and institutional support. So agro-tourism development in Gurubeula is a model of bottom-up approach where the ideas for development and progress came from within.

Conclusions

The twenty-eight-acre Gurubeula agrarian land was meant for organic farming. Tourism has been an intrinsic factor in the development process of the Gurubeula farm from the 1990s. Tourism activities become a promoting and rescue avenue for enhancing organic farming when it was at stake. Tourism has neither been a byproduct of their agricultural activities nor was an external enforcement. The ideas for novel tourism activities or product have been emanated from the people in the system itself. The case study of the Gurubeula concludes that agro-tourism has been an alternative path for agrarian people to overcome the economic deprivation. The popular practice of empowering by Government or NGOs has not taken place in the development process of Gurubeula. The success has come from within and the empowerment was from below. There are five main areas that Five main areas need to be further addressed by agro tourism sector in Sri Lanka, specifically policies formulation, marketing and advertisement, financing, access to information, and infrastructure development. The results also indicate that access to information for education and training purposes is key to the future success of agrotourism development in Sri Lanka. Providing education to small businesses will play an essential role in the future success of agro-tourism development. Previous research has shown that the quality of service received by tourists will reflect on the perception of the price paid, influencing their value; thus, impacting destination competitiveness. For cities/destinations to develop and become competitive, education and training



will become a key factor in creating a destination niche. A similar point was made by Semrad et al. (2014), who stated that the provision of education and training on the subject of tourism would benefit local tourist operators and their employees, increasing the quality of their products, and hopefully leading to a larger market share. Next, an improvement to the overall bureaucratic system is needed.

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