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# Vidyodaya Journal of Management

## Volume 07 Number 02 December 2021

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# Vidyodaya Journal of Management

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## **Editors' Note**

As the Editors-in-Chief of Vidyodaya Journal of Management (VJM), Faculty of Management Studies and Commerce, University of Sri Jayewardenepura, Sri Lanka, it is our pleasure to publish the Volume 7, Issue II of the Journal. This issue contains eight research papers.

The research papers included in this issue are covering areas of Transformational Leadership, Stock Price Reaction, Environmental Management Accounting Practices, Intellectual Property a Common Good to Combat Global Pandemics and the COVID-19 Technology Access Pool (C-TAP), Spiritual and Entrepreneurial Orientation, Buddhist Teachings and Spirituality, Inflation Targeting Monetary Policy Framework and a systematic literature review paper on Management Practices and Workplace Accommodation for Persons with Disabilities.

Examining the impact of transformational leadership on employee performance in the context of porcelain manufacturing companies in Sri Lanka is the focus of the first paper. The findings revealed that transformational leadership has a positive impact on employee performance and employee engagement and also employee engagement has a positive impact on employee performance. Importantly, employee engagement mediates the relationship between transformational leadership and employee performance.

Second paper has identified the overall impact of a stock split announcement on stock prices considering 88 annual stock splits during the ten years period ranging from 2009 to 2019 of the listed companies in the Colombo Stock Exchange. The graphical analysis and the t-statistics indicated that the majority of stock splits were negative than positive with a significant t-value at 5% by indicating that the information regarding the stock splits have not been absorbed efficiently by the market because the market reactions before and after the date of the split announcement were significant at 5%, although the average abnormal return got a quick reaction to the announcement.

The third research paper is an exploratory study to identify the factors that have influenced a manufacturer in the apparel industry in Sri Lanka to adopt and implement EMAPs with the perspective of the New Institutional Sociology Theory. One of the leading manufacturing companies in the apparel industry

was selected as the case study. It was found that coercive isomorphism was the most significant factor whereas the least influential factor was the normative isomorphism on the adoption and the implementation of the EMAPs in the organization. Moreover, the study found some reasons behind the adoption of more Physical EMAPs (PEMAPs) than the Monetary EMAPs (MEMAPs) by the organization.

The COVID-19 outbreak has created a global race for research into a vaccine, diagnostic and therapeutic. In this context, intellectual property rights play a prominent role in incentivizing COVID-19 vaccines. The fourth research paper critically analyzed the prospects that COVID-19 Technology Access Pool (C-TAP) would offer low and middle-income countries to overcome intellectual property rights related barriers and resource constraints in accessing the COVID-19 vaccine and reflect on how to tackle Big Pharma and some high-income countries' influences on the effective functioning of C-TAP.

Fifth paper is focused on to examine the nature of female entrepreneurs' religious behaviour and how Buddhist teachings and spirituality influence female entrepreneurs' business decisions throughout start-ups and the ongoing business operations. Since Buddhism is a vast literature, the study focuses mainly on the five precepts. Results revealed that Buddhist female entrepreneurs' business decisions are influenced by their religious teachings, especially the five precepts and religious spirituality.

The Entrepreneurial Orientation of decision-makers is recognized as a key driver in the entrepreneurship literature that propels firms to act 'autonomously', 'innovate', 'take risks', and be 'proactive' relative to marketplace opportunities. The sixth paper argues that spirituality fortifies entrepreneurs' commitment to developing sustainable business entities, by empowering firms to be adaptable and creating a pro-social business model with a sense of interconnection with the community and natural ecosystem. The paper theorizes how a spiritually driven entrepreneurial orientation will lead to sustainable business ventures that focus on people, profit, and the planet. A spiritually oriented entrepreneur would emphasize on the ethics, principles, virtues, values, and be sensitive to emotions, which will lead to taking proactive actions. The study asserts that entrepreneurs must develop the spiritual maturity to create the right balance of entrepreneurial orientation dimensions, thus leading to creating sustainable organizations.

Inflation Targeting Monetary Policy Framework, in which context it has become a matter of debate whether inflation or economic growth is driven by monetary expansions, which is strongly proved through the economic theories

forwarded by Karl Marx, Irvin Fisher and Friedman. Seventh paper examines the relationship between money supply and economic growth under a broad phenomenon by utilizing 39 countries with inflation targeting policies in action. The utilized Panel Autoregressive Distribution Lag (ARDL) model forwarded the results suggesting that there is a significant negative relationship between the economic growth and money supply in the long run while no relationship has been observed in the short run. The study has contributed vastly to the academic rigor through the comprehensive analysis conducted by employing the ARDL model about the short and long run impact of money supply over the economic growth rates.

The eighth paper is a review paper which explores the question how various scholars approached the social, political and legal issues arise out of low employment rate of the persons with disabilities and expressed their views on how to solve them. Since a systematic literature review has not been conducted in Sri Lanka on this topic, to answer the aforesaid research problem, the author evaluated multiple scholarly approaches towards the barriers affecting human resource practices and workplace accommodation for persons with disabilities and explored solutions available in the existing literature to resolve such issues. Results of this research are produced by collecting and synthesizing previous research for advancing knowledge and facilitating theory development.

Finally, we are grateful for the contribution of authors, reviewers, editorial board and the publisher for their continuous support in publishing of another volume and look forward to obtaining their valuable scholarly contribution for the upcoming volumes as well.

Dr. L. A. Pavithra Madhuwanthi and Dr. Vilani Sachitra  
University of Sri Jayewardenepura



## **The Impact of Transformational Leadership on Employee Performance: The Mediating Role of Employee Engagement in Selected Porcelain Manufacturing Companies in Sri Lanka**

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### **Abstract**

*Transformational leadership is a concept and a belief in the contemporary business world which has proven results in employee development and organizational success. Leaders with transformational leadership behaviors coach and inspire their followers to achieve the targets by changing the value systems, culture and mindsets and sometimes being the role models to them. This paper aims to fill the existing research gap by examining the impact of transformational leadership on employee performance in the context of porcelain manufacturing companies in Sri Lanka, specifying the production worker level. Further this study investigates the mediating role of employee engagement between transformational leadership and employee performance. Thus, the current study contributes to the literature in the field of transformational leadership, employee performance and employee engagement. The study was conducted on a sample of 250 production workers in selected porcelain manufacturing companies in Sri Lanka. The data was analyzed using the analytical software SPSS version 23 and descriptive, correlation and regression analysis were conducted. The findings revealed that transformational leadership has a positive impact on employee performance and employee engagement and also employee engagement has a positive impact on employee performance. Importantly, employee engagement mediates the relationship between transformational leadership and employee performance. According to the findings of the study, it is concluded that transformational*

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*leadership behaviors impact employee performance and employee engagement. This study adds to the current body of literature by providing insight into the impact of transformational leadership and employee engagement on employee performance in the porcelain manufacturing companies in Sri Lanka, and on the empirical ground, some of the findings and judgements of this study may be important to other organizations to make their employees engaged, develop and increase employee performance towards the organizations.*

**Keywords:**

*Employee Engagement, Employee Performance, Porcelain Manufacturing Companies, Production Workers, Transformational Leadership*

**Introduction**

Human capital has become a source of success and revolution. The theory of transformational leadership describes the encouragement and motivation of an individual's positive behavior or enhanced thinking by leaders (Burns, 1978). It is evidenced that transformational leadership is productive under such conditions and a majority of existing literature supports the fact that leader practices contribute to organizational performance (Datche & Hazel, 2015). These kinds of leaders assist followers to engage in their jobs and choice-making process. Additionally, according to Ghafoor, Syed, and Qureshi, (2011), transformational leadership also helps employees to feel that they matter a lot to the employer and the aim of the organization is their progress. The same authors have further described that these positive feelings towards the organization can enhance employees' organizational attitude and finally their quality of work. Lockwood (2007) stated that culture of the institute, conveying style, style of management, behavior of the leader, belief and admiration are the primary factors of employee engagement and these factors must be supported to build-up an engaging cultural behavior inside the workplace.

Currently, most of the organizations suffer with retrenchments and financial difficulties and are making an effort to uplift the organizational performances with limited employers and finances. Even under these circumstances, employee engagement still plays a greater role (Datche & Hazel, 2015). Engagement is known as individual efforts and hard work for enhancing one's performances (Maslach, 2003). Engaged employees support the company towards success through increased performance. The leadership actions to motivate employees to perform over expectations by transforming their behaviors, attitudes and values

are defined as a Transformation (Pillai & Williams, 2004). Though several researches have been conducted to examine this said relationship and the mediating effect, there is a scarcity of research to address the impact of Transformational Leadership (TL) and Employee Engagement (EE) on Employee Performance (EP) in Sri Lanka. Therefore, the objectives of this study are to identify the (1) impact of TL on EP, (2) impact of EE on EP, (3) impact of TL on EE and (4) the mediating role of EE on TL and EP in selected porcelain manufacturing companies in Sri Lanka.

## **Literature Review**

### ***Transformational Leadership***

Transformational leadership is defined as those actions displayed by a leader which enrich the value system of the followers, and convince them to reach beyond their expected performance (Han, Oh, & Kang, 2020). TL is an encouraging and predominant style that has an impact on the outcomes and the actions of the people (Jyoti & Bhau, 2015); (Butler, Stanton, & Soane, 2015). This study defined TL as transforming the norms and values of the followers and inspiring them to elevate their desires for achievements, perform beyond presumption and self-development while promoting the development of the organization.

### ***Employee Performance***

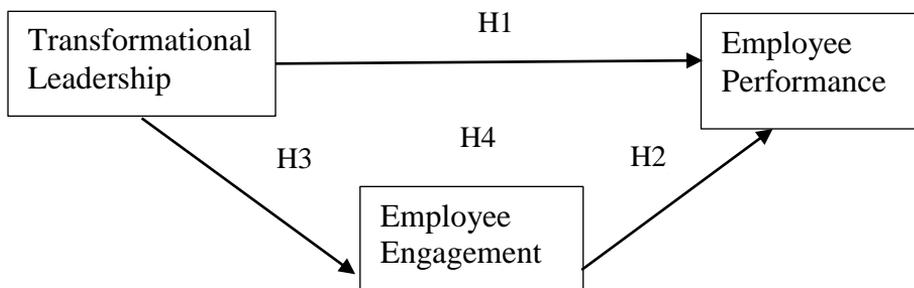
Employee performance is mainly the outcomes attained and achievements made at work (Anitha, 2014). As cited in Dixit and Arrawati (2018), EP refers to how ingeniously employees act in their jobs in accordance with the given targets of the company (Viswesvaran & Ones, 2000). This study defined EP as “the expertise of the worker executing dominant work duties, employee behavior that supports the related environment in which the core tasks and duties are performed, the capacity of the worker to adjust to modifications in the work climate and the harmful behavior that negatively affects the well-being of the organization” (Koopmans, 2014).

### *Employee Engagement*

Xie (2006) explained that dedicated employees to a job, together with untiring efforts, who are faithful to the company and the leader, and who are assertive, is employee engagement. According to Sun (2019), logical employee engagement generally implies the relationship between employees and organizations, as the extent to which the employee understands their jobs and the roles in the department. This study defined EE from the viewpoint of Kahn (1990), “job engagement is best explained as a different measurement of inspirational concept contemplating the coincident investment of an individual’s physical, cognitive, and emotional energy in active, full work performance” (Rich & Crawford, 2010).

### *Conceptual Framework*

Reviewing the prevailing literature, the conceptual framework of the study is depicted in Figure 1. In the conceptual framework TL was considered as the independent construct, EP as the dependent construct and EE as the mediator construct.



**Figure 1: Conceptual Framework**

Source: Author’s compilation (2020)

### *Transformational Leadership and Employee Performance*

The managers who transform the followers strive to enhance their perception by recalling their deep-rooted dreams and morals, such as liberty, fairness and compassion not based on sentiments such as avidity, resentment, and aversion (Rita, Payangan, Rante, Tuhumena, & Erari, 2018). A considerable amount of enhancement in performance is related with those leaders who are considered to score higher on the measures of active individualized transformational and social processes of leadership (Groves & LaRocca, 2011). The leader converts

and encourages followers by personality, intellectual arousal, and individual consideration (Bacha, 2014).

Hence, the first hypothesis is developed as follows:

H<sub>1</sub>: Transformational Leadership positively impacts on Employee Performance

### ***Employee Engagement and Employee Performance***

Some empirical studies have figured out that employee performance can be enhanced by employee engagement and also it can conclusively relate to lucrativeness, customer contentment, detention of workers and growth of the institute (Bates, 2004 ); (Baumruk, 2004); (Richman, 2006). Employee engagement is one of the most effective factors which leads to higher employee performance (Macey , Schneider, & Bar, 2009); (Mone & London, 2010), as well as predict the output and organizational success (Saks, 2006), (Macey , Schneider, & Bar, 2009) and (Perera & Wijewardene, 2019). Hence, the second hypothesis is developed as follows:

H<sub>2</sub>: Employee Engagement positively impacts on Employee Performance

### ***Transformational Leadership and Employee Engagement***

Much scholarly attention has been given to the relationship between transformational leadership and employee engagement at work (Zhu, Avolio, & Walumbwa, 2009); (Salanova, Lorente, Chambel, & Marti´nez, 2011). Research findings by Devi and Narayanamma (2016) have confirmed that there is a notable constructive relationship between transformational leadership and employee engagement.

Transformational leadership is an essential antecedent of work engagement and the relationship between transformational leadership and employee work engagement is a type of relationship to be considered for further studies Pourbarkhordari, Zhou, and Pourkarimi, (2016). Hence, the third hypothesis is developed as follows:

H<sub>3</sub>: Transformational Leadership impacts on Employee Engagement

### ***Mediating Role of Employee Engagement between Transformational Leadership and Employee Performance***

A study conducted by Mariam (2020) has proved that engagement has a mediating effect on the relationship between transformational leadership behaviors on employee performance. So, the results explained that, all idealized influence, inspirational motivation, intellectual simulation, individual

consideration and employee engagement were significant on the employee performance. Moreover, the findings indicated that, employee engagement mediates the relationship between leaders who have transformational leadership actions is a precondition for employees to be engaged, and also enhance the outcomes of the followers (Pourbarkhordari, Zhou, & Pourkarimi, 2016).

Hence, the final hypothesis is developed as follows:

H<sub>4</sub>: Employee Engagement mediates the relationship between Transformational Leadership and Employee Performance

## **Methodology**

This research can be regarded as an analytical study and the investigation type is causal. This study gathered data in the chosen porcelain manufacturing companies' normal surroundings without regulating the internal or external factors. The survey was conducted among a sample of 260 production workers of selected porcelain manufacturing companies among a total population of 805 employees of three selected porcelain manufacturing companies. The sample was selected using simple random sampling method and the sample frame is the payroll register. The sample is derived with the Morgan and Krejcie (1970) table. A set of questionnaires were distributed among the sample and the primary data was collected. A questionnaire was developed based on TL, EE and EP to gather information about employees from the selected porcelain manufacturing companies and five point Likert scales were used to measure the variables in the study. The secondary data was collected through numerous sources such as journals, published reports, internet and books relating to the topic. Statistical Package for the Social Sciences (SPSS) software package 23 was used to analyze the data and for data preparation and screening, reliability validity and relationships were tested. The developed hypotheses were tested by correlation analysis and simple regression analysis. Sobel test was used to measure the mediator effect of the study.

## ***Measures***

In the first part of this questionnaire a scale of 20 items has been developed referring to well accepted questions of other scholarly work which is used to measure TL practices by Bass and Avolio (1995). There are four dimensions namely, idealized influence (both attributed and behavior), individualized consideration, intellectual stimulation, and inspirational motivation.

The next section has been devoted to measure the EP aspects of the production workers. Referring to other scholarly work, a scale of 45 items has been developed for this purpose consisting of four components namely task performance, contextual performance (both interpersonal and organizational), adaptive performance and counter-productive work behavior (Koopmans, 2014).

The third part of the questionnaire consists of data about EE aspects of the production workers. Referring to other scholarly work, a scale of 5 items has been developed for this purpose consisting of three dimensions namely Vigor, Dedication and Absorption (Schaufeli & Bakker, 2003).

The fourth part was used to gather data about demographic details of the production workers such as gender, age group and service period.

Items have been presented in Sinhala since the production workers are comfortable with the Sinhala language which they find easy to understand. Production workers were advised to record their agreements with the items through the five point Likert scales.

## Results

### *Reliability*

To ensure the internal consistency of measures Composite Reliability (CR) and Average Variance Extracted (AVE) were computed. CR is a measure of an internal consistency in scale items (Netemeyer, Bearden, & Sharma, 2003). To ensure CR for the construct the value should be greater than 0.6 and AVE should be greater than 0.5 (Hair, Black , Babin , & Anderson, 2014). As Table 1 indicates this criteria was met and the internal consistency of these measures was ensured.

**Table 1: Measure of Internal Consistency**

<b>Variable</b>	<b>No. of Questions</b>	<b>Factor Min-Max &gt;0.3</b>	<b>CR &gt;0.6</b>	<b>AVE &gt;0.5</b>
Transformational Leadership	20	0.835-0.466	0.864	0.507
Employee Performance	45	0.921-0.465	0.953	0.501
Employee Engagement	17	0.847 -0.514	0.872	0.503

*Validity*

**Table 2: Discriminant Validity**

Variable	Transformational Leadership	Employee Performance	Employee Engagement
Transformational Leadership	0.427		
Employee Performance	0.391	0.481	
Employee Engagement	0.262	0.345	0.463

The above tables depict the data for discriminant validity and the results of the present study ensures the discriminant validity as the squared coefficient values are below the AVE (Hair, Black , Babin , & Anderson, 2014).

Questionnaires were circulated among 260 production workers and 10 valid replies were not received, yielding a reply rate of 96%.

*Demographic profile of the respondents*

Considering the demographic characteristics, 63% of females and 37% of male production workers are in the sample. Moreover, the largest age group representation is 37% who are reaching their retirement and the companies must think of their recruitments and this staff category is the skilled worker category. Then 31% and 23% represent the age 29-39 and 18-28 categories, respectively. The age group representing 51-60 is 9% of the sample and that is significant. Further, service year-based categorization is significant as most senior, and junior samples are the same with 25% which expresses that the new recruits and the workers who are senior remained the same, but the middle category varied. 30% and 19% of the sample represents service year group 6-10 and 11-20 respectively.

**Hypotheses Testing***H<sub>1</sub>: Transformational leadership positively impacts on employee performance*

The impact of the TL on EP was measured by regression analysis.

**Table 3: Model Summary H<sub>1</sub>**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.625 <sup>a</sup>	.391	.388	.36889

a. Predictors: (Constant), Transformational Leadership

The outcomes show (Table 3) that the multiple regression coefficients (R) of the TL related independent variables and EP was 0.625 and the R Square was 0.391. It indicates that about 39.1 percent of the variance (R Square) in the EP is explicated by TL.

**Table 4: ANOVA H<sub>1</sub>**

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	21.635	1	21.635	158.988	.000 <sup>b</sup>
	Residual	33.748	248	.136		
	Total	55.384	249			

a. Dependent Variable: Employee Performance

b. Predictors: (Constant), Transformational Leadership

The p-value is below 0.05, which ensures which TL can be used to forecast EP (Table 4). Thus, results conclude that transformational leadership positively impacts employee performance.

***H<sub>2</sub>: Employee Engagement positively impacts on employee performance***

**Table 5: Model Summary H<sub>2</sub>**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.587 <sup>a</sup>	.345	.342	.38246

a. Predictors: (Constant), employee engagement

Regression analysis was also run to measure the impact of EE on EP. Under the model summary (refer Table 5), value of R square is 0.345, depicting that EP is explained by 34.5% through variation in EE.

As per Table 6 given below, the p-value is below 0.05 which ensures which EE can be used to forecast EP. It is concluded that Employee engagement positively impacts employee performance.

**Table 6: ANOVA H<sub>2</sub>**

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	19.107	1	19.107	130.626	.000 <sup>b</sup>
	Residual	36.276	248	.146		
	Total	55.384	249			

a. Dependent Variable: Employee Performance

b. Predictors: (Constant), Employee Engagement

***H<sub>3</sub>: Transformational leadership impacts on employee engagement.***

Regression analysis was also conducted to measure the impact of TL on EE. Under the model summary (Table 7) value of R square is 0.512, depicting that EP is explained by 25.9% through variation in TL.

**Table 7: Model Summary H<sub>3</sub>**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.512 <sup>a</sup>	.262	.259	.47533

a. Predictors: (Constant), Transformational Leadership

The p-value is below 0.05 which ensures which TL can be used to forecast EE (refer Table 8). Therefore, it can be concluded that transformational leadership positively impacts employee engagement.

**Table 8: ANOVA H<sub>3</sub>**

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	19.929	1	19.929	88.205	.000 <sup>p</sup>
	Residual	56.033	248	.226		
	Total	75.962	249			

a. Dependent Variable: Employee Engagement

b. Predictors: (Constant), Transformational Leadership

***H<sub>4</sub>: Employee engagement mediates the relationship between Transformational leadership and employee performance***

Multiple Regression Analysis and Sobel test were done to explore the mediating impact of EE between TL and EP. According to Sekaran and Bougie (2016) when these two independent variables (TL and EE) are collectively regressed in opposition to the dependent variable (EP) with the purpose of explaining the variance in it, the sizes of the individual regression coefficients explain how much one unit of change will affect the dependent variable. This is based on the assumption that all the other independent variables remain unchanged. Based on the results of Multiple Regression Analysis, the Sobel test was done and Table 9 depicts the output of the analysis.

**Table 9: Sobel Test**

Item	Value
Test Statistics	14.540869
Std. Error	0.3072
P value	0.000

Sobel test has three values and if the P value falls below 0.05 the predictor variable (TL) has an indirect effect on the measured variable (EP) and it is significant (Jacob , 2017). Therefore, it is culminated that EE is a mediator of the correlation between TL and EP.

## **Discussion**

This is the first objective of the study, and the result has supported the first hypothesis. So, this concludes that TL has a positive impact on EP of production workers in selected porcelain manufacturing companies in Sri Lanka. Han, Oh, and Kang, (2020), Jyoti and Bhau (2015), Walumbwa and Hartnell (2011), and Tohardi (2002) in their studies have found that TL has a constructive impact on EP.

This is the second objective of this study, and the result has supported the second hypothesis. So, this culminates that EE has a constructive effect on EP of production workers in chosen porcelain production factories in Sri Lanka. This relationship has been tested and proved several times by various studies conducted by Harter , Hayes and Schmidt (2002), Richman (2006), Saks (2006), Choo (2009), Bakker and Bal (2010), Chung and Angeline (2010), and Bakker and Demerouti (2012).

The results indicate the significant positive impact of TL on EE. So, this concludes that TL has a positive impact on EE of production workers in selected porcelain manufacturing companies in Sri Lanka. Pourbarkhordari, Zhou, and Pourkarimi, (2016), Xu and Thomes (2011), Aryee and Walumbuwa (2012) and Devi and Narayanamma (2016) have tested and stated that there is a constructive correlation between transformational leadership and employee engagement in different contexts.

As per the Sobel test the P value is 0.000 which falls below 0.05. The predictor variable (TL) has an indirect effect on the measured variable (EP) and it is significant. So, this concludes that EE is a mediator between TL and EP of manufacturing workers in selected porcelain production companies in Sri Lanka. Pourbarkhordari, Zhou, and Pourkarimi, (2016), Md. Al-Amin, (2017), Hee, Ibrahim, Kowang, and Fei, (2018) and Mariam (2020) have tested and concluded the mediating effect of EE on TL and EE and this hypothesis has been empirically proved.

## **Conclusion**

The study was based on the emerging and challenging sphere of Human Resource Management today, 'Transformational Leadership,' which is strategically relevant to the achievements of the organizations. The present paper has executed mainly to identify the impact of TL on EP amidst manufacturing workers of chosen porcelain producing organizations in Sri Lanka. To fill the existing research gap, this explanatory research was mainly conducted using correlational and regression analysis with SPSS for providing more meaning and clarifications over the context.

The findings have concluded not only a strong direct impact of TL on EP but also a significant indirect impact via EE. To get confirmation of the study, it has tested both TL and EP with EE separately under the hypotheses and has revealed a significant positive impact. According to the results, a mediation of EE between TL and EP has been revealed.

The empirical link between TL and EP and the mediating role of EE is a major contribution of this study. These results of the study have provided an insight into the existing theory of TL and EP. Consequently, the study enlarges the EE theory by studying the relationship of TL on EP. The importance of these correlations or linkages has not been treated well in the local settings mainly in the factory environment. Therefore, the current study will be an eye opener for the leaders, and the management should revisit these concepts and grab the core of the relationships. Then they can absorb the idea of these dimensions and practice them as required. Especially there is a lack of research pertaining to Sri Lankan culture. The current study has contributed to the Human Resource Management literature from a theoretical perspective by examining TL on EP among the production workers of selected porcelain manufacturing companies in Sri Lanka. This study indicates a new avenue for the TL – EP link of which the direct and indirect paths were significant results of mediation between the constructs.

Further, it is suggested that the relationships can be tested for each dimension separately with the dependent variable employee performance. Moreover, the scope of the study needs to be expanded, creating more complex models that can include some other independent variable and test the indirect or direct relationship and the combined impact of these predictor variables on the measured variable. Apart from that the correlations can be tested for each dimension of employee performance as well. The levels of each dimension can

be tested with reference to transformational leadership. Moreover, testing the follower's characteristics considered by both leader and follower as potential mediators or moderators of the effect of TL on EE and EP is suggested. Apart from that conducting studies with other leadership styles such as authentic leadership and servant leadership to identify the relationship with EE and EP is also proposed. Finally, the current study bridged the gaps in existing literature pertaining to the context of TL and its outcomes.

### **Declaration of Conflicting Interests**

The authors declared no potential conflicts of interest with respect to the research, authorship, and publication of this article.

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## **Stock Price Reaction to the Stock Splits Announcement of Listed Companies in the Colombo Stock Exchange**

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### **Abstract**

*A stock split is a corporate event that directly impacts the number of a company's shares and indirectly on stock prices. This study tests the effect of the stock splits on the share price of companies listed in the Colombo Stock Exchange during the periods of pre and post stock split announcement in accordance with the Efficient Market Hypothesis. The main objective of this paper is to identify the overall impact of a stock split announcement on stock prices. This study analyses 88 annual stock splits during the ten (10) year period from 2009 to 2019 by taking the listed companies in the Colombo Stock Exchange into consideration. It uses the event study methodology to test the market efficiency of the Colombo Stock Exchange, and the market model is run with the aid of abnormal returns, which are calculated based on daily closing stock prices and the All-Share Price Index. For analysing the results, the graphical analysis and t statistics have been utilized. According to the event day average abnormal return, the majority of stock splits were more negative than positive with a significant t value at 5% by indicating that investors were taking the stock split announcement as bad news just after the split announcement was released. Each day with a significant Average Abnormal Return shows more positives than negatives. Graphical results have shown both Average Abnormal Return, and Cumulative Average*

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*Abnormal Return has remained continuously negative up to 18 and 25 days, respectively, by implicating that stock splits have made a deleterious impact on stock return. This study finally concludes that the information regarding the stock splits has not been absorbed efficiently by the market because the market reactions before and after the date of the split announcement were significant at 5%, although the Average Abnormal Return got a quick reaction to the announcement. Furthermore, results had not provided evidence for Semi-Strong Form efficiency of the Colombo Stock Exchange since the significant stock price adjustments before and after the event day was noticed. By this study, the policymakers and investors are convinced that all information has not been incorporated into stock prices in making their decisions.*

**Keywords:**

*Efficient market hypothesis, Event study methodology, Signalling theory, Sri Lanka, Stock splits*

**Introduction**

A stock split is a corporate activity where the company divides each of its shares into a fixed percentage that concurrently diminishes the share price. In simple terms, the stock split means the company splits the majority share into several shares. As a result of splitting stock, the number of outstanding shares gets reduced without creating or loosening the market capitalization of the company. Inversely, a split-back stock or reverse split is a process through which corporate stock shares are effectively merged to form a smaller number of proportionally more valuable shares, and it is called a merger of stocks. When considering a stock split, the stock price is one of the fundamental criteria to be considered because the price of a stock means the highest amount that someone is willing to pay for the stock or the lowest amount that they can buy. There are a number of technically accepted methods in determining the stock price, while the Initial Public Offering (IPO) is one of the generally accepted techniques among them which is used to determine the price of a share at the very first time. The Colombo Stock Exchange (CSE) has introduced several price indices such as All Share Price Index (ASPI), and Standard & Poor's Sri Lanka 20 (S&P SL20). ASPI is used to calculate share price change in all listed companies and S&P SL20 based on market capitalization following the results of 20 leading publicly traded companies listed in the CSE. This study is mainly concerns how an announcing of stock splits impacts stock returns and how it becomes

important to an increment in the number of listed companies regarding stock splits in 2010. Indeed, a stock split has been accompanied by the stock price of the relevant company, which has been proved econometrically, psychologically, and financially by a number of pieces of literature.

Generally, companies use the splitting of stocks as the most advantageous tool on the side of the company as well as the management. Marks (2006) suggests that the investors are affected psychologically by the principle of the stock split when shares are undervalued or overvalued. That means if the stock were undervalued, shareholders are more likely to buy shares because additional returns can be earned through the trading investor, whereas if the share price is overvalued, the share is more likely to be sold. Therefore, knowledge of share price assists the investor in making the best decision in investing in the more beneficial companies. Since share price reflects all information, an investor can determine whether a stock is overvalued or undervalued and therefore invest accordingly. On the other side, the management used the market split roughly to increase the demand for the share. Additionally, Fama (1969) suggests that if the stock prices adjust to new information quickly, the market is efficient, and Fama (1970) describes the theory of market efficiency when the prices reflect all the publicly available information. So, this study concerns to seek out the problem that states whether the share prices of listed companies are affected by the announcements of stock split. Although the number of previous studies which are included in the literature review has observed the impact of stock splits on the distribution of stock returns, retention ratio, stock return volatility etc., this study allows to study on how a stock split announcement affects the market price of a share and the efficiency by using event study methodology.

This study has aimed at several research objectives that lead to inspecting the stock price reaction to the stock split announcement in companies listed in the CSE. In addition, the study supports recognizing the stock price fluctuation in the CSE during the pre and post stock split announcement period and understanding the overall effect of a stock split on the market efficiency. Therefore, the objectives of the study are investigating the stock price response to the stock split of listed companies in the CSE and identifying whether there is any abnormal return around the stock split announcement date of the stock split. Accordingly, the following hypotheses are developed.

Hypothesis 1: There is no significant impact on stock prices around the stock split announcement date of the stock split.

Hypothesis 2: There is no abnormal return around the stock split announcement date of the stock split.

### **Literature Review**

Hua and Ramesh (2013) investigated stock split announcements and their effects on stock prices in the Colombo Stock Exchange (CSE) to analyse how stock prices respond to stock split announcements as well as the market performance by monitoring the CSE using a 64-events sample regarding 52 companies selected from 14 industries during the period from 2009 to 2012. This reading shows that stock splits in the selected companies had a substantial signal and information quality, and by endorsing the signalling theory, the market has responded favourably to the announcement. The researchers concluded that the results of their study support the Semi Strong Form Efficiency because the stock prices are so quickly adapting to public information that no buyer will earn an abnormal return through the split stock.

Dharmarathne (2019) examined the impact of information aroused from the right issue announcement on the CSE with the aim of observing the efficiency of the CSE when the right issue information was just released to the market in accordance with mainly the Semi – Strong Form Efficiency. In generating abnormal returns, the Mean Adjusted Return Model, Market Adjusted Return Model and Market Model have been used while several time series models also have been used. The findings have concluded that stock price reacted adversely after the announcement of the right issue, and the CSE is inconsistent with information efficiency due to the delayed price reactions.

Agara (2014) also explored a parallel analysis of the previous research to study the impact of stock split on stock returns among companies using even the study technique and the market model used to calculate the irregular stock return during the study periods. The researchers state that incoming retail investors would find new rates more appealing. The new price is more appropriate for satisfying the current shareholder as well. It can be demonstrated by the social pricing strategy. Share price knowledge and its momentum help investors in selecting the companies in which to invest prudently. With respect to the signalling theory, this result indicates that stock return has a significantly positive effect on the stock split effect.

Desai et al. (1997) have examined the impact of the shifts in stock split trading activity on the share price and adverse information part of the bid request spread and found a significant rise in variability after splitting, while Fernando et al.

(1999) concluded that an announcement of the stock split might convey favourable information to the market. However, if managers have negative information on future growth because of the costs involved with stock splits and stock dividends, they may choose not to increase the number of shares (split).

Dharmarathna and Amarasekera (2016) have observed the Stock Price Reaction to the Stock Split Announcements and Information Efficiency of the CSE by using Event Study Methodology. With the assistance of Mean Adjusted Return Model, Market Adjusted Model, Market Model and Time Series Models, their observation concludes that the share price does not reflect the information fully and instantaneously, and it does not provide evidence for the Semi-Strong Form Efficient Market Hypothesis because negative price reactions could be noticed before and after the Stock Split.

This hypothesis explains that if the share price is within the optimal price range, the investor is encouraged to buy the share, which leads to increase liquidity. Although numerous researchers have applied different methods for measuring the stock's liquidity, such as Ask-Bid Spread, Share Price Volatility, Trading Volume, Volume Ratio, and Dollar Volume, the event study methodology is also identified as a better method for analysing the liquidity effect. Accordingly, Gunathilaka (2011) has examined the impact of stock split on liquidity by using a sample of 40 stock splits announcement by companies listed in the Colombo Stock Exchange during the period from 2007 to 2010 through an event study methodology and cross-sectional regression technique. The cumulative abnormal return is identified as the dependent variable, and the size of the stock is split as a dummy variable to measuring the impact of signalling on market liquidity, while the market liquidity, which it identifies as the independent variable. This research has used the return on the first price of the day between days 0 and 1. The study discovers a significant positive market reaction and a significant explanatory power of the announcement effect on liquidity at the stock split.

Patel, Dave and Shah (2016) attempted to examine the stock market and trading volume reaction concerning the information content of the event stock split announcement for 34 selected companies who announced stock split in 2016. The study also included a volume ratio analysis to check whether the stock split announcement has a significant impact on the trading volume of a particular stock. The reading specifies that the liquidity of the Indian stock market is adversely responding to the stock split implementation. Because the volume ratio decreases after the stock split announcement, this result contradicts the

other findings. For example, Huang, Liano and Pan (2007) have found that there is an inverse relationship between the stock split announcement and the operational results over the four years following the announcement, whereas Garcia de Andoain (2009) has found that the company's stock split announcements had no impact on the stock price on the announcement day. Results support the semi-strong form of the efficient market hypothesis since stock prices adjust to public information so quickly that no investor can earn an abnormal return by trading on the announcement day.

The event study methodology is useful for identifying the impact on share price, market reaction to some particular event in the market or economy. An event study analyses the impact of a specific piece of news or event directly or indirectly on a company and its stock. Mackinlay (1997), Brown and Warner (1985) have observed the event study methodology practically with proper guidance on conducting an event study. According to studies, it is important to identify the event date; it is denoted as  $t_0$ , which may be the stock split date of the announcement, stock split ex-date, dividend announcement date, merger and acquisition date, and also can be a war-ending date, etc. For example, Chaudhary, Hashmi, and Younis (2016) examine the signalling effect on the cash dividend announcement among the companies listed in the Karachi Stock Exchange during 2010. To recognize the influence on the cash dividend announcement upon stock return, the event window of 15 days consisting of 7 days prior, and 7-day post the event date, the dividend announcement date has been used. The result supposes that the average abnormal return remains positive and statistically significant in the post-event window period.

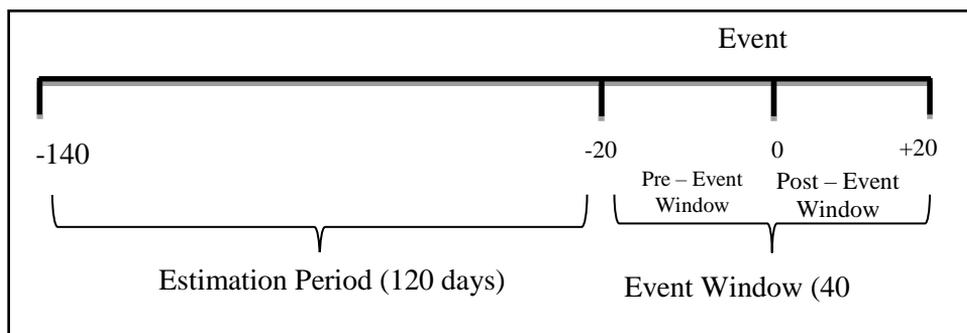
The dividend announcement and stock split announcement can research to investigate the market reaction on the right issues, and bonus issues implemented by the companies. Hua and Ramesh (2013) have exercised the investigation to identify the market reaction to right issue announcements and a test of market efficiency in the Colombo Stock Exchange (CSE) by employing event study methodology. The sample was contained 78 events (61 companies) from different sectors of the CSE during the period 2008 to 2012. And it concluded that there is a strong positive impact on stock prices by the right issue and significant information content in the CSE.

## Methodology

### *Research Design*

This study is based on the Event Study Methodology in order to carry out an analysis of the stock market response of selected stock splits. The focused populations consist of all the stock splits executed by 71 companies listed in the CSE from 2009 to 2019. However, the sample of this study is 88 stock splits, selected out of 94 total stock splits that occurred from 2009 to 2019. The sample selection is based on the availability of the information, such as the handiness of executing the date of the stock split. Data for the study, including stock split data, daily share prices, daily All Share Price Index (ASPI) data, stock turnover, Number of traders, and Number of shares traded, are extracted from the CSE data library.

As per the Event Study Methodology, several terms should be identified in accordance with the analysis. At first, the event/s should be specified, which is/are going to be analysed. This study concerns the stock splits that took place within the sample period as the event. Therefore, the event date is when the stock split took place, which is termed as  $t_0$ . Figure 2 shows the event timeline specified for the study, which comprises the event window, the estimation window, and the event date. The reason for selecting this approach is, it has allowed analysing the stock market response to an event to be prudently correlated by looking at such incident results that happened in the event earlier and later. Further, the signalling effect of a stock split is analysed by examining the pre-event window and the post-event window in addition to the examination of the event day.



**Figure 1: Event Timeline**

To carry out an event study, the event date is ex-date ( $t=0$ ), the event window is 40 days consisting of 20 days before the event date and 20 days after the event date ( $t= -20$  &  $+20$ ). Further, this study was applied to the market model to estimate the parameters, which are the alpha ( $\alpha$ ) and beta ( $\beta$ ). The study applies the estimation period of 120 trading days starting from the  $t= -21$  day to  $t= -140$  days.

Table 1 shows the population of yearly stock split announcements from 2009 to 2019, which is considered by this study. This study focuses only on 88 stock splits out of the following 94 stock splits.

**Table 1: Year-wise stock splits**

	Number of splits											Total events
Split Ratio	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009	
Ten for one	-	1	-	5	3	-	-	1	4	8	2	<b>24</b>
Two for one	-	-	1	4	2	-	2	1	11	7	1	<b>29</b>
Five for one	1	-	1	-	1	-	-	-	5	5	-	<b>13</b>
Three for one	-	-	1	-	-	-	-	-	2	3	-	<b>6</b>
Others	-	1	1	1	3	1	1	2	5	7	-	<b>22</b>
<b>Entire sample</b>	<b>1</b>	<b>2</b>	<b>4</b>	<b>10</b>	<b>9</b>	<b>1</b>	<b>3</b>	<b>4</b>	<b>27</b>	<b>30</b>	<b>3</b>	<b>94</b>

The Event Study Methodology involves finding Abnormal Returns for each stock in the sample by employing Equation 4 through the difference between Actual Return and Expected Return. Equation 1 is reflected in the Market Model under the Event Study Methodology, which can be applied for taking the Expected Return for  $i^{\text{th}}$  security. The Actual Return of security is taken from Equation 2, while the market return is calculated from Equation 3. Next, when the Abnormal Return for each stock is aggregated across securities, the daily Average Abnormal Returns (AAR) can be obtained as per Equation 5, and when the AARs are aggregated across the time, the Cumulative Average Abnormal Return (CAAR) can be taken as per Equation 7. Ultimately, for testing the significance of AAR, t statistic is used as per Equation 6.

$$E(R_{it}) = \alpha_i + \beta_i R_{mt} \dots \dots \dots (1)$$

Where;

$R_{it}$  = the rate of a return of stock "i" on the day "t" in the window period,

$R_{mt}$  = the rate of actual return on the market on the day "t,"

$\alpha$  = the intercept term (alpha coefficient) of security "i",

$\beta_i$  = slope of a straight line (beta coefficient) of stock "i" and

$e_{it}$  = regression error term of security "i" on the day "t".

$$R_{it} = \frac{P_{it} - P_{it-1}}{P_{it-1}} \dots \dots \dots (2)$$

Where;

$R_{it}$  = the rate of a return of stock "i" on the day "t" in the window period,

$P_{it}$  = market closing price per share "i" on day "t"

$P_{it-1}$  = market closing price per share "i" on the day "t-1".

$$R_{mt} = (I_t - I_{t-1}) / I_{t-1} \dots \dots \dots (3)$$

Where;

$R_{mt}$  = the rate of actual return on the market on the day "t",

$I_t$  = ASPI on the day "t" and

$I_{t-1}$  = ASPI on the day "t-1".

$$AR_{it} = R_{it} - E(R_{it}) \dots \dots \dots (4)$$

$AR_{it}$  = abnormal returns for a firm "i" at the time "t",

$R_{it}$  = the rate of the actual return of stock "i" on the day "t" in the window period and

$E(R_{it})$  = expected normal returns for the firm "i" at a time "t" in the window period.

$$AAR_t = \frac{1}{N} \sum_{i=t}^N AR_{it} \dots \dots \dots (5)$$

Where;

$AAR_t$  = average abnormal return for day "t" in the window period,

$N$  = number of events in the sample.

$$T(AAR_t) = AAR_t / \sigma(AAR_t) \dots \dots \dots (6)$$

Where;

$T(AAR_t)$  = Calculated t value (AAR),

$AAR_t$  = average abnormal return on day "t" and

$\alpha$  = standard deviation of  $AAR_t$ .

$$CAAR_t = \sum_{i=t}^T AAR_t \dots \dots \dots (7)$$

Where;

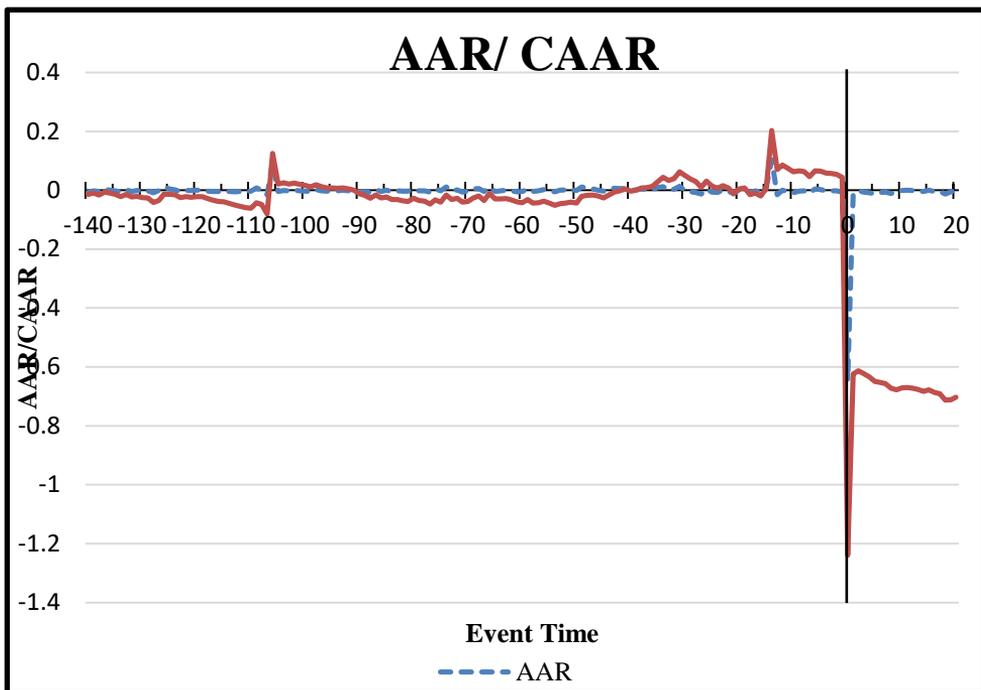
$CAAR_t$  = cumulative average abnormal return on the day "t"

## Results

The data obtained from CSE covers ten years between 2009 and 2019, with 88 stock splits. By establishing the relationship between stock splitting and share prices, the analysis is conducted using Excel data sheets in order to evaluate the abnormal returns under the event study methodology with reference to the Market Model. The analysis section of this study comprises the event study analysis in a graphical presentation and the t - statistical analysis to grab a valid and reliable conclusion regarding the research problem.

### *Graphical Analysis*

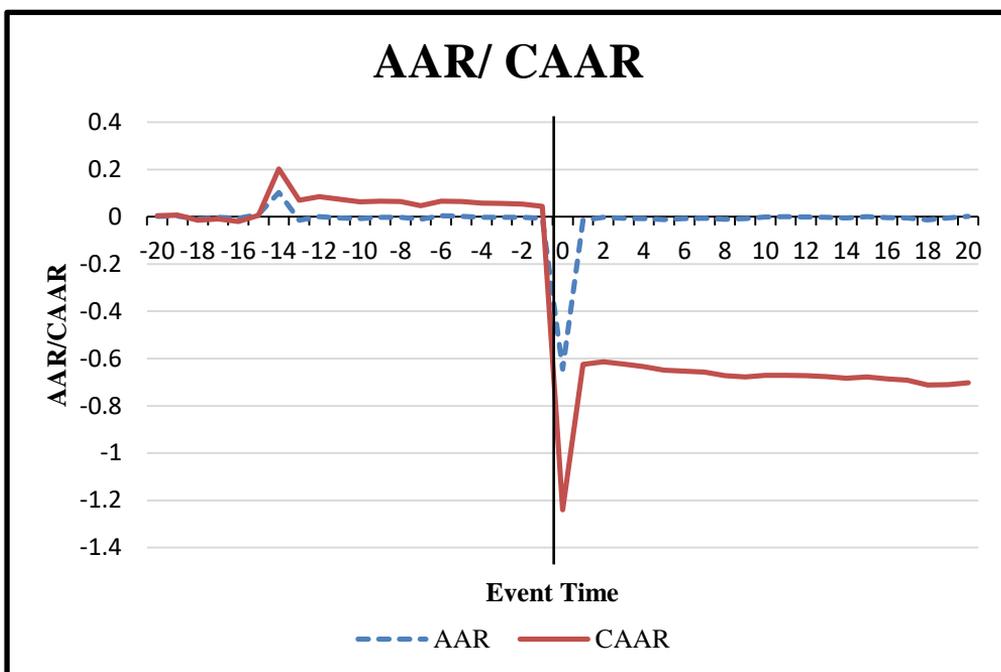
Figure 3 shows that both AARs and CAARs have remained constant with minority fluctuations with positive and negative values within the -140, -20 window. It implies that the market anticipates stock split announcements as favourable information about the future of the firm since the majority of points had got positive before the event happened. However, both AAR and CAAR have shown a sudden drop by the Event date on which the announcement of the stock split was made by implying that the ability of stock prices to reflect the



**Figure 2: AAR and CAAR for Estimation Window (-140, -20) and Event Window (-20, +20)**

new information as soon as it was released to the market.

Figure 4 shows the exact reaction during the Event window with the closest view. Although the AAR results show a positive situation before the event date, a quick drop has happened in both AAR and CAAR as well as, it has got negative. However, by the day +1, abnormal returns began to rise accordingly but keeping its negativity as it is. The continuous adverse behaviour in AAR and CAAR lasted 18 days after the event date by implying that the stock split has made a deleterious impact on stock return. Overall, CAARs were negative for 25 days, including the event day during the event window.



*t – Statistics Analysis*

**Figure 3: AAR and CAAR for Event Window (-20, +20)**

Table 1 presents the AARs, CAARs during the Event Window, as well as the t -Statistic value of AARs has been shown in order to find the significance of each day. An asterisk shows the significance of AAR under a 95% confidence level. In addition to that, an analysis is carried out to check how many events were positive and negative in each day out of the total sample, which is summarized under the column plus: minus sign.

**Table 2: AAR, CAAR, t – Statistics and Sign for the overall sample**

Event	AARs <sup>1</sup>	CAARs <sup>2</sup>	T(AARs) <sup>3</sup>	Sig <sup>4</sup>	Sign <sup>5</sup>
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date	%	%		(+ : -)
N	0.002028732	0.002040142	0.457368773	50:38
-19	0.002840929	0.004881071	0.350737748	35:53
-18	-0.009974907	-0.005093836	-1.273246595	30:58
-17	-0.002222547	-0.007316383	-0.532290752	39:49
-16	-0.006174015	-0.013490398	-1.279862687	41:47
-15	0.009783652	-0.003706746	1.249265053	46:42
-14	0.103163599	0.099456853	0.690921492	42:46
-13	-0.014626841	0.084830013	-0.911135813	31:57
-12	0.000264934	0.085094947	0.039556506	42:46
-11	-0.005351454	0.079743493	-1.075610117	37:51
-10	-0.008473192	0.071270301	-1.409591419	38:50
-9	-0.002922973	0.068347328	-0.626344561	42:46
-8	-0.002096953	0.066250376	-0.525847895	41:47
-7	-0.009926042	0.056324334	-1.18471171	* 32:56
-6	0.004648682	0.060973015	0.259215018	37:51
-5	0.001991658	0.062964673	0.491551648	54:34
-4	-0.002431522	0.060533151	-0.596237057	34:54
-3	-0.001818206	0.058714945	-0.559262357	37:51
-2	-0.002480137	0.056234808	-1.302687057	34:54
-1	-0.006122684	0.050112124	-2.497044331	* 31:57
0	-0.644978166	-0.594866042	-15.60123002	* 2:86
1	-0.014686275	-0.609552316	-1.927965267	* 28:60
2	-0.001748621	-0.611300937	-0.234558938	36:52
3	-0.005893383	-0.61719432	-1.026314014	34:54
4	-0.008129192	-0.625323512	-1.430491249	37:51
5	-0.011911309	-0.637234822	-2.230716664	30:58
6	-0.007662412	-0.644897234	-1.999475474	* 33:55
7	-0.005880152	-0.650777386	-1.041215901	36:52
8	-0.010935438	-0.661712824	-1.858080707	31:57
9	-0.007761138	-0.669473962	-1.930025626	30:58
10	-0.000769953	-0.670243915	-0.14193454	36:52
11	-7.70493E-05	-0.670320965	-0.010944371	34:54
12	-0.000900882	-0.671221846	-0.18028	34:54
13	-0.002535995	-0.673757841	-0.68581	40:48
14	-0.004585967	-0.678343808	-0.83497	36:52
15	0.000296384	-0.678047425	0.087428	42:46
16	-0.003940307	-0.681987732	-0.86026	33:55
17	-0.004554598	-0.68654233	-0.66278	28:60
18	-0.012883125	-0.699425455	-1.71835	27:61
19	-0.005781529	-0.705206985	-1.15054	34:54
20	0.001419844	-0.703787141	0.187731	38:50

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\* Significant at 5%

Notes: <sup>1</sup>Daily average abnormal returns

<sup>2</sup>Daily cumulative average abnormal returns

<sup>3</sup>t – statistic of daily average abnormal returns

<sup>4</sup>Significance of average abnormal returns \*Significant at 5%

<sup>5</sup>Number of Positive stock splits to number of negative stock splits

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Although AARs around the event day fluctuate among positive and negative ends, most of the AARs are negative than positive AARs during both pre and post the event day. In detail, 35% of results on which 7 days before the event day and 10% on which 2 days after the event day were positive while 65% on which 13 days before and 90% on which 18 days after the event day had been found as negative. The AARs in Post - Event period were higher than the Pre - Event period, and negative returns are also observed. From the entire sample of 88 stock split execution, there are 2 positive responses and 86 adverse responses on the event day. The number of positive versus negative sign is 31:57 on the event day and 28:60 on day 1. Especially, this result indicates that the AAR on day 0 is 0.6449%, which is negative and statistically significant. Since hypothesis 1 is rejected and implied, there is a significant impact around the day of the stock split announcement. And also, Table 3 indicates that only 2% of the days generate positive abnormal returns, and 86% of the days generate negative abnormal returns. It implies that Stock prices are affected adversely by the stock split. This finding is consistent with the work of Patel, Dave and Shah (2016) who observed that the Indian Stock Market has been negatively affected by the information content of the stock split announcement. However, the Indian stock market has been recognized as an efficient market regarding stock split announcement since it does not allow investors to earn abnormal returns during the event period.

In accordance with the significance test, 5% of a significant level is applied. Accordingly, the highest significant negative AARs of -0.01468% is found on day +1, which implies that the market has responded negatively on the first day after the announcement due to bad signals absorbed by the market. And also, the statistical significance at the 5% level is denoting the return as negative on average during the immediate day after the event day at 95% of the chance. In addition to that, AAR generates a negative abnormal return of -0.00766% on day +6, and it is also statistically significant. Therefore, Hypothesis 2 can be

rejected since significant abnormal returns around the day of the stock split announcement.

And also, these findings of the event day significance confirm the findings of Hua and Ramesh (2013). The information content of a stock split is absorbed by the stock market on the date of the stock split announcement. However, this study is inconsistent with their opinion since significant abnormal returns can be identified before and after the stock split announcement day.

**Table 3: Direction of Abnormal Returns (ARs) on Day 0**

<b>Direction</b>	<b>Number of events<sup>2</sup></b>	<b>Percentage of events<sup>1</sup></b>
Positive	2	2.2%
Negative	86	97.8%
Total Events	88	100

<sup>1</sup>Number of events categorized according to the positivity or negativity of abnormal returns earned by a stock split.

<sup>2</sup>Number of events as a percentage according to the positivity or negativity of abnormal returns earned by a stock split.

## **Discussion and Conclusion**

A stock split is a corporate action in which a corporation divides each of its shares in a fixed percentage and concurrently a diminution of the price of a share. Therefore, the stock split increases the share outstanding and does not generate or destroy market capitalization. The theoretical background indicates that most companies are executing the stock split to reduce the share price. Therefore, this study fills the knowledge gaps on the effect of stock split on the share price of firms listed in the CSE to investigate the stock price response on the stock split. To examine the relationship between a stock split and share price return, this study analyses the abnormality of the return of the share price as consistent with the Market Model by using the Event Study Methodology. The findings of this study found that on the event day, which represents the day of announcing the split significant market reactions have taken place. The information of the stock split is absorbed and adjusted by the market on the event day (Day "0"), indicating information efficiency since the quick drop in AAR and CAAR happened on Event Day. The empirical results of the event day

provide statistically significant at 5% level and provide evidence for the information efficiency. Results support the semi-strong form efficient market hypothesis since stock prices adjust to public information quickly, and the investor will not be able to earn a normal return by trading on the announcement day.

In accordance with the positive vs negative analysis, 22% of days were positive, and 78% of days were negative within the overall 41 days' event window, whereas 90% of dates generated a negative abnormal return after the announcement of Stock Splits were made. This indicates that most of the days earned negative AARs around the date of the stock split announcement. All of these results support that the stock split and generate a negative abnormal return and help in predicting future returns and market efficiency.

The above results indicate that the AARs are positive for the date of the stock split announcement. The survey of the Colombo Stock Exchange firms is not a semi-strong type of productive market because the market has responded before and after the announcement of stock split released to the market. Nevertheless, capital market performance relies not only on historical values, public and private records but also on applying the current stock market rules and regulations and their administrative effectiveness. As per the first objective of this study, the stock splits are investigated to catch the response on the stock prices. A negative and insignificant AAR of 0.6449% on the split execution date indicates that the market reacts negatively as well as significantly on the split announcement on execution day. Therefore, the results conclude that share prices have negatively reacted to stock splits, and share prices do not fully reflect the information arouse from the stock split announcement because of significant stock price reactions before the ex-date. The second objective of the study is to identify whether there is no abnormal return around the stock split announcement date of stock split and around the stock split day. There is evidence of a negative anticipatory effect due to adverse perceptions of investors during the pre-announcement period (-20,-1) and also large negative AARs (-7.7%) are observed during the post-announcement period of (0, 20) due to quick adjustment of investors to the information and a less amount of time passes to fully incorporate relevant information in the split announcement by the stock prices. However, results indicate a possibility of generating abnormal returns within pre and post stock split announcement day inconsistent with the semi-strong form efficiency.

All in all, using an event study methodology, the study found that the investors gain significant returns on the announcement date and a few days around the announcement dates of the stock split. Results show that stock split announcements lead to more negative abnormal returns and help in predicting future returns and market efficiency. So, this study concludes that, although the investors cannot earn abnormal returns by trading in the stocks on the stock split execution, there is a possibility of outperforming by investors.

### **Declaration of Conflicting Interests**

The authors declared no potential conflicts of interest with respect to the research, authorship, and publication of this article.

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## **Factors Affecting the Implementation of Environmental Management Accounting Practices through New Institutional Sociology Perspective: A case of an Apparel Manufacturer in Sri Lanka**

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### **Abstract**

*The emergence of contemporary business environment and technologies, customer driven business perspective, and transparent and accountable business practices have led different stakeholders to demand information in relation to the management of the environment. Consequently, organizations tend to develop their strategies in line with achieving these financial and environmental performances. The apparel industry is one of the significant contributors in the Sri Lankan economy and it can be seen that Environmental Management Accounting (EMA) is often practiced in this industry. However, it is a matter of consideration for the real reason behind the adoption and implementation of Environmental Management Accounting Practices (EMAPs) in this industry. Accordingly, this study is focused on identifying the actual factors that have influenced a manufacturer in the apparel industry in Sri Lanka to adopt and implement EMAPs with the perspective of the New Institutional Sociology Theory. This study takes a case study approach. Therefore, one of the leading manufacturing companies in the apparel industry was selected as the case company. The primary data were collected through a semi-structured interview and questionnaire survey. The validity of findings was assessed through data triangulation. It was identified that the environmental cost accounting, environmentally induced capital expenditure and revenue are the mostly used EMAPs whereas the payback period method is often applied in the organization for investment appraisal activities. In terms of factors that have influenced to adopt and implement EMAPs through the Institutional Theoretical Perspective, it was found that coercive isomorphism was the most significant factor whereas the least influential factor was the normative isomorphism on*

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*the adoption and the implementation of the EMAPs in the organization. In terms of coercive isomorphism, the government regulations are the most influential force on this adoption and the implementation. Further, the study found some reasons behind the adoption of more Physical EMAPs (PEMAPs) than the Monetary EMAPs (MEMAPs) by the organization. The study contributes to minimize the gap by revealing the types of EMAPs that have been adopted and implemented and revealing the actual factors that have led to adopt and implement those practices in a manufacturer of the apparel industry.*

**Keywords:**

*Environmental Management Accounting Practices, New Institutional Sociology Perspective, Apparel Manufacturer*

**Introduction**

Several decades ago, the managements of the organizations focused on improving firms' financial performance. They placed less importance on non-financial performance like environmental performance. However, with the rise of significant environmental issues like greenhouse effect, biodiversity degradation, ocean acidification, etc. people place a considerable importance on the protection of the environment than ever before. Due to this emerging pressure from the stakeholders, the organizations are much more focused on developing sustainability practices in their organizations. In this context, environmental sustainability practices came into place, to play a major role in addressing environmental impact of the operations while improving the environmental performance of the organizations. Environmental Management Accounting (EMA) is used as one of the environmental sustainability practices in the organizations and it provides the environment related information to the stakeholders.

It is argued that EMA is not a separate system; it adds value to the conventional management accounting system and provides useful information to firms to manage and improve performance and bring about sustainable development. (IFAC, 2005). In this context, EMA has become an emerging concept which is widely dispersed in various sectors in Sri Lanka. Industrial activities are some of the best instances for adopting and implementing EMAPs in Sri Lanka. The Central Bank of Sri Lanka [CBSL], (2017) indicates that the contribution from the industrial activities to the Sri Lankan economy has continuously grown for the past two decades. The growth in value addition from the contribution of industrial activities was 3.9% as of 2017.

Among various types of industries in Sri Lanka, the apparel industry is well known for organizations which are actively involved with the environment (Gunarathne & Alahakoon, 2016). The Board of Investments [BOI], (2019) states that the society has embraced the concept of green manufacturing which is generally known as eco-friendly manufacturing. Thus, it can clearly be seen that EMAPs are widely used in this industry (Gunarathne & Alahakoon, 2016).

EMAPs are adopted and implemented for different reasons such as pressures from various kinds of stakeholders, environmental regulations, achieving the internal efficiency etc., (Montabon et al., 2007). Hence this study is aimed at identifying the factors that have led to adopt and implement EMAPs in a case company in the apparel industry in Sri Lanka.

Since there is a gap in Sri Lankan literature regarding the factors that have led the apparel industry or the organizations to adopt and implement EMAPs with a theoretical basis, this study has analyzed the factors that have led a Sri Lankan apparel manufacturer to adopt and implement EMAPs with the perspective of Institutional Theory. Hence this study is mainly involved with three objectives; to identify Environmental Management Accounting Practices (EMAPs) followed by an organization in the Sri Lankan Apparel Industry, identify Institutional factors that lead to adopt and implement EMAPs and finally identify the types of Institutional forces that will induce EMA adoption. This study is a qualitative research study. The analysis is based on the data collected in 2019 from one of the leading companies in the Sri Lankan apparel industry via an interview and a questionnaire survey.

To identify EMAPs followed by the Apparel manufacturer in Sri Lanka, identify Institutional factors that lead to adopt and implement EMAPs and identify the types of Institutional forces that will induce EMA adoption require the study to be done in the natural setting (Yin, 2014). On the other hand, a highly detailed and a significant in-depth understanding is important for the successful achievement of the research objectives of this study (Yin, 2014). Thus, the said objectives can be effectively achieved through a case study design rather than a quantitative research study. Therefore, a case study approach was applied for this study.

This study contributes a significant insight to the theoretical knowledge. Although several studies can be found in foreign literature (Jalaludin et al., 2011, Glover et al., 2014), there is a significant gap in Sri Lankan literature that has been carried out in relation to this area, specifically with a theoretical basis. Most of the studies that have been done by Peiris et al. (2014), Wickramasinghe

(2016), Alwis et al. (2014) regarding Environmental Management Practices were focused on the hotel and tourism industry. Hence this study creates a value for Sri Lankan prior studies since the study is aimed at in-depth analysis of environmental accounting practices in relation to Sri Lankan Apparel manufacturer through Institutional Theory Perspective.

On the other hand, different industries use different types of EMAPs. There are some beliefs that EMAPs are kinds of techniques that enhance the corporate performance (Montabon et al., 2007, Nakao et al., 2007 and Klassen et al., 1996) while some use these practices as a marketing tool (Gunarathne & Alahakoon, 2016) to attract customers, suppliers and investors. Hence, in terms of practical contribution this study is particularly aimed at identifying the EMAPs adopted and implemented by the Sri Lankan Apparel sector company and the factors behind the adoption and implementation of those practices through the point of view of Institutional Theory Perspective.

The outline of this paper flows as follows. Firstly, the next section of this paper presents the literature review. The remaining sections present the empirical setting (Marble), theoretical framework and methods and data analysis. Finally, this paper explains the findings of the study and gives the conclusion.

## **Literature Review**

### ***Environmental Management Accounting (EMA)***

Environmental Management Accounting (EMA) is defined as the management of environmental and economic performance through the development and implementation of appropriate environment related accounting systems and practices. While this may include reporting and auditing in some companies, environmental management accounting typically involves life-cycle costing, full-cost accounting, benefits assessment, and strategic planning for environmental management (IFAC, 2005).

EMA can be viewed as the identification, collection, analysis and use of physical information on the use, flows and destinies of energy, water and materials (including waste) and monetary information on environment-related costs, earnings and savings (UNSD, 2001). Accordingly, EMA provides two types of information: Physical Environmental Management Accounting (PEMA) information and Monetary Environmental Management Accounting (MEMA). PEMA involves measuring environmental impact information expressed in terms of physical units such as kilograms of materials whereas

MEMA focuses on expressing the environmental impact information in monetary units (Burritt et al., 2010). In fact, both physical environmental management accounting practices and monetary environmental management accounting practices are some of the essential management accounting techniques that can be used to track, trace and treat the environment related cost of the organization (Burritt et al., 2010).

One of the types of benefits of EMA is that it provides information on whether the organization has complied with relevant environmental laws and regulations applicable for the industries (IFAC, 2005). Being able to achieve eco-efficiency is another benefit of EMA (IFAC, 2005). EMA ensures the efficient use of resources and thereby would result in the reduction of both costs and environmental impacts (IFAC, 2005). Thereby EMA ensures the achievement of eco-efficiency (IFAC, 2005). For an instance, EMAPs on raw materials provides information about material analysis by the type of materials, alternatives for materials and its analysis, calculating material cost per unit, analysis of material wastage etc., to the apparel manufacturers. Thereby, the apparel manufacturers are able to control and reduce the material cost, minimize the wastage and it would result in accurate product (garments) costing. Further, EMA is beneficial in strengthening the long term strategic position of an organization (IFAC, 2005 and Solovida et al., 2017). EMA provides information which can be used to enhance the eco-friendly image of the organizations and thereby attract the environment-conscious customers, suppliers and investors (Solovida et al., 2017). For instance, EMA provides information on water management, waste management, and energy management. The apparel manufacturers can utilize this information as a marketing tool to enhance their eco-friendly image and attract customers, suppliers and invertors. Thereby, it will strengthen the strategic position of the apparels.

With this perspective, some believed that the EMAPs should be aligned with corporate strategies to sustain the success and development of any organization (Shah et al., 2017). A company's strategy improves the environmental and economic performance (Shah et al., 2017). Hence, it is crucial taking into the consideration the Environmental performance indicators when developing a company's strategy in order to sustain the success of the company.

### *New Institutional Theory*

An institution is the bearer of a set of practices, a structural arrangement and configuration of rules which determines what is exemplary behavior (Olsen, 1997). Further, institutions can be defined as the social structures that have attained a higher degree of resilience. They consist of cultural-cognitive, normative, and regulative elements that, together with associated activities and resources, provide stability and meaning to social life. (Scott, 1995).

Institutional Theory can be divided into three strands (Jalaludin et al., 2011) namely, Old Institutional Economics, New Institutional Economics and New Institutional Sociology. Some of the key Institutional theorists like Meyer and Rowan (1977), DiMaggio and Powell (1983) believed that the environment in any institution highly influences the formal structure development even more than market pressures. Any innovation-based structure can be easily legitimized in an organization (DiMaggio & Powell, 1983). However, when organizations fail to accept those innovations which have become legitimized or critical, it would be seen as or considered as the 'irrational and negligent behavior of those organizations. Therefore, organizations tend to acquire and promote a formal structural form even though it doesn't increase efficiency of the organization and for the use of legitimacy.

Institutional Theory provides essential and valuable insights into the factors that cause to change the features of organizations. In other words, Institutional Theory explains why organizational structures and practices have become more homogeneous and how and why such change occurs (DiMaggio & Powell, 1983). Though the Institutional Theory can be divided into three strands, Old Institutional Economics, New Institutional Economics and New Institutional Sociology, this study mainly focuses on the perspective of New Institutional Sociology. New Institutional Sociology perspective explains the reasons for the adoption of homogeneous practices based on various areas such as cultural studies, cognitive science, psychology (Jalaludin et al., 2011). Further, the theory views that the organizations adopt these homogeneous practices in order to conform with the external pressures rather than to increase the internal efficiency (Jalaludin et al., 2011).

Isomorphism is one of the key concepts associated with the New Institutional Sociology Theory. According to DiMaggio and Powell (1983), isomorphism is the process through which organizations in the same line of business become homogeneous. They believed that the organizations adopt uniform structures

due to three types of pressures/isomorphism: coercive isomorphism, mimetic isomorphism and normative isomorphism. As a consequence of formal or informal pressures that influence the organizations, coercive isomorphism occurs. For instance, pressures from government and other regulatory bodies (DiMaggio & Powell, 1983). Mimetic isomorphism can be defined as the pressures that lead organizations to imitate successful organizational structures and practices that arise during high uncertainty (DiMaggio & Powell, 1983). Normative isomorphism occurs due to the pressures of professionalization. In other words, similar attitudes, behaviors and practices come into the organizations with same educational backgrounds of the people (DiMaggio & Powell, 1983). All these three pressures have individually or collectively caused organizations to adopt similar practices in the industry.

### ***Empirical Review on EMA and EMAPs***

EMA and EMAPs are widened and can be widened for a broad level of knowledge area. Thus, prior studies on EMA and EMAPs are categorized into several areas: factors affecting on the adoption and implementation of EMAPs, Institutional Theoretical Perspective on adopting and implementing EMAPs and Sri Lankan literature on EMA and EMAPs.

### ***Factors affecting on the adoption of EMAPs***

Some authors have done studies with the objective of identifying the factors that have influenced the firms to adopt EMAPs. The study carried out by Karimi et al. (2017) has contributed to this area. This study was done to modeling the factors that have influenced the financial managers who were engaged in petrochemical and oil refining companies. Hence, the study was quantitative. Further the authors have tested a population of 182 people in petrochemical and oil refining companies. And the collected data were analyzed by using both statistical and descriptive methods. Based on the results, the authors have concluded that from the perspective of financial managers in petrochemical and oil refining companies, the difficulty of collecting and allocating of environmental costs, the lack of standards, the resistance to change and culture, society and competitive environmental are the most affecting factors on adopting EMAPs in the industry. Further the authors have pointed out that there is an influence in adopting EMAPs from the experience of professional work. Hence, they have recommended that further patterns can be demonstrated for

future studies. Hassan et al. (2011) did a study with the objective of identifying the factors that have impacted on the successful achievement of Environmental awards. The study was based on 100 FTSE UK companies and data were collected from corporate and financial reporting of the websites of those companies. It was concluded that companies are highly encouraged to achieve environmental awards to ensure that the stakeholder expectations regarding the environmental issues are met. It was found that the level of Environment related information disclosure and thereby receiving awards have been influenced by the membership in the industry and the nature of the industry sector.

### ***Institutional Theoretical Perspective on adopting and implementing EMAPs***

Relatively a few number of studies were done in relation to EMAPs with the perspective of Institutional Theory. The study done by Jalaludin et al. (2011) on understanding EMA adoption in a new Institutional Sociology Perspective is one of the significant contributions for this type of studies. The objective of the study was to identify the extent of influence from Institutional pressures on EMA adoption. The study was based on a sample of 74 accountants in Malaysian manufacturing companies. Further semi-structured interviews were done for the in-depth analysis. Based on the New Institutional Sociology Theory it was concluded that normative pressures place a significant influence on EMA adoption. Specifically, accounting body membership and training were found to be the most forceful factors out of normative pressures. The authors have emphasized that future studies can also be done with regard to EMA adoption and Institutional pressures with the involvement of other parties in an organization. On the other hand, another study was done in relation to the sustainable practices with the Institutional Theory Perspective by Glover et al. (2014). The study was qualitative and was based on the dairy supply chain in the UK. 70 Semi-structured telephone interviews were used to collect the data and constant comparison analyses were done to analyze the data. The findings highlighted that the supermarkets hold a powerful position in determining the sustainable practices across the dairy supply chain in the UK. The pressure from those supermarkets was considered as coercive pressure in the perspective of Institutional Theory. Further, the authors have emphasized the need of identifying how green sustainable practices are legitimized when competing with the purpose of reducing the cost or maximizing the profits.

### *Sri Lankan Studies on EMA and EMAPs*

The studies which are based on EMA and EMAPs in Sri Lankan literature have been rarely carried out. A majority of the Sri Lankan literature on EMA and EMAPs are based on the identification of EMAPs in various industries, the extent of adoption of EMAPs in Sri Lankan industries and its diffusion in Sri Lanka. A case study was done by Edirisooriya et al. (2014) with the objective of identifying the extent of EMAPs adopted and implemented by a manufacturing operation in the financial sector in Sri Lanka. The authors had collected both primary and secondary data. Hence, triangulation was used to verify the validity of data. Observing organizational processes and semi structured interviews were used as primary data collection methods whereas analyzing documents and online data were used as the secondary data collection methods. Since the study is based on the case study approach, it mainly focuses on the sale of gold. The authors have analyzed the process and identified how waste is generated and what are the treatments the management has taken to manage it. The interview with the General Manager highlighted that the top management has not paid much attention for the management of waste in the organization. Further the authors have identified that the company has achieved economic and environmental sustainability to an extent, but it lacks social sustainability. They have stated that the company has not taken reasonable actions to ensure the safety of employees who engage in the gold refining process. Hence the authors have concluded that the company is in a minimal level of social sustainability. Based on the findings, the authors have recommended that the company has to undertake the necessary health and safety measures in order to ensure the well-being of society and the environment. Further, the authors have stated that the company can achieve cradle to cradle approach by use of refined grey water for the purposes like cleaning rather than release that grey water to the environment.

In contrast to the gold refining organization, another case study was done in relation to an electrical items manufacturer in Sri Lanka. The study was carried out by Thilaksiri et al. (2014) to identify how the company uses EMAPs to manage waste. The data collection methods were the same as the previous study carried out by Edirisooriya et al. (2014). Unlike the previous study, the authors have recognized that the company uses the 3 R's practices of waste management: reducing the sources, reusing and recycling. Further, the top management of the company motivates the employees to actively engage in

waste management activities and procedures. The authors have identified that the company uses the Kaizen system, environment - oriented capital budgeting system, energy accounting as EMA tools to reduce the waste. On the other hand, the company has significantly invested in waste management projects as well. It is proven that the management has adopted and implemented the EMAPs because they have understood the hidden benefits of the use of EMAPs to the organization. The findings of this study prove that some industries in Sri Lanka are adopting and implementing EMAPs successfully. Peiris et al. (2014) also carried out a case study to examine water and waste management with the use of EMA in relation to the hotel sector in Sri Lanka. Unstructured interviews were used as the primary data collection method while informal conversations, the non – participative observation and documentary analysis were used to triangulate the data gathered in unstructured interviews. According to the findings, the selected company initially adopted and implemented EMAPs due to the guidance of the founder of the hotel. Hence, adopting and implementing EMAPs were embedded into the culture in the hotel. The findings prove that the hotel is successfully implementing the EMA system and thereby has achieved ISO 14001. According to the findings of the study, the selected hotel uses both water and waste reduction, reuse and recycle practices as EMAPs. In contrast to the two studies mentioned above, this study emphasizes that the top management has identified, that the continuous engagement of other stakeholders is vital to implement EMAPs successfully. Hence, the top management conducts staff awareness programs to train and motivate their employees in engaging water and waste management practices while using a green directory, quotes and posts to make their guests aware of sustainable practices at the hotel.

With the objective of identifying the EMAPs and its diffusion in Sri Lankan organizations, a qualitative study was carried out by Gunarathne and Alahakoon (2016). The study is mainly based on the experience on EMAPs of authors and it is specifically based on companies which are under the ownership and control of Sri Lankans. According to the study, different EMAPs are implemented by different Sri Lankan enterprises. The study covers EMAPs used in apparel, hotel, manufacturing, and plantations industries while accounting for energy, materials, water, carbon, biodiversity and life cycle costing are mainly identified as EMAPs used by those enterprises. The findings showed that there is a rapid spread of implementation of EMAPs. However, the adoption seems to be as isolated practices and it requires a high level of commitment and support from

the top management of the organizations. The authors have stated that most of the organizations are adopting and implementing EMAPs due to various reasons such as, environmental regulatory requirements, requirements in reporting standards like GRI standards, pressures from different stakeholders etc. While organizations are adopting and implementing EMAPs for different reasons, the universities and professional accounting bodies play an active role in promoting the awareness of EMAPs in the organizations and its benefits of adopting and implementing EMAPs to the organizations as well as to the society.

While most of the studies are aiming at identifying EMAPs in different industries, some researchers carried out studies to identify the determinants of adopting and implementing EMAPs in Sri Lankan industries. Wickramasinghe (2014) carried out a quantitative study to assess the receipts of environmental awards and determinants of such receipts. The study was based on 94 hotels which were located in the Western province. Face-to-face interviews were used to gather the data and the collected data were analyzed by using Probit approach. The hotel size, chain affiliation, luxury level, classification, and number of employees per room were used as the independent variables to identify which element has an impact on determining on receiving the environmental awards and certifications. Based on the analysis of findings, the author concluded that hotels in Kalutara receive more environmental awards and certifications than the hotels in the Colombo district. Moreover, chain affiliation was recognized as the most significant determinant in receiving environmental awards and certifications for hotels. Further, the results of the study found that luxury hotels receive more environmental awards and certifications than mid-range and budget level hotels. However, according to the findings the size of a hotel is irrelevant in receiving environmental awards and certifications.

## **Methodology**

The study is based on a qualitative research study approach. Hence it explains 'how' and 'why' for a particular scenario (Yin, 2014). Thus, a qualitative research study enables to develop a deep understanding of the subject matter (Yin, 2014). In other words, it provides detailed insights into why the case organization adopts EMAPs. On the other hand, different types of research designs are available in relation to the qualitative research study approach. Out of those forms of designs, a case study approach was selected for this study for the successful achievement of the objectives in the study. According to the viewpoint of Yin (2014), a case study can be defined as an empirical inquiry

which thoroughly investigates the contemporary scenario in a natural setting and there are unclear boundaries between the phenomenon and the context. Further, it requires a highly detailed and a significant in-depth understanding. According to Yin (2014) the case study enables thorough investigation of the present scenario. Hence, a case study approach enables to investigate the types of EMAPs adopted by the organization, the Institutional factors that lead to adopt and implement EMAPs by the organization and the types of Institutional forces that induce EMA adoption. Hence, using the case study approach for this study is more appropriate compared to other types of designs. This can be considered as one of the best strengths of the study.

This study is aimed at identifying the factors that have led to adopt and implement EMAPs in a Sri Lankan apparel manufacturer with the perspective of Institutional Theory. Thus, the nature of the study requires an in-depth analysis (Yin, 2014). On the other hand, having timely primary data increases the accuracy, validity and reliability of the conclusion of the study. By concerning all these aspects, it was decided that the qualitative case study research approach is much more suitable for this study than the quantitative research study approach.

The data was collected by using primary sources. The semi-structured interview and questionnaire survey were the main data collection methods used in the study. These two types of data collection methods were used with the purpose of data triangulation. In data triangulation, different types of methods or different types of sources are used in order to ensure the validity and reliability of data (Bryman, 2012). Thereby, with the purpose of data triangulation, an interview was conducted with an employee at management level whereas the questionnaires were distributed among the executive level employees in the finance division of Marble.

When developing the questionnaire and interview guide, firstly, the researcher analyzed the types of EMAPs by referring previous research articles. For this the study done by Jalaludin et al. (2011) on understanding EMA adoption in a New Institutional Sociology Perspective was mainly used. Based on the analysis, the most suitable EMAPs for the apparel sector organization were listed. With the objective of identifying the EMAPs which have been adopted and implemented by the apparel manufacturer, the following practices were listed out in both the questionnaire and the interview guide based on the previous literature.

- Environmental cost accounting
- Environmentally induced capital expenditure and revenue

- Post assessment of relevant environmental costing decisions
- Environmental life cycle costing
- Environmental target costing
- Post investment of individual environmental projects
- Monetary environmental operational budgeting
- Monetary environmental capital budgeting
- Environmental long-term financial planning
- Relevant environmental costing
- Monetary environmental project investment appraisal
- Environmental life cycle budgeting
- Environmental life cycle target pricing

Further, by referring research articles on the factors that have led to adopt and implement EMAPs, the researcher prepared a list of factors. Since the study is attempting to identify those factors with the perspective of the Institutional Theory, the researcher categorized those factors into three categories: coercive factors, normative factors and mimetic factors (DiMaggio & Powell, 1983). If Marble is adopting and implementing EMAPs due to the pressure from the powerful stakeholders, those factors were considered as the coercive factors (DiMaggio & Powell, 1983). Finally, if Marble is adopting and implementing EMAPs or similar EMAPs with the objective of receiving competitive advantage and reducing uncertainty, those factors were considered as mimetic factors (DiMaggio & Powell, 1983).

In the process of categorizing the factors into these three categories, the study done by Jalaludin et al. (2011) on understanding EMA adoption in a New Institutional Sociology Perspective, the study done by Hassan et al. (2011) with the objective of identifying the factors that have impacted on the successful achievement of Environmental awards, and the study done by Glover et al. (2014) in relation to the sustainable practices with the Institutional Theory Perspective were referred. Based on the lists of EMAPs and the factors under coercive, normative and mimetic factors an interview guide and a questionnaire were developed.

Before distributing the questionnaires, a pilot test was done. A pilot test helps in identifying the essentiality to modify the questions or the procedures that do not call forth the appropriate responses or enable the researchers to obtain quality data (Malmqvist et al., 2019). After making the necessary adjustments, the finalized questionnaire was distributed to two senior executive level employees in the finance division of Marble in the last two weeks of July 2019. They are

the only employees who are accountable in dealing with sustainability issues of the organization. Hence, they were the most suitable individuals in collecting reliable and accurate data for the questionnaire survey. The developed questionnaire had three sections. Part A was based on demographic information of the respondent. It included the questions to identify the qualified respondents. In Parts B and C questions were developed on the basis of the research objectives. Part B was developed with the objective of identifying the EMAPs followed by the Apparel Manufacturer in Sri Lanka. 13 types of EMAPs were listed under Part B and it was to question the extent to which those EMAPs are used in Marble by using a Likert scale. Further, the fund allocation for EMAPs as a percentage from the total annual budget and the challenges the respondents face when implementing EMAPs in Marble were questioned. Part C was developed with two objectives: to identify the Institutional factors that lead to adopt and implement EMAPs and, identify the types of Institutional forces that will induce EMA adoption in Marble.

In order to gather qualitative data, an interview guide was developed. The interview guide is also a similar version of the questionnaire, but it also comprised of some open-ended questions. In other words, in addition to the data triangulation, further clarifications and explanations regarding the responses on the questionnaire survey were obtained by conducting the interview. For instance, the difference between the reporting of the bases of environmental costs, and the overall opinion on what have mostly influenced to adopt and implement EMAPs etc. In developing the interview guide the research studies carried out by Jalaludin et al. (2011), Hassan et al. (2011) and Glover et al. (2014) were referred. They were also referred in developing the said questionnaire. Further, the report prepared by Marble in accordance with the United Nation Global Compact (UNGC) principles was referred in order to obtain knowledge on the environmental management practices that are followed by Marble. An interview was conducted with an employee at management level. An interview was carried out with the environmental sustainability compliance officer who has been in the position more than five years at Marble. The environmental sustainability compliance officer is the key responsible person to adopt and implement EMAPs at the case organization. Hence, this officer is the most suitable individual for the interview in order to obtain more accurate, detailed and reliable data. Further, interviewing the other employees will not be suitable and value adding for the study, since they are not dealing with environmental sustainability concerns of the organization and are not much knowledgeable about the environmental sustainability. The interview was

carried out in the last week of July 2019 and it lasted for more than one hour. It helped to gain an in-depth knowledge on EMAPs and clarify some processes which were mentioned in their report on UNGC principles. Further, it helped to clarify the matters regarding the data collected through questionnaires; - for instance, further clarification regarding the challenges that Marble faces when implementing the EMAPs.

For the purpose of analysis, initially, a content analysis was done in relation to analyze the information gathered through the semi-structured interview whereas the descriptive statistics were used to analyze the responses received from the questionnaire survey. Next, a comprehensive comparison was carried out between the responses received from the questionnaire survey and the interview.

### *Case Study Company*

Since the study is based on the case study approach, one of the leading companies in the industry was selected as the unit of analysis for the study. For confidential purposes, the selected company is coded as ‘Marble’. Marble is a private listed company which is one of the top apparel manufacturers in Sri Lanka. Initially the company was engaged in the manufacturing of lingerie. With the rapid growth of business over 30 years, Marble has become one of the largest textile and apparel manufacturers in the South Asian region (Marble, 2017). The company manages a business portfolio along with revenue around USD 2 billion. Marble owns more than 50 manufacturing facilities which are located across more than 15 countries (Marble, 2017). Marble offers a range of products to its customers. The range includes performance wear, sports-wear, sleepwear, hoodies, T-shirts, smart clothes etc. Further, it is connected to some global clothes brands (Marble, 2017). Marble is one of the best examples for a company which is always encouraged by ethical and sustainable practices (Marble, 2017). In order to sustain sustainable manufacturing and development, Marble is actively engaged in establishing goals along with its strategy (Marble, 2017). When manufacturing garments, Marble uses recycled and sustainable materials (Marble, 2017). The work in relation to manufacturing is closely aligned with Higg index (Marble, 2017). The Higg index is a self – assessment standard introduced by sustainable apparel coalition for the apparel and footwear industry in order to assess both social and environmental sustainability throughout the supply chain (Marble, 2017). Marble has earned 59 million US\$ in revenue from this sustainable materials product range in 2017 (Marble, 2017).

In addition to the above, with the perspective of environmental sustainability, Marble takes actions for generating renewable energy, managing footprint and supporting bio diversity (Marble, 2017). Installation of solar panels on factory rooftops is one of the instances for an action that has been taken in respect of generating renewable energy (Marble, 2017). Hence, the company represents one of the best examples for the concept of ‘green garment factory’ in the industry (Marble, 2017).

## **Analysis and Discussion**

### ***Current EMAPs at Marble***

Identifying the environmental cost is very critical for an organization since it generates benefits for the organization. For instance, the customer preferences and their buying behaviors on environmental friendly products will increase the sales and profit of the organization, and show cost reduction due to being able to reduce the inefficient and wasteful consumption cost. Ultimately, these practices will lead to enhance the image of the business. Hence, for an organization tracking the environment related cost is vital as it leads to ensure its long-term survival.

EMA lies on a wide range of scope. It involves with full cost accounting, lifecycle costing, benefits assessment, and strategic planning for environmental management (IFAC, 2005). On the other hand, EMA is used in different decision making areas such as designing products, designing processes, cost allocation and cost control, capital investment etc. During the interview the environmental sustainability compliance officer commented that environmental cost accounting is one of the highly used EMAPs at Marble. He commented,

*“We do environmental costing at a high level.”*

*“Actually, we have done our best with regards to Environmental Management performances. We have traced, monitored, controlled and disclosed the information on the environment related activities.”*

Environmental cost accounting attempts on tracing both accounting cost and cost benefits. In other words, it involves incorporating environmental cost information into the present accounting practices and cost allocation to the relevant products and processes (EPA, 1995). In this process Marble uses a separate software. The environmental sustainability compliance officer said that by using the software, they collect environmental data on the basis of purchase. Moreover, by using the collected data, Marble calculates the usage details on

energy, water and waste. Responses received from the questionnaires also confirmed that environmental cost accounting is one of the key EMAPs that is used in Marble.

The report prepared by Marble according to UNGC principles also mentioned that by using the software, Marble calculates energy, waste and water usages. Further, it was said that from year 2017 onwards Marble changed from consumption based to purchase base reporting on environmental data to present more accurate data. In consumption base, the usage quantity is recorded at current market price, whereas in purchase base, the usage quantity is recorded at the historical or the actual price. Hence, the actual cost incurred from past to present, is presented in the accounts when adopting the purchasing base. The environmental sustainability compliance officer stated,

*“In consumption base we usually consider the consumption amount and recorded it at the recent price. But in purchase method we record at the price of purchase date. For an example if you purchase diesel, we simply record that we have purchased this amount of diesel at this price. But in consumption method we daily record how much is consumed at the end of the day and record at the price of that day. So as you can see, the previous method was not a very accurate method.”*

The environmental sustainability compliance officer confirmed that environmentally induced capital expenditure and revenue is another highly used type of EMAP at Marble.

*“Environmentally induced capital expenditure and revenue is highly used and post assessment of relevant environmental costing decision is used at a moderate level.”*

One of the other aspects he highlighted was that Marble is highly encouraged on physical environmental management accounting practices. For an instance, the environmental sustainability compliance officer said that Marble analyzes the energy consumption in different periods in a year, calculate energy intensity ratios and compare it with previous years etc. The UNGC report prepared by Marble shows a comprehensive analysis of energy, waste and water accounting practices at Marble.

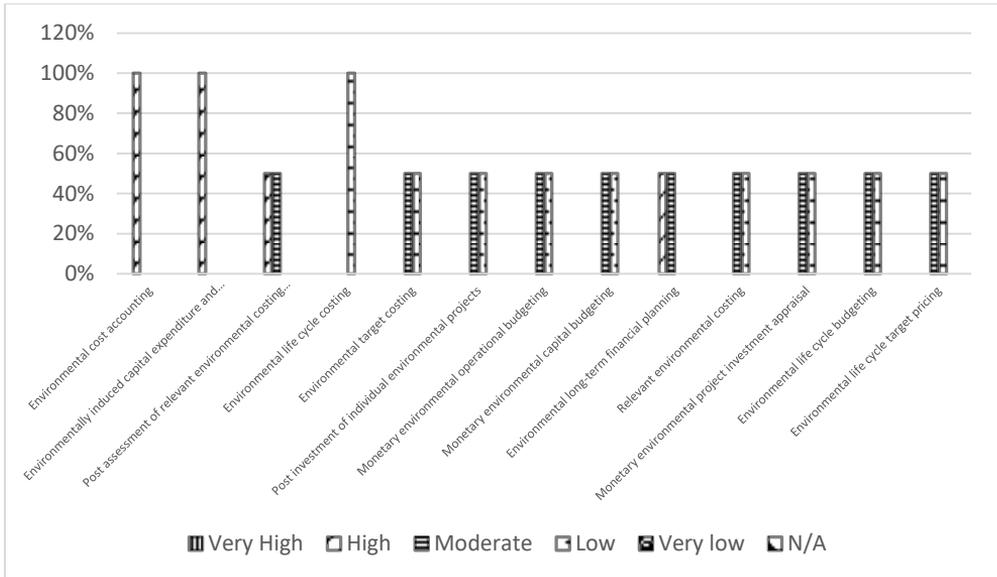
However, the environmental sustainability compliance officer highlighted that, most often, they use the payback practice when assessing their projects. Investment appraisals involve inclusion of environmental costs, cost savings and revenue, emphasizing the pollution prevention on investments (EPA, 1995).

In investment appraisals Marble includes a line item on environmental costing. Further the environmental sustainability officer commented,  
*“When preparing budgets, lifecycle costing and other investment appraisal projects, we include a small line on environmental costing. But we do not keep a main account or a line item”.*

When assessing the projects and other investments, if it cannot generate a favorable payback, then the management does not continue with the projects. Further, the officer emphasized that Marble gives priority to payback period method rather than lifecycle practice. The environmental sustainability compliance officer emphasized,  
*“Actually, mostly we use payback method rather than lifecycle method. Before starting any project, we do a cost benefit analysis and we include all the possible environmental impacts when doing cost benefit analysis. We only continue the project if there is a benefit for us.”*

On the other hand, the questionnaire survey conducted with the purpose of data triangulation also confirmed the above findings of the semi-structured interview. Two questionnaires were distributed among the senior executive level employees who are the only employees that deal with environmental issues at the finance division. Descriptive statistics were used to analyze the data and the findings of the surveys were aligned with the findings of the semi-structured interview.

The findings of the responses received from the questionnaires are shown in Figure 1. According to Figure 1, environmental cost accounting and environmentally induced capital expenditure and revenue are the highly implemented EMAPs whereas environmental lifecycle costing is the EMAP which is implemented at the lower level.



**Figure 1: The level of EMAPs followed based on questionnaire survey**

### ***Challenges faced when adopting and implementing EMAPs***

One of the most critical challenges is the identification of Environmental costs separately. The environmental sustainability compliance officer significantly highlighted that most of the environmental costs are hidden in the general overhead costs. The environmental sustainability compliance officer stated, *“The environmental costing is already included in overhead cost. So, we are not specifically focusing on environmental costing.”*

He further emphasized that it requires a lengthy process to accurately identify the environmental cost and on the other hand there can be other factors affecting in determining environmental costing. The environmental sustainability compliance officer during the interview explained,

*“If I give you an example, let’s say we remove all the bulbs and install improved LED bulbs in the whole building. We can check the energy saving, but the value we get is for the whole building. We can say exactly how much is saved from a floor. Because there can be other factors as well. If employees from one floor work overtime, then there can be a saving. That’s why we can’t exactly say how much was saved from the installation. So we do post assessment, but we can’t specifically identify it whether it happened due to our environmental management practices.”*

On the other hand, the environmental sustainability compliance officer pointed out that the insufficient government regulations and accounting standards are some reasons for lower focus on Monetary Environmental Management Accounting Practices (MEMAPs). The instance he took was the regulations on private listed companies.

*“Actually, we have done our best with regard to EMPs. We have traced, we have monitored, controlled and disclosed. The compliance is also done. We only continue the projects, if they have a payback. I think environmental accounting is already embedded into accounting. So, we don’t use a separate area as EMAPs. Other than that, there are no governmental regulations on accounting practices, what they say is, we need to have management practices.”*

According to his explanation it is clear that as a private listed company, it is enough to report on PEMAPs through sustainability reporting. Hence, they are encouraged to make targets and achieve them through physical units rather than reporting on monetary values.

*“As a private listed company, we do not necessarily need to disclose numerical figures. Even in our sustainability reporting we only reported through percentage figures and graphs etc. So, because of this we are not reporting EMAPs in monetary figures”.*

The use of MEMAPs would result in more accurate product costing and thereby help in deciding more accurate product pricing (Gunarathne & Alahakoon, 2016). For an instance, in the apparel sector some garments require specific dyeing processes that require careful and high cost disposals. If these costs were considered as general overhead and not as MEMA, then the costing and the pricing of the products do not reflect correctly. Hence, not only PEMAPs, but also MEAMPs are vital for management decisions.

Further, the stakeholders, especially, customers, suppliers and investors can know how much environment related cost was reduced and how much revenue was earned during the period if MEMA information is communicated to them. Thereby, they can make much more informed decisions regarding the organization.

Another fact the officer mentioned, is the comparison issues between different projects when those projects use different accounting methods. Hence, it is not an easy task to have a unique way of allocating environmental costs to the projects.

*“Other than that, the projects we are doing are different from each other. So, we can’t use the same method for costing to all projects.”*

On the other hand, majority responses from the finance division emphasized that the cost reduction practices lead to less focus on MEMAPs.

An exploratory study carried out by Miah et al. (2015) with the objective of identifying the factors that have led to adopt environmental accounting and reporting, has also confirmed the above mentioned challenges when adopting EMAPs in relation to the Bangladeshi corporate sector. The study has revealed that the insufficient proper accounting method, issues in integrating EMA with financial accounting, comparison difficulty when using different accounting methods, insufficient provisions in the Companies Act, Securities and Exchange Commission’s Act, inadequate professional guidelines on EMA and less support from Management on policies on EMAPs are some limitations when a firm is going to adopt EMAPs.

Further, during the interview, the officer stated that not only is it a challenge to implement EMAPs at Marble, but also it is a challenge to implement EMAPs in the industry. Other than the above stated reasons, the additional reason he mentioned was, the lack of proper technology to track and control environment related costs. In other words, an approved technology or software has not been developed to trace the environment related costs and the costs other than environment related costs separately in the industry. The findings of the questionnaire survey confirmed this.

*“Because there is no standard or a law that encouraged or pressured us to have a separate accounting practice to account for environmental impact... Even in the GRI guidelines it doesn’t say anything about EMAPs. It simply says to maintain EMPs. Another one is that the government does not focus on regulating EMAPs. Environmental law is the example. Accounting practice is not mandatory.”*

*“Other than these, technology is not very improved to tackle the environmental cost separately. We have some issues in the case of technology.”*

### ***Factors for Adopting and Implementing EMAPs***

This study analyzes the factors that have led to adopt EMAPs at an apparel manufacturer with the perspective of Institutional Theory. The theory explains why organizational structures and practices have become more homogeneous and how and why such change occurs (DiMaggio & Powell, 1983). Based on

the New Institutional Sociology Theory, the factors are categorized into three isomorphism perspectives. They are coercive isomorphism, normative isomorphism and mimetic isomorphism (DiMaggio & Powell, 1983).

It was considered as a coercive isomorphism factor, if Marble adopted and implemented EMAPs due to the pressures of formal and informal parties in the organization. Based on previous research literature (Jalaludin et al., 2011, Glover et al., 2014) the factors below were listed as coercive isomorphism factors.

- Government regulations
- The company's shareholders/ owners
- Newspaper and TV
- The environmental laws
- The local communities
- The company's customers
- The environmental groups
- The company's labor union

According to the environmental sustainability compliance officer there is a high influence from the government regulations, company's shareholders and customers, environmental laws and its employees.

The officer said that they are influenced by the government regulations and environmental laws. However, all those regulations and laws encourage in adopting and implementing PEMAPs, not MEMAPs.

*"It has a high influence. We are influenced by the government regulations. However, we are not being pressured by the government. We do not wait until the government pressures us. But we don't have a pressure to use MEMAPs from the government. There is no law or standard to keep accounts. In environmental law, it doesn't say that we need to do EMAPs. But environmental law says to maintain the management practices. As an apparel company we have to comply with compliance laws, otherwise we can't operate in the industry."*

Use of MEMAPs results in much more accurate product pricing and costing status. Hence, if the government wishes to provide certain tax reliefs in order to encourage eco-friendly manufacturing, information from MEMA will be a vital factor.

The officer further said that Marble is highly influenced by its shareholders and customers. According to his explanation the brand is a very critical and sensitive

factor for Marble. If its shareholders and customers demand to implement a practice, then Marble takes its best action to implement those practices without any hesitation.

*“We focus on stakeholders. If our shareholders want to implement or do EMAP, then we implement it. So, we have a high influence from shareholders. If customers want us to implement a practice, then we implement it. In our case, the brand is very critical to us. So, complying with relevant regulations and meeting our customers’ expectation is very important to us.”*

Marble always appreciates the creative and innovative suggestions and opinions of its employees. Hence, there is a high influence in adopting and implementing EMAPs from its employees at Marble. The officer during the interview commented,

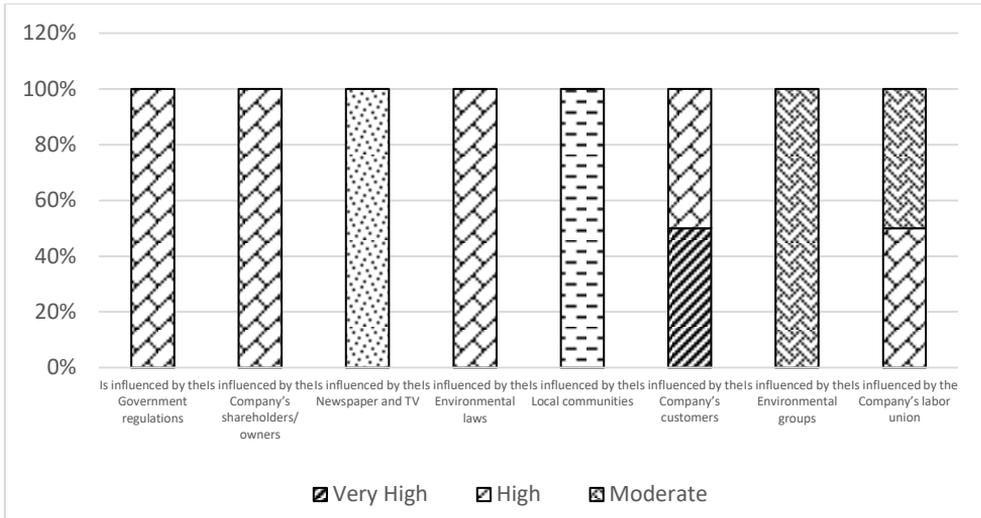
*“Actually, in factories we have community and all employees need to be a part of that community. They gather, discuss and suggest to us to use the practices. We give priority to our employees’ ideas. So, it has a high influence.”*

According to the opinion of the officer, Marble is moderately influenced by local communities only if the suggestion is reasonable. If that suggestion or proposal is given by the local communities who are not reasonable or do not generate a positive impact, then Marble does not implement that practice.

*“It’s just moderate. If it is reasonable or has a positive impact, then we do the practice. Otherwise we don’t consider their requirements. If it is a reasonable one, then we obviously do the practice”.*

In fact, according to the Institutional Theory, most of the time, the apparel manufacturer adopts and implements similar EMAPs due to the influence of the government regulations, company’s shareholders and customers, environmental laws and its employees, i.e. due to coercive isomorphism.

By analyzing the responses in the questionnaires, it can be proven that Marble is highly influenced by government regulations, company’s shareholders and customers, environmental laws and its employees since all the respondents have agreed upon these factors. Figure 2 given below shows the summary of the responses received on the questionnaire survey.



**Figure 2: Analysis of coercive isomorphism that influence to adopt and implement EMAPs based on questionnaire survey**

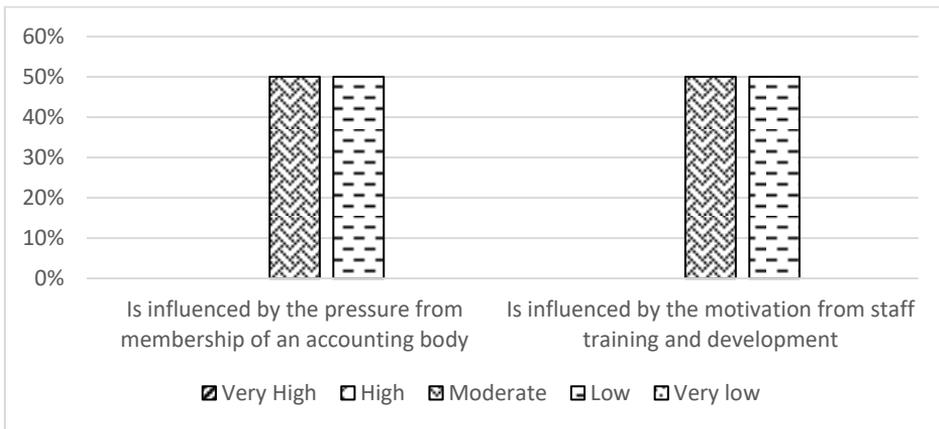
When compared to coercive isomorphism there is a very low level of influence from normative isomorphism factors. According to the Institutional Theory, normative isomorphism occurs due to the pressures of professionalization. In other words, similar attitudes, behaviors and practices come into the organizations with the same educational backgrounds of the people (DiMaggio & Powell, 1983). After analyzing previous literature on EMAPs and Institutional Theory, the factors below were categorized as normative isomorphism factors.

- The pressure from the membership of an accounting body
- The motivation from staff training and development

According to the opinion of the environmental sustainability compliance officer, there is a very low influence and pressure from the membership of an accounting body and motivation from staff training and development.

*“Accounting bodies gives the recommendations on how to account it. But it does not mean we must do the accounting part. But we do the right thing because we feel it is the right thing to do. The pressure from the accounting body is more likely to be irrelevant because there is no a specific accounting standard on MEAMPs. So, it is a very low influence. On the other hand, we do not conduct training and development mainly on MEMAPs, especially in MEMAPs. So, it is very low.”*

Majority responses on the questionnaires agreed that the mentioned factors moderately influence to adopt and implement EMAPs at Marble (Figure 3).



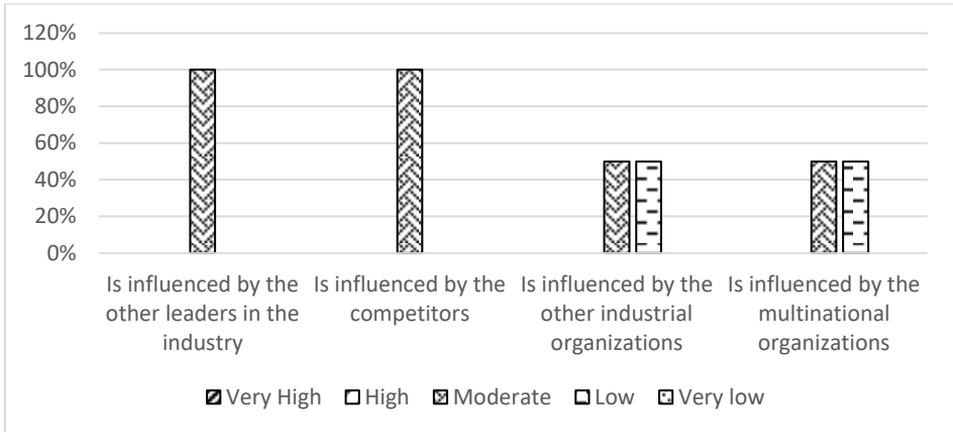
**Figure 3: Analysis of normative isomorphism that influence to adopt and implement EMAPs based on questionnaire survey**

Hence, based on both responses on the interview and the questionnaire, the apparel manufacturer is moderately influenced by normative isomorphism to adopt and implement similar EMAPs.

Factors were considered as mimetic isomorphism if those factors lead Marble to imitate successful organizational structures and practices that arise during high uncertainty or to obtain competitive advantage. The factors below were listed based on previous literature.

- Other leaders in the industry
- The competitors
- Other industrial organizations
- Multinational organizations

Figure 4 shows the summary of the responses of the questionnaire survey. Based on Figure 4, the majority agreed that there is a moderate level influence from all the above factors in adopting and implementing EMAPs.



**Figure 4: Analysis of mimetic isomorphism that influence to adopt and implement EMAPs based on questionnaire survey**

The officer also commented,

*“The influence from other leaders in the industry, the competitors, industrial organizations and multinational organizations is at moderate level in implementing EMAPs.”*

The opinion held by the environmental sustainability compliance officer on the first and foremost reason behind currently adopted and implemented EMAPs is environmental compliance. If Marble can’t comply with relevant standards and regulations, then Marble will not be able to operate in the industry.

*“The first and the main reason is environmental compliance. As I told you earlier, the apparel industry is not a good area if you consider the perspective of environment. So, you need to comply with relevant environment regulations. Otherwise you cannot operate in this industry.”*

The second reason according to his opinion is the industry and customer compliance. Next, he stated that influence from its shareholders and employees, is the third reason for adopting and implementing EMAPs at Marble.

*“As a company we need to maintain certain standards and regulations. As you know, we are in the middle of a supply chain. If the brand says that the minimum living wage across the supply chain should be this amount, then we have to pay that wage. We give them the priority. Next, I can say is the influence from shareholders and employees. As I told you earlier, we give them priority.”*

Further the officer said that, they believe that adopting and implementing EMAPs is the right thing to do.

*“Finally, by doing the current practices we feel that this is a better thing to do. We give three meals to an employee. Most of the other companies do not give three meals to an employee. We do this because we feel this is the right thing to do.”*

By analyzing the responses in the questionnaires and the interview with the environmental sustainability compliance officer, it can be concluded that according to the Institutional Theory, the coercive isomorphism is the significant reason behind the adoption and implementation of similar EMAPs at Marble. Further, it can be concluded that the least reason in adoption and implementation of EMAPs is, normative isomorphism. The qualitative study carried out by Glover et al. (2014) in relation to the dairy supply chain with the perspective of Institutional Theory has also concluded that coercive pressures are the most significant pressure that has determined the sustainable practices across the UK dairy supply chain.

## **Conclusion and Recommendations**

This study is based on identifying the factors that have led to adopt and implement EMAPs of a case organization in the Sri Lankan apparel sector with the perspective of New Institutional Sociology Theory. Most of the research literature is based on EMA and firm performance, barriers and challenges faced when implementing EMAPs, EMAPs in different categories such as water accounting, and EMAPs in different sectors such as the hotel industry. A very few research literature is based on the factors that have led to adopt and implement EMAPs. Further, very little literature can be found on EMAPs and Institutional Theory perspective. More specifically, most of the time, that literature is not based on the Sri Lankan apparel industry. Therefore, it is timely to conduct a research study on identifying the factors that have led the apparel industry to adopt and implement EMAPs with Institutional Theoretical Perspective.

This study was conducted with the aim of achieving three objectives; to identify EMAPs followed by the apparel manufacturer in Sri Lanka, identify Institutional factors that lead to adopt and implement EMAPs and finally identify the types of Institutional forces that will induce EMA adoption. The nature of objectives requires the study to be conducted in its natural setting. In other words, the nature of objectives requires a comprehensive and an in-depth investigation of the present scenario (Yin, 2014). Due to these reasons, this research study is based on a qualitative case study approach.

The first objective of the study was to identify EMAPs followed by the apparel manufacturer in Sri Lanka. The study revealed that environmental cost accounting and environmentally induced capital expenditure and revenue are the mostly used EMAPs in the organization. The second and third objectives of the study were, to identify institutional factors that lead to adopt and implement EMAPs and to identify the types of institutional forces that will induce EMA adoption. Environmental compliance rules and regulations, industry and customer compliance, shareholder and customer compliance were the reasons behind the determination of factors that have led to adopt EMAPs. Since these factors come under the coercive factors, it was concluded that coercive isomorphism is significant in the decision of adopting and implementing EMAPs in the organization. Further, the study found that normative isomorphism factors influence at a low level in the adoption and implementation of EMAPs. Lack of proper standards in environmental standards, insufficient provision of guidelines by the accounting bodies were the key reasons behind this lower level influence in adopting and implementing EMAPs. However, all these reasons are related to MEMAPs. MEMAPs are not mandatory standards or guideline like GRI guidelines. In other words, according to the sustainability report (2019) issued by the Colombo Stock Exchange (CSE), it is not a mandatory requirement to present details of MEMAPs, even though it is recommended to communicate environmental information to the stakeholders. If MEMA information is communicated to the stakeholders, they can make much more informed decisions regarding the organization. For instance, revenue generated from eco-friendly manufacturing and materials and environment related cost reduction information will provide valuable insights to their decisions regarding the organizations.

In addition to the above findings, the study has also recognized some barriers and challenges faced by the industry when adopting and implementing EMAPs. Identifying the environmental costs and expenses, capitalizing those expenses, identifying the environmental liabilities and measuring those liabilities are some problems encountered by the company. Currently, there is a lack of proper accounting standards being issued in Sri Lanka. However, it can be recognized that some advisory guidelines were issued by the Financial Accounting Standards Board (FASB), Accounting Advisory Forum (AAF), Institute of Chartered Accountants of England and Wales etc.

Further, in Sri Lanka it is not a mandatory requirement to report on financial and non-financial environmental performance data. However, the Securities Commission in Canada requires the companies to report both present and future

operational and/or financial effects of environmental protection requirements. Though EMA is essential in product pricing, costing, budgeting, cost savings and investment appraisals (EPA, 1995), the findings of the study emphasized that it is not easy to separately identify the environmental costs and it is already hidden in the overhead cost. This problem can be solved by considering the solutions suggested by the United Nations Division for Sustainable Development (UNSD, 2003).

UNSD (2003) suggested that flow cost accounting, input/output analysis, activity-based costing and life-cycle costing as some management accounting techniques that can be used to identify and allocate the environmental costs. The volume of emissions or waste, toxicity of emission and waste treated, environmental impact added, volume of the emissions treated, can be taken into consideration in determining the cost allocation keys. Further increasing the awareness of the benefits of EMA and the effective and efficient use of both MEMAPs and PEMAPs is another essential recommendation to the successful implementation of EMAPs, for instance, convincing the organizations on how MEMA information would result in accurate product costing pricing.

It is highly recommended to make both MEMA and PEMA as mandatory reporting requirements in Sri Lanka. Another recommendation is the developing of the conceptual framework or an accounting standard by the accounting bodies with the emphasis on objectives, assumptions and mandatory guidelines to encourage both MEMAPs and PEMAPs. Also, it is recommended to develop organizational policies on both MEMAPs and PEMAPs. Since there is an unavailability of mandatory reporting rules and regulations, by initiating company specific EMA policies will result in developing the image of the organization and gaining the competitive advantage. In developing the policies, a company can take into the consideration the guidelines that are already established by the above-mentioned organizations such as CICA.

The Sri Lankan apparel sector is a significant contributor to the economy. Out of the large population, only one company was selected to collect data. Hence, the scope is limited and it is difficult to generalize the findings to the entire population. Though the study has some inherent drawbacks, it has contributed an in-depth knowledge and information in relation to the theory and practice. In the perspective of theoretical contribution, this study has attempted in analyzing the factors that have led to adopt and implement EMAPs through the Institutional Theoretical Perspective. Moreover, the findings of the study have unveiled how the theoretical EMAPs are practically used in the apparel company. In the perspective of practical contribution, this study has unveiled

the actual reasons behind the adoption and implementation of EMAPs in the apparel manufacturer in Sri Lanka. Further, the study has revealed the types of EMAPs that are being implemented in the apparel manufacturer in the industry. Another practical contribution of this study is the exposing of the barriers and challenges encountered by the organization in the apparel industry.

Though the study has made a significant contribution to the theory and practice, further research studies can be carried out in different industries. On the other hand, further studies can be conducted on how the recommendations of the study were used to mitigate the challenges and barriers faced by the industry regarding the adopting and implementation of EMAPs. Since EMA and EMAPs lie on the broadened scope, this study can also be conducted in other sectors in Sri Lanka. For instance, further studies can be conducted to identify the factors that have led to adopt and implement EMAPs in the Sri Lankan construction industry.

### **Declaration of Conflicting Interests**

The authors declared no potential conflicts of interest with respect to the research, authorship, and publication of this article.

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## **Making Intellectual Property a Common Good to Combat Global Pandemics and the COVID-19 Technology Access Pool (C-TAP): Responding to the Challenges Exerted by Big Pharma and Some High-Income Countries**

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### **Abstract**

*The COVID-19 outbreak has created a global race for research into a vaccine, diagnostic and therapeutic among research institutes, governments, and big-tech pharmaceutical companies (Big Pharma). In this context, intellectual property rights (IPRs) play a prominent role in incentivizing COVID-19 vaccines. Simultaneously, IPRs, particularly the patent rights of Big Pharma, create restrictions on fair access to affordable COVID-19 vaccines. Besides, economically powerful high-income countries have purchased and reserved a large amount of COVID-19 vaccines while low and middle-income countries (LMICs) have been struggling to obtain sufficient vaccine doses. These factors have contributed to increasing the gap of access to affordable COVID-19 vaccines between high-income countries and LMICs. Having foreseen the likely effect of LMICs being discriminated against in the global COVID-19 vaccine production and distribution, the global community has already made some efforts to revisit the normative aspects of IPRs by making intellectual property a common good to achieve global health during the pandemic. For example, the World Health Organization (WHO) has launched the COVID-19 Technology Access Pool (C-TAP), considering the proposal made by Costa Rica. The C-*

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*TAP intended to ensure technology transfer, disclosure of research, flexible licensing and open innovations. However, Big Pharma and some high-income countries have criticised and directly interfered in the effective functioning of C-TAP. Therefore, there remains a question as to whether the C-TAP approach would only be idealistic or realistic in the global governance of IPRs and public health. Accordingly, this paper critically analyses the prospects that C-TAP would offer LMICs to overcome IPRs-related barriers and resource constraints in accessing the COVID-19 vaccine and reflect on how to tackle Big Pharma and some high-income countries' influences on the effective functioning of C-TAP.*

**Keywords:**

*Access to medicine, Big Pharma, COVID-19 vaccine, C-TAP, IP as a common good*

**Introduction**

The main objective of this paper is to analyse how the global community and international law and policy can contribute to the effective functioning of the COVID-19 Technology Access Pool (C-TAP) to ensure access to affordable COVID-19 vaccines worldwide. In doing so, this paper pays particular attention to how big tech pharmaceutical companies (Big Pharma)<sup>1</sup> and their supporting high-income countries have responded to C-TAP and the extent to which they have influenced the functioning of C-TAP. This paper further evaluates the common critique on intellectual property (IP) incompatibility of C-TAP through the lens of considering IP as a common good to facilitate health during global pandemic situations. Having analysed the possible barriers that hinder the effective functioning of C-TAP, this paper makes suggestions on how to overcome such barriers. In general, this paper emphasises the importance of a multi-sectoral approach—participation of diverse policy actors in supporting and enabling global health proposals—to respond to global health concerns.

The global race among research institutes, governments and Big Pharma to find a cure for Corona Virus diseases has almost been accomplished with the finding

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<sup>1</sup>Big Pharma is a commonly used term to indicate multinational pharmaceutical companies. The Merriam-Webster Dictionary defines Big Pharma as ‘large pharmaceutical companies considered especially as a politically influential group’.

of COVID-19 vaccines by some pharmaceutical companies.<sup>2</sup> Particularly, intellectual property rights (IPRs) have played a prominent role in incentivising and accelerating the global race for finding the COVID-19 vaccine. At the same time, IPRs have created significant challenges on the issuance of compulsory licenses, open access for research and innovation, and ultimately the assurance of equal access to affordable COVID-19 vaccine (Chiriboga et al., 2020). In this context, the global health community has faced two challenges: first, to accelerate the global search for safe and effective COVID-19 vaccines and second, to ensure fair access to affordable COVID-19 vaccines.<sup>3</sup> Considering these challenges, the World Health Organization (WHO) has launched the C-TAP to create a voluntary patent pool relating to all medicines, technology sharing and furthering research and development in advancing a COVID-19 vaccine, particularly to mitigate potential IPR-based challenges in finding a COVID-19 vaccine and its fair distribution (Anon, 2020a).

Even though the C-TAP seemed to be a pragmatic global solution to ensure access to affordable COVID-19 vaccines worldwide, the global policy actors seem to have diverse opinions on C-TAP. A considerable number of WHO members, health advocates, civil society organizations and philanthropical organizations have embraced this proposal. However, Big Pharma publicly criticized C-TAP, and some high-income countries that are home to large pharmaceutical companies raised their objections at WHO and World Trade Organization (WTO) discussions claiming that C-TAP could erode IPRs and thereby slow the progress of the global search for COVID-19 treatment (Anon, 2020c; Newey, 2020). The criticisms of Big Pharma, and more importantly, the objections raised by some high-income countries that represent the interests of Big Pharma have hindered the effective functioning of C-TAP at the global level. The delays in the proper functioning of C-TAP have created barriers in fair access to technology, know-how and IPRs associated with the COVID-19 vaccine, particularly for low and middle-income countries (LMICs). This situation has affected predominantly on LMICs' capacity of producing or importing adequate COVID-19 vaccine doses.

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<sup>2</sup>According to existing data Oxford-AstraZeneca, Pfizer-BioNtech, Moderna, Sinopharm-Beijing, Gamaleya (Sputnik V), and Sinovac are the most commonly administrated vaccines throughout the world. ("Coronavirus (COVID-19) Vaccinations - Statistics and Research," 2021).

<sup>3</sup>Since vaccine plays a prominent role in the global race for COVID-19 treatment, this paper particularly focuses on analysing the matters relating to the COVID-19 vaccine.

## **Research Problem**

This paper will consider the research problem: how the global community and international law and policy can contribute to the effective functioning of C-TAP to ensure access to affordable COVID-19 vaccine worldwide. The terms ‘global community’ and ‘international law and policy’ used in this research question have specific meanings and applications in the context of global governance of the COVID-19 pandemic. The term global community used in this question refers to global policy actors such as the WHO, international non-governmental organizations (INGOs), civil society organizations, and philanthropic organizations, and in specific cases the WTO which play a vital role in the international governance of trade and IP. The term international law and policy used in this question refers to the specific branches of international law, including international health law and IP law, that affect the implementation of C-TAP and access to the COVID-19 vaccine worldwide.

## **Methodology**

In answering the above research problem, this paper adopted a legal doctrinal analysis consisting of an extensive literature review and a policy-oriented legal approach. The legal doctrinal methodology has been used in this research to systematically analyse the laws and rules governing C-TAP and access to COVID-19 vaccines, to examine the overlaps of these laws and rules, and to make suggestions for future developments (Hutchinson & Duncan, 2012). An extensive review of primary and secondary legal sources on C-TAP, IPRs and access to medicine were used to identify, evaluate, and suggest how the global community and international law and policy can ensure effective functioning C-TAP. Simultaneously, this paper employed a policy-oriented approach to analyse how the emerging COVID-19 pandemic-related political and socio-economic factors influence formulating global health policies and revitalising normative aspects of IPRs (Chen, 2015; McDougal, 1956).

## **Conceptual Background and Discussion**

This section consists of five subparts, and they provide the contextual background of the discussion of this paper and the suggestions to ensure the effective functioning of C-TAP. Part One discusses the need for global action to combat the COVID-19 pandemic. Part Two analyses the importance of making intellectual property (IP) a common good during a pandemic and Big Pharma’s

arguments against considering IP as a common good. Part Three examines the scope of C-TAP with particular reference to Big Pharma and its supporting governments' critiques. Part Four provides an analysis of the contribution of C-TAP from its inception through to today. Part Five makes suggestions to ensure the proper functioning of C-TAP to achieve its objectives in combating the COVID-19 pandemic and establishing C-TAP as a global mechanism to overcome potential IPR-based challenges of access to fair and affordable vaccine and treatment in future global health disasters.

*No one is safe until everyone is safe*

The rapid transmission of the COVID-19 virus has caused nearly 163 million cases of infection and 3.3 million deaths as of 14 May 2021 worldwide (Roser et al., 2020). COVID-19 has created an unprecedented and novel threat to the world (Abrams and Szeffler, 2020). Chakraborty and Maity have recognised the COVID-19 pandemic as 'the most crucial global health calamity of the century and the greatest challenge that humankind faced since the Second World War'(Chakraborty & Maity, 2020). Considering the gravity and impact of the crisis on every aspect of human existence, the WHO declared the COVID-19 outbreak as a public health emergency of international concern on 30 January 2020 (Harapan et al., 2020). It has also created a considerable challenge before humankind finds a cure to contain the spread of the virus and to ensure everyone's access to affordable COVID-19 vaccine (Bassi & Hwenda, 2020).

The societal and economic impact of the COVID-19 pandemic varies from one country to another based on their economic capacity and resources. Undoubtedly, the low- and middle-income countries (LMICs) face severe public health concerns with this crisis compared to their high-income counterparts (Abrams & Szeffler, 2020). In the pre-COVID-19 era, it was estimated that 2 billion people lacked regular access to essential medicine worldwide, particularly in LMICs (Kohler & Mackey, 2020). For example, the cost of the Hepatitis B vaccine—30 US dollars per dose—was too expensive for many LMICs, and thus, they were not able to afford the vaccine (Vanderslott, Dadonaite, and Roser, 2013; Zakir et al., 2019). Arguably, the COVID-19 pandemic would exacerbate the lack of access to essential medicine and could create considerable health disparities between high-income countries and LMICs.<sup>4</sup> Further, LMICs would likely lag in the global race for the COVID-19

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<sup>4</sup> COVID-19 vaccines range from 3 US Dollars (AstraZeneca-Oxford) to 37 US Dollars (Moderna).

vaccine as they lack the necessary resources and financial capacity to engage in high-tech research and innovation (Chiriboga et al., 2020).

As of 14 May 2021, 7.79 billion of the global population has received at least one dose of the COVID-19 vaccine (“Coronavirus (COVID-19) Vaccinations - Statistics and Research,” 2021). Even though the global COVID-19 vaccine administration has been progressing rapidly since December 2020, it has also been predicted that “it could be September 2023 before [the entire world] have enough doses [of vaccine]” (McDonnell et al., 2020). Besides, there is a considerable gap between high-income countries and LMICs in global COVID-19 vaccine administration (Rouw et al., 2021). As the statistical analysis of COVAX<sup>5</sup> and Duke Global Health Innovation Centre demonstrated there is a gap of COVID-19 vaccine purchase between high-income countries and LMICs (McAdams et al., 2020 : (“Vaccine Procurement: Tracking COVID-19 Vaccine Purchase across the Globe,” 2021)). According to this analysis, 57% of the global COVID-19 vaccine doses were purchased by high-income countries that only account for 19% of global adult population. Conversely, LMICs only purchased 38% of global COVID-19 vaccine doses while accounting for 81% of the global adult population (“Coronavirus (COVID-19) Vaccinations - Statistics and Research,” 2021). The huge disparity in terms of vaccine purchase could exacerbate health inequalities between high-income countries and LMICs. Hence, the global community is no longer presented with a task to develop a vaccine to cure COVID-19; however, the global community has the challenge to ensure fair access to affordable COVID-19 vaccines worldwide.

There are two factors that are likely to prevent LMICs from accessing COVID-19 vaccines. First, these countries lack the resources to purchase vaccines and develop their own vaccine (Forman et al., 2021). Second, IPRs'-related barriers exerted by Big Pharma could restrict these countries from access to affordable COVID-19 vaccines (Ido, 2020; World Health Organization, 2020). The vulnerability of LMICs accessing the COVID-19 vaccine demands global policy actors' attention and encourages them to consider comprehensive policy options for revitalising the scope of IPRs to accommodate public health concerns. In

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<sup>5</sup> COVAX is an international partnership that aims to support the development, manufacturing and distribution of COVID-19 vaccines, particularly in LMICs. COVAX consists of international non-governmental organizations such as the Coalition for Epidemic Preparedness Innovations (CEPI), Gavi, the Vaccine Alliance, and the World Health Organization.

such a situation, the C-TAP proposal would be an effective global level solution to ensure ‘widespread technology transfer’ by lessening the IPRs-related barriers to access COVID-19 vaccines and treatment (Wouters et al., 2021).

Nevertheless, the world would only be safe when all affected people are cured and the spread of the virus is permanently contained, including in LMICs. Hence, the COVID-19 pandemic echoes the notion that ‘no one is safe until everyone is safe’. Simultaneously, it demands a supra-national and multi-sectoral solution rather than a country-specific or a region-specific approach in addressing the IPRs-related challenges to access vaccine and treatment in global pandemics. Hence, reiterating the need for global solution, this paper proposes making IP a common good through C-TAP as one of the best approaches to address this concern. The section below examines the importance of considering IP as a common good to respond to the COVID-19 pandemic.

### ***IP as a common good to respond to the COVID-19 pandemic***

Considering IP as a common good would challenge the exclusivity of IPRs’ in their duration of protection and IP owners’ rights to use and enjoy their rights, excluding all third parties (Carrier, 2004). However, the dire need to combat the COVID-19 pandemic can be considered a justifiable reason to limit IPRs, particularly patents, by treating them as a common good accessible and useable by third parties for the sole purpose of ensuring access to affordable COVID-19 vaccines around the world. In general, intellectual property has grown over time and entered all aspects of human life in modern days (Sunder, 2010). Even though property rights are considered to be served for human values, there remains a question as to whether the property rights associated with IP truly serve human values or create some barriers and inequalities in access to technology, innovation and knowledge, and realisation of human capabilities (Sunder, 2006). IPRs are largely governed by the Agreement of Trade-Related Aspects on Intellectual Property (TRIPS), which sets the minimum standards for IP protection at the international level (Dinwoodie & Dreyfuss, 2012). The TRIPS Agreement recognises diverse IPRs such as copyrights, trademarks, patents, geographical indications, industrial designs, layout designs, protection for undisclosed information, trade secrets, and control of anti-competitive practises in contractual licenses. More importantly, the TRIPS Agreement outlines the scope of each IPR, ensuring that owners get exclusive protection over their rights for a limited period, however, subject to the exceptions such as

fair use and achieving public interest and public health goals (Garrison, 2006; Guan, 2016a).

Patent rights have gained considerable attention among Big Pharma and global health actors in the race for COVID-19 vaccines and treatment. Particularly, patent rights propounded on economic ideology and incentive theory could become a major impediment in ensuring equitable access to patented pharmaceuticals (Meiners & Staaf, 1990; Zlinkoff, 1943). The rationale behind granting a time-barred monopoly for the inventor or the manufacturer of the patented product is to compensate his investment in developing such a product and incentivise the same, among other factors (Dam, 1994; Shiffirin, 2009). However, the general conception of patent monopoly backed by the incentive theory could create barriers in access to affordable vaccine in a global pandemic (Kohler & Mackey, 2020). The patent rights obtained by Big Pharma on the COVID-19 vaccine could create different barriers to LMICs access to the vaccine. In distributing the COVID-19 vaccine, Big Pharma could be favourable to high-income countries that often represent Big Pharma's interest in global economic and health forums such as the WHO, TRIPS and WTO councils (Nhamo et al., 2021). For example, AstraZeneca had announced that they offer priority in providing the vaccine for both the USA and the UK in mid of 2020 (Roope et al., 2020). Further, in February 2020, the USA has entered into an investment agreement with Sanofi<sup>6</sup> to secure preferential and priority access to the future vaccine (Paton, Griffin, and Koons, 2020; Woods et al., 2020). It seems Big Pharma facilitates 'my country first' approach, which is commonly known as vaccine nationalisation (Abbas, 2020a; Phelan et al., 2020). This situation could be unfavourable and perhaps jeopardise LMICs that face severe health consequences with the rapid progression of COVID-19, and at the same time, that lack financial resources to invest in the developing and purchasing COVID-19 vaccines.

The behaviour of Big Pharma and some high-income countries have revealed that patent monopoly and vaccine nationalization could be a deadly combination on the ethical framework of global vaccine allocation and fair distribution of vaccines in the COVID-19 pandemic. To have an ethical framework for global vaccine allocation and distribution, the global community could consider benefiting people by limiting the harm which could be created by patent monopoly and vaccine nationalisation, and prioritizing the needs of

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<sup>6</sup> Sanofi is a French multinational pharmaceutical company headquartered in Paris, France, as of 2013, the world's fifth largest by prescription sales.

marginalized countries, in this case, LMICs. Considering IPRs as a common good rather than exclusive private property to accommodate more significant societal interests such as public health and human values (Sunder, 2012) would be one way to address the adverse impacts of patent monopoly and vaccine nationalisation on LMICs, particularly in the time of the COVID-19 pandemic.

### ***Patent Monopoly Vs Access to Medicine***

This section provides a theoretical account of patent versus access to medicine debate exploring the involvement and response of Big Pharma. The complex relationship between IPRs and public health is a significant concern in patents and access to medicine debate. As Sam Halabi commented, ‘the exclusive control given to pharmaceutical patent holders, ... stands at odds with access to affordable medicines’ (Halabi, 2014). Nevertheless, it is argued that patent monopolies facilitate profits, new and improved medicines and drive knowledge-based economies. The monopoly granted to a patentee in the current context is justified through factors such as the high cost of research and innovation (Sellin, 2015). Even though the rationale behind patent monopoly is to incentivise innovation, the practice of patent holders—pharmaceutical industry—revealed that patent monopoly is ‘gaming the system’ by using IPRs to evergreen patents (having rights indefinitely) and profiteer off public health crises (Hassan, 2020). The patent protection granted to a medicine, vaccine or a pharmaceutical product is a dominant factor in bargaining between the patentee and the public (Khachigian, 2020). Even though innovation for treating and preventing acute diseases could assist millions of vulnerable and sick people, access to essential and life-saving diagnostics and therapeutics for many chronic conditions are limited due to a gaming system by patent holders in the pharmaceutical industry.

As a positive response to this issue, the Doha Declaration on TRIPS and Public Health (Doha Declaration) was introduced in 2001 to allow a flexible reading of TRIPS to accommodate ‘access to affordable, essential drugs in the developing countries’ (Ahmadiani & Nikfar, 2016). Further, it intended to reaffirm the TRIPS members’ rights to regulate public health concerns (Abbas & Riaz, 2013; Abbott, 2002). The post-Doha Declaration era provides a contextual basis for realising how Big Pharma and proxy governments interfered and made it difficult for countries, in particular the LMICs, to effectively utilise Doha proposals to promote access to medicine at national level (Novella, 2010; Williams, 2015). They created different obstacles on the TRIPS members’

efforts to use Doha flexibilities to issue compulsory licenses (CLs) on essential medicine. As discussed in the table below, the most popular tactic was to create hostile situations and impose retaliatory measures against the TRIPS' members' efforts to issue compulsory licenses (Beck et al., 2019; Ford et al., 2007; Wibulpolprasert et al., 2011).

**Table 1: Examples for Industry and Lobbying Country Oppositions on the Issuance of Compulsory Licenses**

<b>Country</b>	<b>Initiative</b>	<b>Opposed industry actor/country</b>	<b>Nature of the hostile situation or retaliatory measure</b>
Brazil (2005-2007)	The decision to issue a CL for antiretroviral (AVR) drugs	Abbott Laboratories United States of America	Demanded the Brazilian government to restrict the CL and moratorium on future price negotiations until 2011.
Thailand (2006 - 2008)	The decision to import a generic version of ARV drugs from India under a CL. - similar license to import ARV drugs. - four additional licenses to import cancer drugs.	Abbott Laboratories  United States of America  European Commission	Decided to withdraw its applications for marketing approval on seven new drugs, condemning Thailand's decision to issue CL on its products. The Office of the United States Trade Representative (USTR) subsequently removed the Generalised System of Preference (GSP) on three products exported by Thailand. A letter issued by the European Trade Commissioner criticised Thailand's decision to issue CL, stating that 'such approaches could lead to Thailand isolation from the global biotechnology investment community'.
India (2012-2015)	The decision to issue CL for a cancer drug.	United States of America	USTR named India on the 'Priority Watch List', and US International Trade Commission (USITC) investigated India's trade and

<b>Country</b>	<b>Initiative</b>	<b>Opposed industry actor/country</b>	<b>Nature of the hostile situation or retaliatory measure</b>
Colombia (2016)	The decision to issue a CL on leukaemia drug listed in the WHO's Essential Medicines List.	Novartis Colombia & Novartis International A.G. Swiss Confederation Colombian Embassy in the United States	investment policies. The Colombian Ministry of Health received different communications that contained the: - allegations on factual inaccuracies and distortion of international trade and IP obligations; - threats of dispute settlement claims; - threats to suspend the promised US funding for the Colombian peace process.

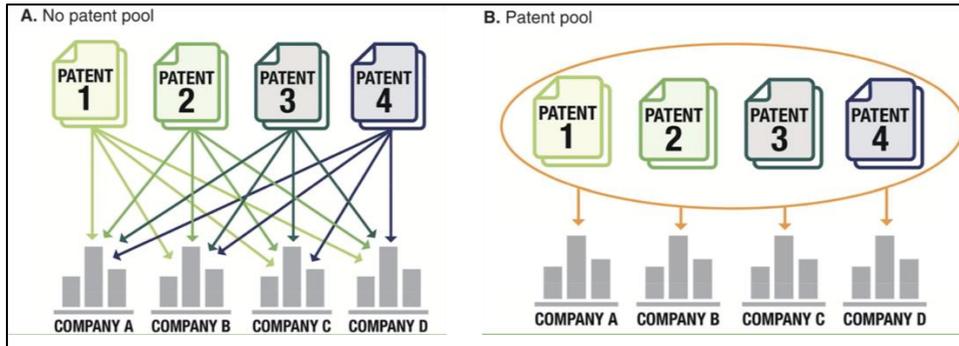
As evidenced, Big Pharma and highly industrialised countries such as the USA, EU and Switzerland created hostile situations and retaliatory actions against other countries' efforts to issue compulsory licenses. Hence, the examples depicted in the above table witness to the power of Big Pharma and some of the high-income countries, in posing obstacles on the use of internationally agreed norms for access to medicine by the LMICs to achieve their public health goals (Dutfield, 2020). This observation leads us to consider the bigger picture of the capacity and the lobbying power of Big Pharma to suppress global efforts to promote public health. Given Big Pharma and proxy governments resisted the Doha Declaration, one can reasonably imagine how they would respond to a WHO level initiative such as C-TAP that is less binding when compared to the Doha Declaration.

Even today, Big Pharma continues to use their devious tactics, threats and retaliation to lock up the knowledge commons by extending control over life-saving drugs using patent rights as a tool (Gotzsche, 2019). Further, there are some instances in which the pharmaceutical companies protest against the approval and production of generics (Stiglitz, Jayadev, & Prabhala, 2020). Further, there may be some risks of falsified and substandard medicines, risk of power and influence of pharmaceutical companies and potential system bias, if the process of development of a COVID-19 treatment is left entirely to pharmaceutical companies. Hence, the process should be regulated to some extent and over-sighted by the global health actors, particularly the WHO.

In addition, there are several reasons IPRs should be considered as a common good in responding to the COVID-19 crisis. First, the territorial nature of IPRs could be a significant impediment in furthering IP as a common good in this global pandemic (Rotstein, 2011). Some countries, such as Canada, Chile and Israel, have already adopted pre-emptive measures that facilitate the effective use of compulsory licenses on prospective COVID-19 treatment (Madar et al., 2020). However, country-specific considerations would not create equal opportunities for all countries, in particular the marginalised LMICs, to access affordable COVID-19 treatment. Therefore, it is essential to consider IPRs as a common good at a global level in advancing COVID-19 treatments and the issuance of compulsory licenses for such treatments. Otherwise, the invented vaccine or COVID-19 treatments will only be an asset for Big Pharma or a particular country with strong IPRs protection. Second, the Doha Provisions for compulsory licensing were rarely applied by TRIPS' members due to their highly technical and time-consuming nature (Bhattacharya 2012; Harris, 2011). In respect of COVID-19 treatment, there should be a useful and prompt mechanism to conclude compulsory licenses between patent holders and generic drug companies. In this context, considering IPRs as a common good through the creation of common IPRs and a technology pool would be a pragmatic solution to remove the IP-based regulatory barriers to research and access COVID-19 treatment.

### ***Patent pooling and C-TAP***

The concept of patent pooling can perhaps be considered as an advanced version that has emerged from the compulsory licensing for access to essential medicine. Patent pooling is an agreement that enables two or more patent holders to license one or more of their patents as a package by enabling the third party to pay associated royalties (Verbeure et al., 2006). As demonstrated in the figure below, in the presence of a patent pooling system, the third parties could quickly obtain licenses from the centralised pool without contacting each patent holder, and with less interaction cost (Luca, 2015).



*Figure 1: A comparative illustration of the different licenses needed in the absence and presence of patent pooling.*

Put in other words, patent pooling encompasses a bundle of benefits such as elimination of stacking licenses, reduction of licensing transaction costs, expedition of the exchange of technical knowledge and information, and discouragement of patent litigation. Given that patent pools require voluntary participation of various patent holders, its success would depend on the voluntariness of patent holders. However, patent pooling has been an innovative solution to remove the stacking of multiple patents and multiple patent holders and to enhance the willingness of technology information sharing by patent holders (Verbeure et al., 2006).

The Medicines Patent Pool (MPP) was the first global level public health patent pool established in 2010 with the mandate of improving ‘access to antiretroviral treatment (HIV/AIDS drugs) in the LMICs’ (Burrone et al., 2019; Cox, 2012; Ulrich, 2015). Several pharmaceutical companies signed licensing agreements with the MPP by extending their voluntary support (Abbas, 2020b; FM’t Hoen, 2016). Subsequently, the MPP’s mandate was expanded to include hepatitis C and tuberculosis treatment, the WHO Essential Medicines List, and most recently the COVID-19 medicines and diagnostics (Abbas, 2020b; Moore, 2015). Even though the MPP served as an influential global initiative for patent pooling, its scope was somewhat limited as it is confined to patent rights and limited reach of the LMICs. Accordingly, the C-TAP was launched considering Costa Rica’s proposal as an advance global IPR and technology pool to respond to the COVID-19 pandemic effectively.

***Costa Rica's proposal and WHO's involvement in launching of C-TAP:***

In a letter dated March 23, 2020, the President of Costa Rica, Carlos Alvarado, requested the WHO to undertake an effort 'to pool rights and technologies that are useful for the detection, prevention, control and treatment of the COVID-19 pandemic' (Love, 2020). In general, the proposal was aimed at accelerating access to research outcomes, intellectual property and shared data through a collaborative global effort (Abbas, 2020b). More importantly, the proposal encapsulated the ideologies of a global corporation and voluntary participation to promote global nonexclusive voluntary licensing for COVID-19 treatment (Baker, 2020). According to the President, Costa Rica's proposal was a solidarity call for action to all stakeholders, such as WHO members, academia, companies, research institutions and cooperation agencies, to coordinate joint research and development of a vaccine for COVID-19 (WHO and Costa Rica preview technology pooling initiative to ensure access to COVID-19 health products for all, 2020). Hence, Costa Rica's proposal can be considered as a wake-up call for global solidarity to address the regulatory barriers, in particular the barriers associated with IPRs, in responding to the COVID-19 pandemic.

Another significant aspect of this proposal was that it emphasised the need for broadening the scope of technology and IP pool from the traditional focus of patent rights to the broadest possible IPRs needed to accelerate the global search for COVID-19 treatments and their fair distribution (Baker, 2020). As cited in the objectives of Costa Rica's proposal:

*This pool, which will involve voluntary assignments, should include existing and future rights in patented inventions and designs, as well as rights in regulatory test data, know-how, cell lines, copyrights and blueprints for manufacturing diagnostic tests, devices, drugs, or vaccines. It should provide for free access or licensing on reasonable and affordable terms, in every member country (Carlos Alvarado Quesada, Presidente de la República, Costa Rica, and Daniel Salas Peraza, Ministro de Salud, Costa Rica, 2020).*

Therefore, Costa Rica's proposal seems to be more comprehensive than the MPP as the proposal provides 'broader focus of IPRs' and emphasises the need for a 'global approach' (Abbas, 2020b). Based on Costa Rica's open letter, the WHO launched C-TAP on May 29, 2020. Through this initiative, the WHO intended to provide an encompassing strategy for scientific knowledge, technology, data and intellectual property shared equitably among all research

of the globe (Love, 2020). The C-TAP has the following five key objectives (Anon, 2020a).

1. Public disclosure of gene sequences and data.
2. Transparency around the publication of all clinical trial results.
3. The collaboration of governments and other funders encouraged to include clauses in funding agreements with pharmaceutical companies and other innovators about equitable distribution, affordability, and the publication of trial data.
4. Licensing of any potential treatment, diagnostic, vaccine, or other health technology to the MPP.
5. Development of life-saving medicines for LMICs and promotion of open innovation models and technology transfer that increase local manufacturing and supply capacity through joining the Open COVID Pledge and the Technology Access Partnership (TAP).

As seen, all five objectives of the C-TAP associate with multiple forms of IPRs that may be involved in the process of developing and distributing COVID-19 treatment. Accordingly, this global initiative lays a foundation to consider different IPRs such as patents (Guderian, Bican, Riar, & Chattopadhyay, 2021), copyrights (Abeysekara, 2011 and 2012), know-how, and software rights (Kumar, Gupta, & Srivastava, 2020) to be considered as a common good for the sole purpose of accelerating global efforts to combat the COVID-19 pandemic. These objectives do not necessarily mean that the C-TAP would remove entire IPRs from its holders; instead, they require right holders to respect and accommodate the public health exceptions associated with IPRs concerning the global pandemic situation (Baldini & Bonadio, 2020). Hence, it is irrational to argue that C-TAP would eliminate protected IPRs of Big Pharma, and create a permanent negative and unclear precedent in the global research and development landscape (Millar, 2020).

The C-TAP has gained considerable global attention and 37 WHO members, including Sri Lanka, have informed the WHO that they join the ‘solidarity call to action’ to make it a reality and ensure its effective implementation (Anon, 2020c). At the same time, Big Pharma and proxy governments have entered into a war against C-TAP, claiming this initiative deprives their IPRs and vested interests while creating a negative precedent in the global IP landscape. The section below analyses Big Pharma and proxy governments’ responses on C-TAP.

***Big Pharma and its proxy governments' response on C-TAP:***

There has been a considerable resistance from pharmaceutical giants such as AstraZeneca, GlaxoSmithKline, Pfizer, and Johnson & Johnson since the discussion on COVID-19 patent pooling was started (Newey, 2020). Albert Bourla, the Chief Executive of Pfizer pharmaceutical company, has criticised C-TAP, stating that:

*I think it is nonsense, and at this point, it is also dangerous. There is an enormous effort right now happening to find a solution. The risks we are taking [represent] billions of dollars and the chances of developing something are still not very good (Newey, 2020).*

This argument reflects the Big Pharma's position, which always focuses on IP as a motivation for innovations and advanced drug marketing (Grabowski, 2002; Hartmann, 2017). Even though many countries supported C-TAP, the USA has rejected 'any involvement' to the process (Silverman, 2020). It is not surprising that Big Pharma and the USA continue to criticise and disapprove C-TAP, as they have a known history of challenging every pragmatic change introduced to counterbalance IP monopoly, in particular, patent rights over pharmaceutical drugs. Big Pharma's response to early patents pools provides similar examples of resistance. When UNITAID established the MPP in 2009 (New, 2009), some pharmaceutical companies explicitly mentioned that 'they could better accelerate access to medicine themselves rather [than] sign up to the pool' (Jack, 2010). Big Pharma's response to C-TAP seemed to be more aggressive and agitated when compared to their response on MPP. Big Pharma tends to highlight IP as a big issue to challenge and discredit the C-TAP proposal. For instance, as the Chief Executive of AstraZeneca pharmaceutical company stated:

*"I think IP is a fundamental part of our industry and if you do not protect IP, then essentially there is no incentive for anybody to innovate" (Newey 2020).*

Further, the International Federation of Pharmaceutical Manufacturers Association (IFPMA), the executives of top pharmaceutical companies, have questioned the C-TAP, criticising its aim for a voluntary IP pooling (Anon, 2020b). Moreover, the Coalition for Epidemic Preparedness Innovations (CEPI), one of the leading vaccine funding groups, has opposed Costa Rica's proposal, stating that 'it is not effective and not necessary' (Story, 2020). For the success of C-TAP, it is essential to obtain support from major

pharmaceutical companies and highly industrialised countries in which such companies are housed. Such support would dispel the uncertainties of the effectiveness of C-TAP and contribute to rejecting the IP incompatibility argument often leveled against the C-TAP proposal.

### ***Functioning of C-TAP and the journey so far***

It has been nearly ten months since WHO launched C-TAP ‘calling the global community to share knowledge, IPRs and data necessary for [finding and distributing] COVID-19[vaccine and treatment]’(Anon, 2020a). Even though this global initiative has received considerable global attention ever since, little global action has been taken to realize its objectives (Hoen, 2021). Seemingly, Big Pharma and some high-income countries have played a vital role in the process of obstructing the functioning of C-TAP (Anon, 2021). At the same time, WHO and WTO member states and civil society organizations such as Oxfam that represent People’s Vaccine Alliance and Health Action International have directly been involved in encouraging WHO to take concrete actions to realize the objectives of C-TAP (Hoen, 2021). This section assesses the controversial journey of C-TAP so far, referring to its ups and downs, and the future prospects.

A considerable number of WHO member countries, mainly the countries in LMICs’ cluster, have taken substantial efforts to make C-TAP a reality rather than a proposal. Ethiopia submitted a draft resolution to WHO in December 2020, highlighting the challenges faced by developing nations in establishing robust local production facilities for vaccines, treatments and other health technologies (Balasubramaniam, 2021). Expanding this proposal, China, Eswatini, Ethiopia, Ghana, Kenya, Namibia, Rwanda, South Africa, Sudan, Togo and Zimbabwe have submitted the resolution Strengthen Local Production of Medicines and other Health Technologies to Improve Access to the Executive Board of WHO in January 2021.<sup>7</sup> Even though this resolution recalls the global commitments towards enabling C-TAP, it has not been concluded yet due to the WHO members’ diverse opinions on the language referring to TRIPS health flexibilities and transparency of the C-TAP proposal (Balasubramaniam, 2021). A similar incident happened in the TRIPS Council when considering India and South Africa’s proposal to temporarily waive

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<sup>7</sup>See, PP20 bis of the *Resolution Strengthen Local Production of Medicines and other Health Technologies to Improve Access*, EB148/CONF./9, World Health Organization, 148<sup>th</sup> Session of the Executive Board, (21 January 2021).

TRIPS provisions on copyrights and related rights, industrial designs, patent and undisclosed information to ‘prevention, containment or treatment of COVID-19’ (Usher, 2020).<sup>8</sup> High-income countries such as Switzerland, European Union and the UK opposed this proposal claiming that a ‘well-functioning IPR system would be a solution rather than an obstacle to developing a safe and effective vaccine for COVID-19 (Balasubramaniam, 2020; Reuters Staff, 2021). These oppositions have made India and South Africa’s proposal of temporarily waving TRIPS provisions inconclusive at the TRIPS Council (Mercurio, 2021).

The resolution submitted to the WHO and the proposal presented at the TRIPS Council can be considered substantial efforts taken by countries to recognise the underline premise of C-TAP, which encourages considering IP as a common good to ensure fair access to affordable COVID-19 vaccines worldwide. However, the same considerations of IPRs have been the trigger that creates disagreements between high-income countries where most pharmaceutical industries are housed, and LMICs are keen to obtain fair access to affordable COVID-19 vaccines. Thus, the lack of political support and resistance of some high-income countries prone to represent the interests of Big Pharma have been two key factors that influence the effective functioning of C-TAP at the global level. Further, less faith in C-TAP has evolved due to a lack of clarifications on who provides political leadership for C-TAP and who undertakes the responsibility of ensuring transparency of C-TAP activities.

If C-TAP is supported by many developed nations and functioned efficiently to achieve its major objectives, it could create fair opportunities to distribute the COVID-19 vaccine worldwide. If C-TAP has functioned as intended, it would have expedited manufacturing the COVID-19 vaccine and ensured the transparency of the publishing and disclosing important clinical trials conducted by Big Pharma. Further, if C-TAP has properly functioned through its initiation, it would have contributed to encourage redistribution of resources and finance to ensure that LMICs get the necessary support to overcome resource constraints in manufacturing or buying the COVID-19 vaccine. Moreover, C-TAP would have been detrimental to the proper functioning of COVAX, which provides a significant contribution towards financing and distribution of COVID-19 vaccines among LMICs (Anon, 2021; McAdams et al., 2020). However, the journey so far has not been favourable to the proper functioning of

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<sup>8</sup>*Waiver from Certain Provisions of the TRIPS Agreement for the Prevention, Containment and Treatment of COVID-19*, IP/C/W/669, World Trade Organization, Council for TRIPS, (02 October 2020).

C-TAP with its full strength. Hence, it is reasonable to argue that C-TAP has been underutilized or perhaps underperformed at the global level in ensuring that LMICs are not left behind in the battle against COVID-19.

***The uphill battle: responsibility of the global community to advance C-TAP***

Seemingly, the global community has an uphill battle in establishing C-TAP as a global mechanism to facilitate the transfer of technology, IPR and research data necessary to ensure fair and affordable access to the COVID-19 vaccine. The need to make IP a common good through C-TAP can be considered the recent most example of the lingering conflict between IP and public health since adopting the TRIPS Agreement. Even though the TRIPS flexibilities and Doha Declaration provided practical proposals to harness this conflict, it seems Big Pharma and its supporting countries continue to circumvent such proposals using their might. They have already expressed their disappointment with C-TAP (Newey, 2020). Seemingly, there is a strong likelihood that Big Pharma, and proxy governments would continue to use any tactic to dilute the effective functioning of C-TAP. Hence, it is immature to think that anyone could stop Big Pharma and its supporting countries from undermining pragmatic health proposals such as C-TAP. However, the global community could collectively resist and manage such influences (Ekström et al., 2021). Accordingly, this paper suggests increased stakeholder participation and strong corroboration between the WHO and WTO as significant factors in responding to Big Pharma and its supporting governments' interference in enabling C-TAP.

Global solidarity is considered one of the pillars of global governance for health (Gostin, 2014). There have been different calls for stakeholder participation and global corroboration in respect to the C-TAP initiative. The 'General Assembly of the United Nations Resolution on International Cooperation to Ensure Global Access to Medicines, Vaccines and Medical Equipment to Face COVID-19'<sup>9</sup> and the 73<sup>rd</sup> World Health Assembly Resolution on "COVID-19 Response"<sup>10</sup> were adopted to escalate global commitment for a COVID-19 response (Anon, 2020c). These international commitments invited the global actors including, countries and research development funders, knowledge holders of IPRs or data

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<sup>9</sup>*Resolution on International Cooperation to Ensure Global Access to Medicines, Vaccines and Medical Equipment to Face COVID-19, A/RES/74/274, General Assembly, UN Doc. A/74/L.56 (08 April 2020).*

<sup>10</sup>*COVID-19 Response, A73/CONF./1 Rev.1, World Health Organization, 73<sup>rd</sup> World Health Assembly, (18 May 2020).*

on existing or novel treatments, researchers, patients and communities, inter-governmental and non-governmental organizations, and all stakeholders to confirm their participation and accountability for the global action towards combating COVID-19, which includes enabling C-TAP.

The tug of war between some high-income countries and LMICs concerning C-TAP at the international level provides an example of the fragmentation of international law (Koskenniemi and Leino, 2002; Trachtman, 2011; Young, 2012). At the same time, it emphasizes the importance of integrating health and IP norms and building partnerships among TRIPS Council, WTO, and WHO to respond to global health crises (Drope & Lencucha, 2014). Therefore, it needs greater co-operation between WHO and WTO to minimise the normative and institutional fragmentation of health and IP norms simultaneously in enabling the effective functioning of C-TAP. Given that WTO focuses on trade liberalization, we cannot reasonably expect WTO to facilitate C-TAP as the WHO does. However, WTO could facilitate and encourage the integration of trade norms with health norms, particularly in the ongoing discussions of temporarily waving TRIPS provisions at the TRIPS council (Zarocostas, 2021). In fact, as the paternity rights holder of C-TAP and as the custodian of global health, WHO has a greater responsibility to enable C-TAP's functioning with the support of its member countries. As clearly stated in a letter sent by OXFAM addressing the WHO Director-General, WHO could provide further clarifications of aspects such as the strategy, mandate, political leadership and the mechanism of ensuring transparency of that activities carryout by C-TAP (Hoen, 2021). Further, it is also important that WHO drafts model agreements that C-TAP could use in concluding matters of sharing of rights in the invention, research data, biological resources, knowhow and knowledge transfer.

In addition to these institutional collaborations and the particular involvements of WHO, the following two aspects should be considered in justifying C-TAP in international law and policy, particularly in the context of IPR regulations. First, the normative integration of IP, human rights and public health can be used as a theoretical base for verifying IP as a common good through the C-TAP amid the COVID-19 pandemic. The normative integration of IP and public health emphasises that individual IPRs should be interpreted and understood in a manner sensitive to public health (Guan, 2016b). Accordingly, international developments of IP and public health could be used to defend IP-based challenges on the C-TAP proposal. Second, the cardinal premise of the Sustainable Development Goals 2030 Agenda (SDGs) – ‘leave no one behind’ –

can be used to justify the need for global participation to ensure the LMICs are not left behind in the global race for COVID-19 vaccines (Buse & Hawkes, 2015; Filho et al., 2019). Further, SDGs Goal 3, which denotes ‘health and well-being for all’, and SDGs Goal 17, which requires ‘global participation’, can be used to substantiate collaborative actions towards enabling C-TAP (“Sustainable development goals – United Nations,” n.d.). These aspects would contribute to verifying IP as a common good in the time of the COVID-19 pandemic, foster stakeholder participation and global corroboration to ensure the smooth functioning of C-TAP, and finally, affirm fair distribution of COVID-19 vaccines among every country without discrimination.

## **Conclusion**

This paper concludes that the participation of global policy actors, including the partnership among the WHO, WTO and TRIPS Council, are important factors in tackling the influence of Big Pharma and some high-income countries on the effective functioning of C-TAP to ensure that every country gets a fair opportunity to access affordable COVID-19 vaccines. As this paper has investigated the cardinal premise of C-TAP— making IP a common good to respond to the COVID-19 pandemic—it provides a theoretical account of the role of IPRs in a global health crisis. In this vein, this paper emphasizes the importance of making IP a common good to uphold health equity which ultimately every country receives fair opportunities to access affordable medicine, particularly in global health emergencies such as the COVID-19 pandemic. Further, this paper witnesses the power that the multinational corporations have accumulated, particularly Big Pharma, and how these companies and some high-income countries react to undermine the global health proposals utilising the IPRs protected under the TRIPS Agreement. Big Pharma’s intervention on C-TAP mirrors how multinational companies interfere with shaping international law and policy, particularly the global health proposals (Freudenberg, 2014). Similarly, there is a tendency that Big Tobacco, Big Alcohol and Big Food use their full might to interfere with the effective implementation of pragmatic global health policies (Damle, 2018; Delobelle, 2019; Reeve & Gostin, 2019). These multinational corporations are economically powerful, politically strong and strategically equipped in subverting any health policy which may affect their trade, profitability and long-term sustainability. Big Pharma's blatant war against C-TAP is a clear demonstration of this long-lasting issue. Hence, the COVID-19 crisis can be considered as a wake-up call for the global health community, and countries to

proactively resist and manage pharmaceutical industry tactics and the involvements of their supporting high-income countries in undermining the global health proposals. The solidarity action would make the public health community and stakeholders more potent than Big Pharma and some of the high-income countries that lobby for Big Pharma. Such a commitment would ultimately pave the way to ensure effective functioning of C-TAP and access to fair and affordable COVID-19 vaccines worldwide in the current pandemic situation; and lay a strong global-level foundation that could be used to mitigate similar effects in future global health disasters.

### **Declaration of Conflicting Interests**

The authors declared no potential conflicts of interest with respect to the research, authorship, and publication of this article.

### **Authors' Contributions**

A.A.C.J Adikari carried out the preliminary literature review and drafted the manuscript. Sanath Sameera Wijesinghe carried out further literature review and contributed to develop the manuscript. Both authors have read and approved the final version of the manuscript and agree with the order of presentation of the authors.

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## **Exploring Buddhist Teachings and Spirituality in Female Entrepreneurs' Business Decisions in Sri Lanka: The Foundational Role of the Five Precepts**

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### **Abstract**

*Female entrepreneurship is one of the main drivers of economic and social development in any country. Over the years, a great deal of research has been conducted in the area of female entrepreneurship. However, to date, there has not been much discussion of female entrepreneurs' religious behaviour. Hence, this study examines the nature of female entrepreneurs' religious behaviour and how Buddhist teachings and spirituality influence female entrepreneurs' business decisions throughout start-ups and the ongoing business operations. Although Buddhism is a vast literature, this study focuses mainly on the five precepts. This study is based on social constructionism philosophy, and narrative design was used to explore the female entrepreneurs' religious behaviour. A snowball sampling procedure was applied, and seven interviews were conducted to generate data for the study. This qualitative data analysis was complemented and supported by narrative in-depth interviews, observations and collected documents and field notes. Results revealed that Buddhist female entrepreneurs' business decisions are influenced by their religious teachings, especially the five precepts and religious spirituality. The main themes related to the start-up, operations and pricing, networks, profit sharing, finance, problem solving and sustainability. Further, female entrepreneurs have engaged in solid religious practices in businesses and personal lives since their childhood. Buddhist teachings and spirituality can be identified as the critical factor of Buddhist female entrepreneurs' business*

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*success and work-life satisfaction in Sri Lanka. The findings can facilitate and promote spiritual entrepreneurship among entrepreneurs. It is valuable to deepen our understanding of the role of Buddhist teachings and spirituality, which affects entrepreneurs' business decisions.*

**Keywords:**

*Buddhist teachings, Five Precepts, Buddhist spirituality, Female entrepreneurs, Business decisions, Qualitative*

**Introduction**

The purpose of this study is to explore the nature of female entrepreneurs' religious behaviour and how Buddhist teachings and spirituality influence female entrepreneurs' business decisions from start-ups till the ongoing operations. This research study focuses on the combination of female entrepreneurship and Buddhist spirituality within the Sri Lankan context.

Female entrepreneurship has received much scholarly attention through the last few decades (Hughes et al., 2012; Ahl, 2002). This sector is considered a significant source of economic development and social empowerment in any nation. Female Entrepreneurship is essential for a country like Sri Lanka because females constitute more than half of the country's population. Most probably, females decide to become entrepreneurs as a good option for giving personal and family commitment. It is a practical solution for females who have encountered the 'glass ceiling' in organisations (Ahl, 2002).

There is still less research dedicated to the issue of spirituality and entrepreneurship. The influence of spirituality and religion within the field of entrepreneurship has attracted increased scholarly attention (Candland, 2001). It is generally accepted that religion can shape personal morals and values, influencing individual behaviour and entrepreneurial activities (Audretsch et al., 2007).

Recent entrepreneurship studies have suggested that religious-spiritual influences on entrepreneurial motivation (Parboteeah et al., 2014), new venture creation, entrepreneurial risk-taking, and performance (Ibrahim & Angelidis, 2005). While these studies offer insights into the relationship between religion and entrepreneurship, they focus mainly on Western and Islamic faiths. But this research study focuses on the Buddhist spirituality of female entrepreneurs in Sri Lanka as an Eastern religion and the contribution of Buddhist teachings and spirituality for making decisions related to their businesses. As Buddhism is a vast literature, this research study is based mainly on the "Five Precepts".

As a cultural component, religion can impact in different ways, people's lives, their behaviour, thinking patterns and attitudes. The impact can be on people's personal lives, career, and businesses. According to the Western perspective, some researchers argue that spirituality is rooted in religion, while others think of these as separate. This study attempts to address the context gap in this setting, and it is placed within the religious behaviour of female entrepreneurs in Sri Lanka.

## **Literature Review**

### ***Female Entrepreneurship***

The rise of female entrepreneurship has attracted academic interest and developed as a separate research field (Tulus 2009). Scholarly interest in female entrepreneurship is inspired by both the economic and equality-related implications of this phenomenon. The average rate of business start-ups from 1998 to 2014 among female entrepreneurs' (0.8%) is low compared to their male counterparts (2.5%) in Sri Lanka (UN 2018). Moreover, typical female entrepreneurs' business enterprises are small, with low turnovers, low employees, and no professional assistance. In the process of entrepreneurship, women have to face a more developed range of problems associated with entrepreneurship than men, and these problems can be doubled because of their dual roles as an entrepreneur and homemaker. Not only do women have a lower participation rate in entrepreneurship than men, but they also generally choose to start and manage firms in different industries than men tend to do (Brush, 1992).

While Sri Lankan women have made considerable gains in education, this has not yet translated into full access to employment or entrepreneurship. Statistics show that women's participation in entrepreneurial activities in Sri Lanka could be further strengthened, with greater access for women to support services. Women entering the labour market in Sri Lanka are still disadvantaged in finding quality paid employment; they must often look for other sources of income, notably self-employment. Women operate their businesses, which tend to be in the most disadvantaged sectors, predominantly in agriculture, tourism, handicrafts, and garments. Even those who specialised in industry and services tend to concentrate on a limited number of activities, such as catering, tailoring, beauty and food processing. Women-owned businesses often lag behind male-owned enterprises in terms of size, productivity and tend to be less profitable, with little potential for further expansion and have a high failure rate.

In most Asian countries such as Sri Lanka, women are viewed as weak, passive, obedient or submissive. Furthermore, dominant religious beliefs and traditions do not favour women being involved in outside activities (Ram & Seela 2010). In some cases, society has stereotyped them as being a weakness in a man's life, should his wife be working or involved in the business. When women are engaged in business activities, they have to deal with many people and sometimes travel away from their homes and participate in business gatherings. Such activities are not well accepted by Asian societies (UNESCAP 2005, Ram & Seela 2010, Surangi 2018). The Sri Lankan society is still patriarchal; Sri Lankan women are traditionally considered homemakers and not business people. Women's family obligations also bar them from becoming successful entrepreneurs in both developed and developing nations (García & Welter 2011). Having primary responsibility for children, homes and elders, few women can devote their time and energy to their business (García & Welter 2011). In this setting, inherited customs and social norms create pressure by reinforcing gender stereotypes, constituting one of the main constraints for female employment and entrepreneurship in Sri Lanka. As women need to balance business or jobs with the demands of family and household care, they have to pursue economic activities that offer fewer career opportunities, that are less innovative and typically confined to traditional roles.

As entrepreneurship is considered a significant source of economic growth, employment, poverty alleviation, regional development and innovation, women are a readily available resource that different stages of economic development may use to accomplish economic progress (UN 2018). Historically, most Asian societies have been patriarchal, with the woman considered as a secondary person. Gender equality is vital to economic and human development in a country. Removing gender inequalities provides society with a better chance to develop. Therefore, encouraging women to become involved in entrepreneurial activities may lead to economic prosperity and improve their living standards.

### ***Entrepreneurship and Religion***

The entrepreneurial process is influenced by the religious/spiritual values of the entrepreneur (Balog et al., 2014). These influences can be categorised as macro-level and micro-level. Entrepreneurial decision making occurs at every stage of the entrepreneurial process (Shepherd et al., 2015) and comprises intention, opportunity discovery, feasibility, launch, and functioning of the business. Therefore, the entrepreneurial decisions made at these stages are also influenced by the spiritual/religious values of the entrepreneur.

In literature, most scholars have addressed Christian and Islamic religions and spiritualities concerning management and entrepreneurship. According to the scholars' findings, Christians run their businesses based on Christian values and principles, and entrepreneurship provides an opportunity to use their talents to the glory of God (Cullen et al., 2013). Christian spiritual tradition profoundly informs and shapes the leadership of Christian spiritual leaders (Delbecq, 1999). In findings, Islamic spirituality is highlighted as the critical role of the success of Muslim female entrepreneurs (Grine et al., 2015). In general, the majority reflects a strong relationship between religion and spirituality of the entrepreneur and his/her business decision making. In contrast, some scholars have argued that religion does not foster entrepreneurship in any mean (Cousins, 1996).

### ***Buddhist Teaching and Spirituality***

Buddhist Teachings are the preachings of Lord Buddha. Lord Buddha was a teacher, philosopher and spiritual leader who is considered the founder of Buddhism. The Three Universal Truths, Four Noble Truths, and Noble Eightfold Path are the Buddha's basic teachings, the core of Buddhism. The Dharma begins with the "four noble truths" (Dunn & Jensen, 2019). According to the Buddha's teachings, ethics are the foundation for all good qualities we can develop in our minds. We can eliminate worry and regret and all the unpleasant results of unwholesome actions by following five basic training rules called the "five precepts". These precepts are selected as the Buddhist teachings for this research study, as Buddhism is a vast literature.

Buddhist spirituality is concerned with the end of suffering through an enlightened understanding of reality. All spiritual practices of the Buddhist tradition are oriented towards ultimate freedom from suffering and the cultivation of wisdom and compassion. Buddhist spirituality is not about absenting oneself from this reality, but rather fully, completely, and courageously facing it. It is imminently practical and provides discipline for the mind and the body, for treating others and oneself. It shows us how to love others, instead of saying "Love others", and it shows us how we may become wise instead of merely saying "Be wise". Buddhist spirituality may be compatible with other religious perspectives because it is practical rather than theoretical (Dunn & Jensen, 2019).

### *Entrepreneurship, Religion and Spirituality*

Theory of planned behaviour (TPB) that "predicts and explains behaviour in specific contexts" is a frequently used theory in different disciplines. This theory is valid for entrepreneurship research because becoming an entrepreneur is considered a conscious activity, and the intention is considered a cognitive state. Further, it is argued that entrepreneurial decision is a complex one and needs an intentional mental process. Also, there is an argument that strategic entrepreneurship is considered an intentionally planned behaviour, which is valid for even necessity motivated and unexpected entrepreneurship. Therefore, studying the decision-making process for entrepreneurial behaviour via the theory of planned behaviour (TPB) seems reasonable (Sabah, 2016).

Institutional theory attends to the deeper and more resilient aspects of social structure. A growing subfield of institutional theory considers institutional logics, broadly (but not universally) shared assumptions and action patterns (Thornton & Ocasio, 2008). At the organisation level, institutional logic can be seen as sources of managerial decision-making rules. Institutional theory has also shifted into examining the founding conditions for new firms (Tolbert et al., 2011).

According to the literature, religion and spirituality influence decision making. Buddhism influences ethical decision-making in organisations as a religion and a great philosophy (Jayawardena, 2017). Buddhist concepts of Right Livelihood play an essential role in evaluating and exploiting entrepreneurial opportunities and the day-to-day operations of the resultant new businesses (Valliere, 2008). The role of religion in influencing the likelihood of choosing self-employment suggests an essential link between religion and occupational decision-making (Audretsch et al., 2007). Religion plays a significant role in affecting the judgment, emotional and motivational qualities of Sri Lankan business leaders' decision making (Fernando & Jackson, 2006). There is a possibility of applying the practical wisdom of Buddhism into the individual, group and organisational decision-making processes, and business organisations and business schools can use the practical knowledge gleaned from the Buddhist traditions. Islamic spirituality on Muslim female entrepreneurship in Malaysia shows the effects of spirituality on shaping their decision-making (Grine et al., 2015). Organisational and management practices are influenced by both religion and spirituality. Buddhism is a prevalent religion throughout many parts of the world, and Buddhist culture and beliefs are manifested through Buddhist business practices (Dunn & Jensen, 2019). Buddhist concepts and procedures are adequate to be applied in organisational management, and hence these concepts and techniques

have a universal application that could improve organisational productivity (Weerasinghe et al., 2015). Buddhist teachings are essential for understanding management as practiced in Buddhist countries and that such practices have universal application and appeal (Rarick, 2007). Buddhist concepts impact leadership, team building, personal development, conflict and people management (Ashtankar, 2015). Applying Buddhist practical wisdom contributes to achieving more beneficial economic outcomes and management practices (Kovács, 2014).

Some scholars researching this area have found some relationships between religion, spirituality, entrepreneurial behaviour, or activity. Religion is one of the vital cultural influences and socialising factors shaping females' gender role attitudes and values, affecting the characteristics of their entrepreneurial behaviour (Rogers & Park, 2014). Intrinsic religious motivation positively influenced potential entrepreneurial activities (De Noble et al., 2007).

Buddhist values and associations can bring unique benefits to new ventures founded by Buddhist entrepreneurs and help improve recent venture performance (Liu et al., 2017). Sustainable businesses are achieved through the influences of Buddhist teachings (Sachayansrisakul, 2016). Religiosity may contribute to entrepreneurial success. Hence, in the presence of personal religiosity, the entrepreneurs' pursuit of material wealth does not lead to dysfunctional outcomes but rather to greater degrees of life satisfaction (Bellu & Fiume, 2004). Christian-based companies experience higher sales, more significant increases in personnel, and higher productivity (ROI) (Ibrahim & Angelidis, 2005). Entrepreneurs' personal religious and spiritual beliefs influence managerial practices, but values are not related to entrepreneurial motives (Morris & Schindehutte, 2005).

Muslim females in Malaysia have made significant inroads into entrepreneurial decision-making by capitalising on religiosity and spirituality, providing them with guidance, support, satisfaction, and balance (Grine et al., 2015). Islamic Spirituality is a key motivator for the ambition of Muslim females to succeed in their business and increase their work performance (Grine et al., 2015). Belief in the Islamic religion is related to motivation and commitment towards socially responsible business activities (Graafland et al., 2006).

As a robust cultural dimension, religion influences females' entrepreneurial processes and aspirations (Mazonde & Carmichael, 2016). Religious beliefs have a positive effect on their entrepreneurial activity in three aspects; by influencing the decision to become an entrepreneur (motivation), how they

manage their enterprises (decision-making and managerial practices) and in their internal and external networks (Dodd & Seaman, 1998). Some scholars have presented contradicting findings that religion has no impact on entrepreneurial pursuits or entrepreneurial success (Nair & Pandey, 2006). According to scholars' findings, Christian entrepreneurs and Muslim entrepreneurs run their businesses based on their religious principles and values (Kayed & Hassan, 2010). There is a relationship between Buddhist entrepreneurs' spirituality and their right decision-making (Jayawardena, 2017). Buddhist doctrine within the socio-cultural context played a significant role in evaluating and exploiting entrepreneurial opportunities (Valliere, 2008).

Research investigating female entrepreneurs has developed considerably over the past two decades. However, female entrepreneurs' religious values and spirituality are still relatively under-researched and represent a challenging research field. As identified in this study, female entrepreneurs' decision and their religious values and spirituality is yet to be developed in methodological, theoretical and conceptual terms. Researchers from different academic disciplines, particularly those of Business, Economics and Sociology, have discussed the concept of religious values and spirituality. However, a general conceptual framework for investigating this area is still absent. Thus, we can see that the focus of empirical studies on female entrepreneurs' religious values and spirituality has been limited. So far, minimal empirical studies have been conducted in developing countries in this regard. Therefore, there remains an opening for theoretical and empirical research in female entrepreneurs' religious values and spirituality, focusing on the Foundational Role of the five precepts.

## **Methodology**

This qualitative study aims to capture and understand the complex social phenomenon of female entrepreneurs' religious behaviour and is thus grounded in the interpretive paradigm. The narrative methodology focuses on the life experiences of a single event or a series of events or the detailed stories of a small number of individuals (Creswell, 2007). It is crucial to know Buddhist female entrepreneurs' life stories/experiences or past incidents to achieve the particular research objectives of the study. Knowing their life story is essential to understanding their attitudes and how their life experiences affect shaping them. It helped the researcher realise how religious teachings and spirituality influence the business decision-making among Buddhist female entrepreneurs in Sri Lanka.

The interviews, observations and documentary analyses taken in this study are consistent with the research objectives and methods used in similar studies. Seven female entrepreneurs were purposively selected and interviewed. Heterogeneity was a central guiding principle for selecting the sample. The researcher identified saturation point as the narratives began to reveal similar things. Before each interview, researchers obtained oral consent to record the interviews digitally.

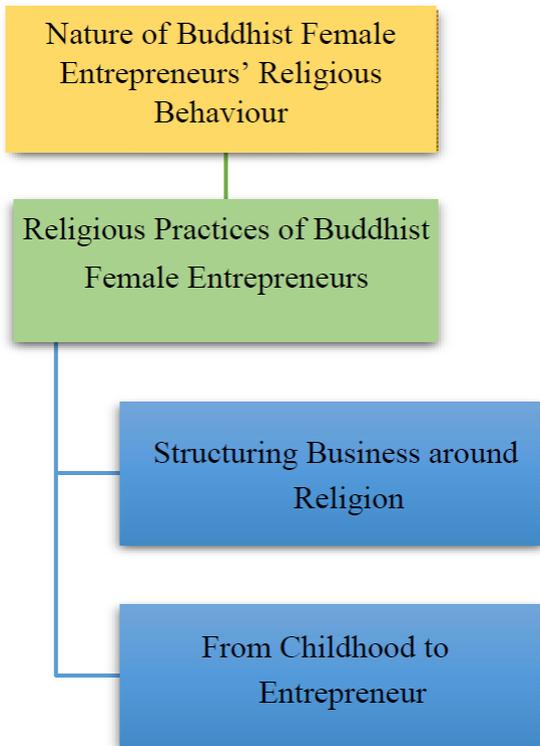
Additionally, field notes were prepared based on the observations.

Thematic analysis was used to analyse the collected materials. First, interview transcripts were reread and reviewed several times, searching for "repeated consistencies". Researchers highlighted quotes and phrases from the interviews. Using the constant comparative method, the researcher went back and forth among transcripts until categories emerged that were consistent yet distinct. The researcher named these categories, coded and indexed the transcripts, and placed sections in labelled folders representing each category. Second, the researcher brought together the coded interviews, and looked for relationships within and across the data sources. A table was developed to compare various coded interviews. Finally, the researcher integrated and refined the categories until themes solidified. Moreover, the ethical procedure was applied at every stage of the research process, including informed consent and confidentiality.

## **Findings and Discussion**

### ***Themes derived from narratives of Buddhist female entrepreneurs***

The current study focuses on two research questions. The researcher derived the themes separately to support the research questions. In the first research question, the researcher attempted to identify "What is the nature of female entrepreneurs' religious behaviour?" The nature of female entrepreneurs' religious behaviour (emergent themes) is presented in Figure 1.



**Figure 1: Nature of female entrepreneurs' religious behaviour**

Source: Developed by the researcher based on the outcome of this research

### *Nature of Buddhist female entrepreneurs' religious behaviour*

According to the literature, female entrepreneurs follow various religious behaviours in their businesses and personal lives depending on their religion and belief. Muslim female entrepreneurs practice religious rituals such as praying, fasting, charity and pilgrimage to Makkah (*haj*) and *zakat* (a form of almsgiving considered in Islam as a religious obligation or tax, which, by Quranic ranking, is next after prayer) is observed regularly (Grine et al., 2015).

First, the researcher reveals the religious practices of Sri Lankan Buddhist female entrepreneurs in their business.

### *Structuring business around religion*

According to the responses of the interviewed Buddhist female entrepreneurs, they exhibit strong religious practices in their business. They have given priority

to religious and traditional rites in their businesses. Starting a business after worshipping Lord Buddha and involving pirith (the Buddhist practice of reciting certain verses and scriptures to ward off misfortune or danger) in their business environment proves how they prioritise religious beliefs and how their religious spirituality works. Furthermore, they also offer incense and the prime portion of food they cook to Lord Buddha as a practice in their businesses. On special days of every year, on the days like the 01st of January, Sinhala and Tamil New Year day and the first day they start their business, they offer alms to monks or the clergy. By the time they start their businesses proper, they have completed all the initial religious tasks in the opening ceremony of the business. All of the information very clearly shows that their business is structured upon Buddhist teachings and spirituality. During these instances, the 'five precepts' of their Buddhist spirituality act as the house's foundation. All of their businesses are structured on Buddhist culture and are seen as a religious orientation. The quotations indicated below specifically prove the details described above regarding Buddhist female entrepreneurs' religious practices in business.

*"We offer a prime portion to Lord Buddha when we prepare food in our business" (Participant # 1)*

*"Even now we offer incenses and chant pirith every morning and evening in our business place" (Participant # 6)*

*"We do almsgiving to clergy on 01st of January, Sinhala and Tamil New Year day, and the day we start the business" (Participant # 4)*

These responses powerfully demonstrate that Sri Lankan Buddhist female entrepreneurs perform and follow religious practices in their businesses, and they have established a better religious background in their business environment. Findings have complied with Sachayansrisakul (2016) as Buddhist female entrepreneurs in Thailand are regular temple visitors, perform the basic religious rituals like merit-making and food offerings to the monks, pray regularly, meditate, and follow all the teachings by heart (Sachayansrisakul, 2016).

### ***From childhood to entrepreneur***

Apart from this, Buddhist female entrepreneurs in Sri Lanka follow strong religious practices in their personal lives since their childhood. They have an excellent religious family background. Mainly their parents have influenced

them to be good Buddhist practitioners since their childhood. They accepted that these religious practices had provided them strong support to be more ethical and well-disciplined entrepreneurs. The following responses of Buddhist female entrepreneurs display their religious practices from childhood to their entrepreneurship.

*"I have worked as a teacher of a Dhamma school"* (Participant # 1)

*"I perform Bodhi Pooja, and I also perform a Pooja for nine planets and gods"*  
(Participant # 2)

*"I listen to Dhamma"* (Participant # 2)

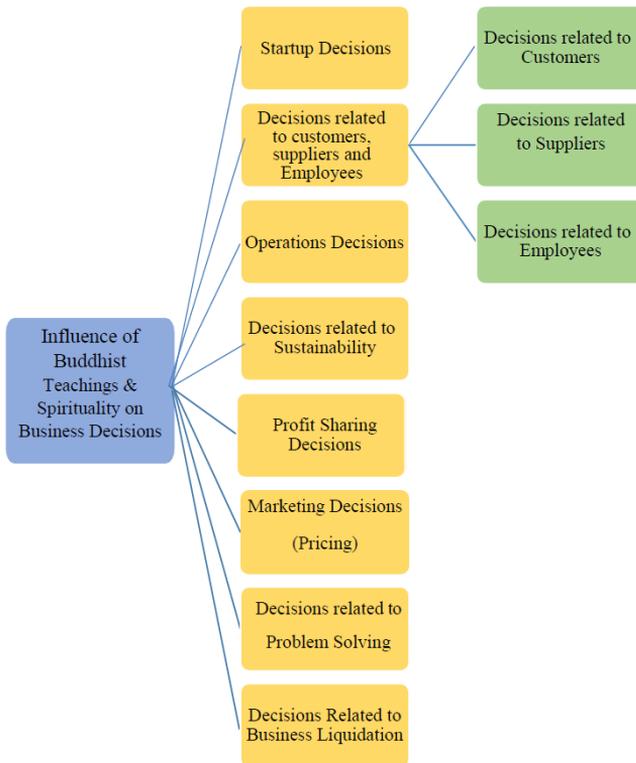
*"I worship Lord Buddha every morning and chant pirith every evening"*  
(Participant # 4)

*"I meditate for some time once a day"* (Participant # 4)

After becoming entrepreneurs, they perform Bodhi Pooja, and whenever they have any free time, they visit the temples. Some of them have made it a habit to meditate once a day. They worship Lord Buddha every morning, and they chant pirith as well. Similar results have been found in the USA (Griebel, Park & Neuburt 2014). Studies reveal that religion impacts many different areas of a person's life, such as family politics and gender roles and vice versa (family affects religious behaviour).

***How do Buddhist teachings and spirituality influence female entrepreneurs to make their business decisions?***

In the second research question, the researcher attempted to identify, "How do Buddhist teachings and their built-up spirituality influence business decisions, from the start-up till the ongoing business operations?" Figure 2 shows eight significant themes and three sub-themes derived from the female entrepreneurs' stories related to the second research question.



**Figure 2: How Buddhist teachings and spirituality influence during the start-up through to the ongoing business operation.**

Source: Developed by the researcher based on the outcome of this research

***Start-up decisions***

According to the participants' responses, they had considered the five precepts when they started their businesses. Their built-up Buddhist spirituality influenced them to start a legally accepted and ethical business. Lord Buddha advises the laity to avoid five specific trades, which creates negative karmic results if engaged in. "Five trades that a disciple should avoid are: Trading in arms, in living beings, in the flesh, in intoxicating drinks, and poison" (Griebel, Park & Neuburt 2014). The above trades are to be avoided if we wish to sustain the spirit of Buddhism by implication of that advice. Practicing the above advice assists in upholding the first precept and the fifth precept. Sri Lankan Buddhist female entrepreneurs also consider this advice when they make their start-up decision.

*"My restaurant is a pure vegetarian restaurant, which means there is no animal slaughter in our business, and our business is based on the first precept. It is also the cause to start this kind of business" (Participant # 4).*

*"I focused on this type of business by thinking of virtue and sin" (Participant # 7).*

Mainly, these respondents are most concerned about conducting their businesses without harming any living beings. They want to help others and be the happiest person by carrying out their businesses in a righteous way. Therefore, they believe in *Karma* and have adopted their whole business processes accordingly. Some female entrepreneurs have decided to start a business to be good mothers. The Sigalovada Sutta sets out the five traditional duties of parents toward their children. The above responses display how the five precepts and Buddhist spirituality influence female entrepreneurs to make their start-up decisions. These findings are contradicted with Weber's famous theory as he suggested that those who participate in the economic realm would eventually no longer need religion (Weber, 1930). However, many studies demonstrate that people do not see work and religion as entirely distinct spheres.

### ***Decisions related to networks of employees, customers, and suppliers***

#### **Decisions related to customers**

After analysing the decisions taken by female entrepreneurs on their networks, especially on employees, customers and suppliers, the researcher identified that Buddhist female entrepreneurs have adopted the five precepts and that the Buddhist spirituality influenced their attitude-based entrepreneurial behaviours.

*"I never lie to my customers, and I provide accurate information to my customers regarding nutritional status of fruits" (Participant # 1)*

*"When the sangha come to my juice bar, I never take money from them" (Participant # 1)*

*"I treat every child in my pre-school equally" (Participant # 3)*

*"Even if we make a small mistake, it bothers us. Some flower plants do not grow properly. Some customers like to buy these flower plants as well. There have been instances where I have told them the truth and sold them" (Participant # 6)*

The responses above reflect that especially Buddhist female entrepreneurs have adopted the fourth precept by not lying to and cheating their customers. Their Buddhist spirituality has led them to make more ethical decisions when conducting their businesses. Here, one of the respondents says that she never charges money from the Buddhist monks who are customers. Buddhist spirituality hugely influences the making of such decisions. They treat their customers equally, and the customers too have faith and pleasant, genuine feelings on Buddhist female entrepreneurs' behaviour. These female entrepreneurs do their best to delight customers and offer more quality products. According to their responses, they cannot commit even a tiny mistake to their customers, as it would make them feel guilty and create bad feelings. Rarick (2007) explained how entrepreneurs combine their values and business decision towards customers. Thus, these entrepreneurs have found a way to make their work-lives compatible with their values and create a new work ethic in treating customers.

#### **Decisions related to suppliers**

Suppliers are also critical stakeholders, and they are considered one of the essential parts of any business. Therefore, maintaining good relationships with their suppliers affords many advantages to entrepreneurs and business owners (Surangi, 2018). The following responses show how Buddhist female entrepreneurs make decisions regarding their suppliers and how the five precepts and Buddhist spirituality guide them at such times.

*"I never bargain with my suppliers and work with my suppliers fairly"* (Participant # 1).

*"We have a supplier for our business. I'm not cheating him, and pay money at the right time. Therefore, he has been supplying leaves for my business for six years"* (Participant # 7).

According to the above responses, Buddhist female entrepreneurs have followed the fourth precept by abstaining from lying. They have paid their suppliers without any delays. Also, they never bargain unnecessarily with their suppliers. Buddhist female entrepreneurs believe that they should also satisfy the suppliers just like the customers, or they cannot run their businesses continuously. Therefore, they avoid unfair bargaining for prices. They especially maintain a very genuine relationship with their suppliers. Women in the study select raw

materials that they want. If not, any inferior quality raw materials or products may cause issues from the customers' perspectives. They balance everything in their businesses without missing anything and pay equal consideration to all aspects, and this is all about the ethical behaviour of entrepreneurs. A widespread claim in the literature is that religious belief is likely to enhance ethical decision-making across business groups (Sabah, 2016; Rarick, 2007). If this were so, one could argue that the behaviour of entrepreneurs would be contingent upon the ethical constraints imposed by their religious beliefs (Sabah, 2016; Rarick, 2007).

### **Decisions related to employees**

Employees are the key drivers of any business. Human capital is the most important and valuable factor of any business and hence maintaining good relations with them and managing human resources well provides competitive advantages. In this regard, the employee-related decision making is fine-tuned by the five precepts and Buddhist spirituality. The responses reveal how this happens.

*"When I select an employee for the post of a cashier, I see whether that person is honest or not. All employees should be capable enough to treat our customers pleasantly (Participant #1)*

*"At least I never steal the labour of my employees. I provide a reasonable salary for them with free food and accommodation. Consumption of alcohol is strongly prohibited within the business premises and also within the boarding place for employees" (Participant # 4)*

When hiring employees, they look at the employees' personal qualities, such as honesty, integrity, patience, and how pleasantly they treat their customers. These entrepreneurs have adopted the second and fourth precepts because they do not hire thieves, loiterers, liars and cheaters as their employees. The above responses prove that they never commit any financial fraud on their employees. Buddhist female entrepreneurs pay salaries on time to their employees, and they also provide other facilities like food and accommodation free of charge. They highly appreciate employees' discipline and strictly prohibit alcohol consumption during working hours within the business premises and boarding places. These aspects are also taken into consideration when hiring employees. Therefore, the researcher realised how they practice the fifth precept.

Furthermore, these female entrepreneurs also want to create quality and better working environments for their employees to work without hassles. They have given the freedom to their employees to carry out their work. The researcher of this study also stresses that when making the above kind of decisions, the five precepts and Buddhist spirituality have remarkably influenced the decision-making process of the Buddhist female entrepreneurs in Sri Lanka.

### ***Operational decisions***

According to the female entrepreneurs' responses, operation decisions are also influenced by the five precepts and Buddhist spirituality.

*"I use only natural products in my salon. Even when I'm doing a facial, I start it after invoking blessings"* (Participant # 2)

*"When we are cooking a meal, we never use things like artificial flavours. We give everything with good intentions"* (Participant # 4)

*"We use the exact amount in the mix because if the blend goes wrong, the pottery will explode. So, we do the mixing properly without faking"* (Participant # 5)

The above responses showed us how female entrepreneurs follow the five precepts, especially the first, second and fourth precepts. Buddhist spirituality also assisted them in making such operation decisions. They never sell poison nor use artificial flavours and harmful chemicals in the operation processes to maximise profits. This means that they follow the first precept by abstaining from killing living beings. Instead, they want to create healthier customers in the society. It proves their adoption of Buddhist teachings and spirituality. They never compromise in the operation process; especially when mixing raw materials, they use the correct and sufficient amounts when implementing operational tasks. Therefore, they follow the second and fourth precepts without stealing and lying to their customers. They do everything with pure and good intentions, and they believe that doing business the right way adds merits to their lives. These findings are similar to current knowledge in the area. Some studies report that religious respondents exhibit higher degrees of ethical sensitivity towards operational decisions and are less likely to behave in an unethical fashion (Angelidis & Ibrahim, 2004).

### *Decisions related to sustainability*

Most business owners miss sustainability when carrying out their businesses. But Buddhist female entrepreneurs pay attention to the people, planet and profit while carrying out their businesses. Their responses show how sensitive they are to the environment and the people and maximise profits. They think of the future, and accordingly, they have altered their decisions without causing any harm to the environment. In this regard, Buddhist teachings and spirituality have had a considerable influence.

*"We must give a portion of what we receive now in this spirit even if we have been in the world of business for a long time. I've been carrying out a salon for 20 years" (Participant # 2)*

*"We are eco-friendly. In our business, we never use polythene and plastics" (Participant # 4)*

*"The business has a good existence when it comes to religion" (Participant # 6)*

*"Because we have not cheated people, we can continue our business for a long time." (Participant # 7)*

According to the Buddhist female entrepreneurs, they have continued their businesses for a long time as they have not harmed society and the environment. They have carried out all their business processes without polluting the environment. They have always tried to minimise the negative impacts on society and the environment caused by business operations. Sustainable businesses and green businesses strive to address the triple bottom lines called people, planet and profit. Generally, sustainability in business addresses two main categories (Spiliakos, 2018).

- The effect the business has on the environment
- The impact the business has on society

According to Lord Buddha's advice, Buddhist female entrepreneurs have incorporated their business decisions of not causing any harmful effect on the categories mentioned above and ensure sustainability in business. Therefore, they have followed the green practices in their business, like reducing or prohibiting polythene and plastic consumption and maintaining an eco-friendly

business. These findings are similar to Worden's framework. He proposed a normative analysis of the ethical dilemmas inherent in applying religious content to secular environments and then considered the strategic implications of this application for organisational performance and sustainable competitive advantage (Worden, 2005).

### ***Profit-sharing decisions***

Profit-sharing is another type of decision in business. Buddhist female entrepreneurs allocate their profits for religious tasks and the betterment of society as Buddhist teachings and spirituality shape them. They do not forget to invoke merits when they earn profits from the businesses. The following responses show us very clearly how they allocate or share their profits for social welfare.

*"I provide fruits or juices when my villagers or neighbours need them for almsgivings, and most of the time I provide all of them only at cost"* (Participant # 1)

*"We visit children's homes on Children's Day and offer alms to disabled children"* (Participant # 3)

*"We can't go to the temple very often; if a beggar comes here, I never send him away without giving anything. If a monk comes here, the same thing happens. We conducted a dan sala for five years with the profits earned from the business"* (Participant # 7)

The profits from the businesses are used for religious tasks, charity purposes and the betterment of people faced with more significant social and economic difficulties. To make this kind of business decisions, especially their attitudes, are influenced by Buddhist teachings and spirituality. However, related to profit sharing decision, these findings contradict the literature as some researchers have termed "love of money" to prevail religious precepts as a motivating factor, even for believers (Sabah, 2016; Rarick, 2007).

### ***Marketing decisions***

Marketing is an essential function in any business. Marketing mix mainly comprises of 4P's called price, place, product, and promotion. Here Buddhist

female entrepreneurs primarily emphasise how they decide on their pricing by incorporating Buddhist teachings and spirituality.

*"I look at the current situation and compare it with the other salons and try to offer a better quality of service for a lower price than my competitors"* (Participant # 2)

*"I set affordable prices to my customers anyway, and I do not make decisions based on money. Always I want to offer something more than the money. It was something I gained from Buddhism"* (Participant # 2)

*"We fix the price of food through costing but not unfair to consumers. Many people say that our prices are very reasonable"* (Participant # 4)

They earn money from the businesses by establishing fair prices for their products. They never allocate higher prices because they consider the customers' perspectives without paying attention to profit-maximising and self-interests. Especially they set reasonable prices which customers can afford. They never set prices beyond the reach of their customers. Similar evidence was found in a study done by Rogers and Park (2014) as they found that a reduced acceptance of problematic ethical behaviour was connected with a higher degree of religious salience for respondents, that is, for those respondents who agreed that religion was significant in the making of marketing decisions.

### ***Finance-related decisions***

Finance is another critical business function, and without making better financial decisions, it isn't easy to progress in the business world. Every entrepreneur or business person must carefully handle it, or else they may have to face bankruptcy and may even end up with liquidation. In this regard, Buddhist teachings (the five precepts) and spirituality are incorporated by Buddhist female entrepreneurs to make more precise financial decisions.

*"I'm not in debt, and I don't obtain too much debt"* (Participant # 2)

*"The Mahara Divisional Secretariat provides us with loan schemes, and I pay them systematically. They check to see if my business is doing well before lending"* (Participant # 6)

*"I took loans from the Regional Development Bank to develop my business. I'm paying loan instalments systematically. That is where trust comes in"* (Participant # 7)

According to the above responses, it is evident that they pay their loan instalment to the respective lenders without defaulting, especially to banks and other government institutions. They have been granted the privilege to obtain such loans since they fulfil the relevant criteria. Therefore, by making such decisions to pay loan instalments on time, they have gained the trust of the respective loan providing parties. Here they have adopted the second and fourth precepts from among the five precepts. They have qualified to manage their loans without any defaults.

Furthermore, their customers are very loyal to them, so they set off loans they have obtained. They have obtained loans for their business development based on the requests of their loyal customers. Hence, they are more sensitive to customer requests as well. The five precepts and Buddhist spirituality have also served them remarkably to make better financial decisions without losing or heading towards bankruptcy. Moore and Buttner (1997) also concluded that the beliefs of the participants shaped their entrepreneurial activities since their "search for profits had to be in harmony with the natural order rather than being motivated by self-interest alone."

### ***Decisions related to problem-solving***

When running a business, all entrepreneurs face some troublesome situations. Buddhist teachings and spirituality render great assistance to Buddhist female entrepreneurs to manage and resolve such cases far more quickly. The following responses indicate such grants have enabled them to successfully handle the problems they had faced in their business operations.

*"I learned the eight worldly concerns from Buddhism. According to that, I know how to deal with any problem. By thinking that way, we can decrease our stress and realise the reality of the particular problem"* (Participant # 4)

*"It is something great that I have received from Buddhism to endure any problems in my business"* (Participant # 4)

*"On rainy days, we cannot meet our sales targets, but our sales are much better on sunny days. So, at the same time, we tolerate these two consequences by*

*thinking about the world's reality. Buddhism reminds us that gain and loss are the opposite sides of the same coin"* (Participant # 4)

In such instances, the eight worldly concerns provide them with more patience to face unfavourable business conditions. However, during such cases, they have also experienced a drop during certain seasons. But Buddhist female entrepreneurs face such situations with a positive mind. The eight worldly concerns in Buddhism are gain vs loss, fame vs insignificance, praise vs blame, happiness vs suffering. According to those things, they often balance and resolve their business problems successfully by reflecting on these philosophies. Their responses reveal how important Buddhism and spirituality are to make the best decisions to overcome their business problems better. According to them, their personal qualities matter a lot when dealing with difficulties and these qualities are shaped by adopting Buddhist teachings since their childhood. They know how to manage such bad experiences without any conflicts by reducing their stress and anxiety.

#### ***Decisions related to business liquidation***

Liquidation in finance and economics is the process of bringing a business to an end and distributing its assets to the claimants. The researcher wants to stress what happens when a business run by Buddhist female entrepreneurs must be closed down permanently. Hence, the decisions they make regarding at what stage of the business cycle the business should be liquidated and the adoption of the five precepts and the following spirituality to make these business decisions are highlighted by the researcher of this study through the following quoted texts:

*"I do not embrace this business"* (Participant # 2)

*"I will hand over my business to the children if they wish to continue this business, and I'm pleased about that because my children love this business"* (Participant # 4)

Lord Buddha's teachings are based on how to free one's self from sufferings. Therefore, a strong bond with anything material is pointless because everything perishes and changes with time and nothing is permanent in this world. Buddhist female entrepreneurs have also realised this truth. They never want to run their businesses till the end of their lives but want to hand over the businesses to the succeeding generations. They are usually prepared to give up

their businesses at the correct time without any hesitation. They have already decided to hand over their businesses to their children if they wish to continue. On the other hand, they also never force their children to take over the businesses after them. According to them, embracing anything too strongly is pointless, and they should refrain or free themselves from such intentions. They have been taught such concepts or ideas due to their familiarity with Buddhism. As a whole, we can identify the kind of religious behaviours Buddhist female entrepreneurs follow and how Buddhist teachings and spirituality influence them to make such business decisions. Accordingly, individuals practicing spiritual leadership at a personal level will experience greater psychological well-being, life satisfaction and physical health: they will also develop a sense of meaningful and purposeful life and an ability to follow their inner convictions that culminate in a state of self-realisation, in alignment with the cultivation of good-quality interpersonal relations (Fry 2003).

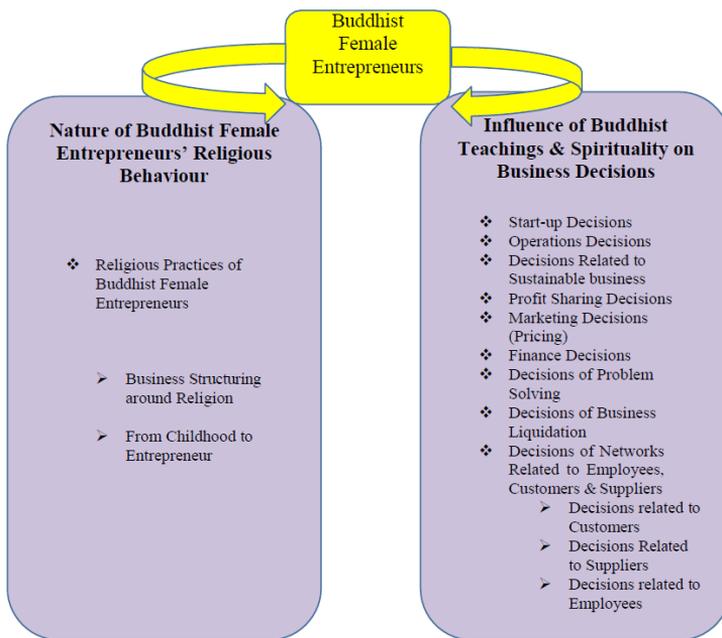
## **Conclusion**

This research explores how female entrepreneurs' business decision-making is shaped by Buddhist teachings (the five precepts) and spirituality. The influence of religion on work has not been fully explored in the Sri Lankan context, particularly the relationship between religion and entrepreneurship as a specific type of work. Therefore, this study examines the link between female entrepreneurial behaviour towards their decision-making and religion. The study finds that religion, for female entrepreneurs, is highly individualised, and religion shapes entrepreneurial activities.

These research findings contribute towards enriching female entrepreneurship literature. These findings provide a new aspect to define female entrepreneurs by highlighting their religion and spirituality. Spiritual entrepreneurship literature is also enhanced through these research findings as the current study is focused on Buddhism as a religion. In the spiritual entrepreneurship literature, Buddhist spirituality opens a new window to more explorations as well.

Moreover, the model was developed by the researcher based on the research findings of the current study. This model exhibits the nature of the religious behaviour of Buddhist female entrepreneurs and how the Buddhist teachings (the five precepts) and spirituality influence their business decision-making. This business model comprises ten themes and five sub-themes. The nature of religious behaviour can be classified under two conditions: religious practices in

Buddhist female entrepreneurs' personal lives and business lives. The influence of the five precepts and Buddhist spirituality on various business decisions is quite evident. They are decisions related to start-up, networks (employees, customers and suppliers), operations, sustainability, finance, marketing (pricing), problem-solving, profit-sharing and liquidation. The objective is not to establish a positivist proof of the framework; instead, the model aims to demonstrate its acceptability and how it helps readers to understand why religion and spirituality are influencing female entrepreneurs' decisions. This explanation, along with the analyses in Figure 4 and the literature review, provide a basis for the development of the model (Figure 4)



**Figure 3: Proposed Model for Buddhist Teachings and Spirituality in Female Entrepreneurs' Business Decisions**

**Source:** Developed by the researcher based on research findings

It is proposed that there are at least two practical applications for the model. One is educational; the other is for business practitioners. Educationally, there is a need for a model of Buddhist teaching, spirituality and entrepreneurship, which researchers can use as a basis. Further, the model will be used by policymakers of countries to develop an ethical framework for entrepreneurs and business persons as a better drive to society towards sustainability and transparency while improving the businesses. This ethical framework will help

reduce fraud and corruption in the business world and ultimately create a better community. These findings lead all business persons to conduct more sustainable businesses by considering the profit, people, and the planet. This research study provides an excellent motivation to engage in more ethical businesses by making the right decisions. This article can be considered as a guide to all entrepreneurs and business persons not only to be a mere entrepreneur but to be a spiritual entrepreneur as well.

### **Declaration of Conflicting Interests**

The authors declared no potential conflicts of interest with respect to the research, authorship, and publication of this article.

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## **Conceptualizing the relationship between Spiritual and Entrepreneurial Orientation in developing sustainable enterprises**

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### **Abstract**

*Entrepreneurship is considered a critical element that promotes the development of an economy and the society of a country. At the organizational level, the Entrepreneurial Orientation (EO) of decision-makers is recognized as a key driver in the entrepreneurship literature that propels firms to act 'autonomously', 'innovate', 'take risks', and be 'proactive' relative to marketplace opportunities. However, the current EO literature is evolving and has not explored its impact on developing sustainable operations. This paper intends to bridge this gap by introducing a concept of Spiritual Orientation (SO) playing the role of a mediator to explain the association between EO and sustainable operations. We argue that spirituality fortifies entrepreneurs' commitment to developing sustainable business entities, by empowering firms to be adaptable and creating a pro-social business model with a sense of interconnection with the community and natural ecosystem. Thus, it is important to understand the spiritual development of entrepreneurs, because it leads entrepreneurs to exhibit fairness, kindness, and improved awareness of other people's needs and thereby be sensitive to the alterations in the natural*

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*ecosystem. This paper argues that Spiritual Orientation leads entrepreneurs to exercise greater 'autonomy' as a result of seeing the interconnectedness of their actions. A spiritually oriented entrepreneur would place emphasis on the ethics, principles, virtues, values, and be sensitive to emotions, which will lead to taking proactive actions. As such, spirituality elucidates how business visionaries continue despite challenging situations by expanding their ideas of future-oriented sense making. This paper theorizes how a spiritually driven EO will lead to sustainable business ventures that focus on people, profit, and the planet. We assert that entrepreneurs must develop the spiritual maturity to create the right balance of EO dimensions, thus leading to creating sustainable organizations.*

**Keywords:**

*Entrepreneurship, Entrepreneurial Orientation, Spirituality, Spiritual Orientation, Sustainability, Triple Bottom line*

**Introduction**

A considerable body of Entrepreneurial Orientation (EO) literature has revealed what it entails to be entrepreneurial at the organizational level and conceptualized as the manifestation of entrepreneurship as an organizational attribute (Covin & Wales, 2019). The burgeoning scholarly interest in this field suggests that entrepreneurial organizations outperform their more conservatively controlled peers in general (Anderson, Kreiser, Kuratko, Hornsby, & Eshima, 2015; Rauch, Wiklund, Lumpkin, & Frese, 2009). As such, the indication solidly implies that EO continues to be a vibrant research topic in explaining firm-level performance (Covin & Wales, 2019). However, to date, the EO research has narrowly concentrated on the ability of the EO-performance connection (Rauch et al., 2009). For example, EO literature primarily focused on applying dependent variables that reflect the economic performance of a firm such as, firm growth, profitability, innovativeness, and marketing orientation, rather than using a wholistic performance measure that includes social and environmental performance (Wales, Gupta, & Mousa, 2011). There is hardly any research in the EO literature that explores the effect of EO on outcomes such as sustainability (Mullens, 2018). The antecedents of investments in sustainability with a link to EO remain poorly developed and understood (Dana, 2009; Hahn, Pinkse, Preuss, & Figge, 2015).

Furthermore, when it comes to moderation and mediator variables of EO, the focus has been on the networks, environmental dynamism, CEO tenure, knowledge-based resources, organizational learning, strategy, and structural organicity (Wales et al., 2011). Although there is an increasing interest among entrepreneurship scholars concerning the role of spirituality in entrepreneurial cognition (Dana, 2009; Ganzin, Islam, & Suddaby, 2020; Mauksch, 2017), the EO literature has not given any attention to this important area with its moderator or a mediator effects on the firm performance.

The purpose of the paper is not to question the ontological assumptions of the EO construct, rather develop a robust conceptual framework to explore the EO-performance to understand the full effect of the EO contract and offer an explanation as to how spirituality could enhance this EO-performance relationship. Furthermore, we assert that the spiritual maturity of an entrepreneurial team acts as an antecedent variable that effects EO dimensions. Its impact on the EO seems to decide the long-term sustainability of the firm and its capacity to adjust to challenging situations.

This paper is divided into three sections: literature review, discussion, and conclusion. The literature section will cover significant research in the fields of EO and spirituality, while the discussion section will focus on developing an integrative framework to illustrate the EO spiritual orientation-sustainability-performance relationship. The conclusion section provides a summary of the paper and suggests future research directions.

## **Literature Review**

Under this section, we discuss the relevant literature related to three different but connected domains: entrepreneurship and EO, spirituality, and sustainability. The relationship between entrepreneurship and EO is well established in the entrepreneurship and strategy literature. However, the proliferation of spirituality and sustainability into EO is still in its infancy and remains virtually unexplored in the empirical research.

### ***Entrepreneurship***

Entrepreneurship is an indispensable component of the economy and entrepreneurs are generally considered to be the ones who are encouraging the economic expansion by introducing innovations, novel concepts, and new ideas

towards the production of improved and competitive products and services by giving millions of work openings (Zahra, 1999). As such, an entrepreneur creates wealth for individuals and societies (Raco & Tanod, 2014). Schumpeter's (1934) induction of the entrepreneur as an individual who establishes brand new combinations and waves of innovative destruction along with reconstruction, paved the path in creating a separate domain for entrepreneurship research (Meyer, Heidi, & Meeks, 2002). Kirzner (1973) incorporated a precise sense for 'entrepreneurship', recognizing it as the 'alertness' towards new opportunities, and also asserted that entrepreneurship is a series of innovative acts following on from the identification of such an opportunity (Koppl & Minniti, 2003). Entrepreneurship is a broad concept. Scholars have established several definitions of entrepreneurship during the last 200 years of entrepreneurship studies, without sticking to any one of them (Hitt, Ireland, Camp, & Sexton, 2002; Morris, Kuratko, & Covin, 2008). The absence of a clear definition has hindered the creation of a new conceptual framework in the subject of entrepreneurship (Shane & Venkataraman, 2000). Morris created the following definition of the concept of entrepreneurship, which is used in this work (Morris, 1998, p. 16):

*“Entrepreneurship is the process through which individuals and teams create value by bringing together unique packages of resource inputs to exploit opportunities in the environment. It can occur in any organizational context and results in a variety of possible outcomes, including new ventures, products, services, processes, markets, and technologies”.*

This interpretation acknowledges the importance of the entrepreneur or entrepreneurial team, while still emphasizing the process view that capitalizes on opportunities. It also defines specific inputs and outputs that will lead to the production of value (Morris 1998). Entrepreneurial firms, according to Miller (1983), would be those who pursue innovation, proactively penetrate new markets, and embrace a certain amount of strategic and financial risk in search of new opportunities. Using Miller (1983) as a foundation, I proposed that organizations had two distinct strategic behavioural proclivities: conservative as well as entrepreneurial. Innovativeness, proactiveness, and risk-taking characterize the entrepreneurial end of the spectrum. As a result, scholars developed the concept of 'Entrepreneurial Orientation,' a firm-level strategic orientation regarding entrepreneurship (Lumpkin & Dess, 1996). EO is largely regarded as a foundational idea in the literature on firm-level entrepreneurship

(Wales et al., 2011). The essential act of entrepreneurship is a *new entry*. That is, new entry explains *what* entrepreneurship consists of, and entrepreneurial orientation describes *how* a new entry is undertaken (Lumpkin & Dess, 1996, p. 136).

### ***Entrepreneurial Orientation***

In the realm of entrepreneurship, EO as well as entrepreneurship are connected but distinct conceptualizations that have gotten a lot of empirical and conceptual attention in the past decade (Covin & Wales, 2012). A firm's EO refers to the entrepreneurial processes, to be specific how the business enterprise has undertaken the strategies, practices, and decision-making styles utilized towards new entry (Walter, Auer, & Ritter, 2006). As it's an organizational level construct (Wales et al., 2011) and a solid indicator of the firm's execution, much remains to explore in relation to the conditions and factors that nurture it (Pittino, Visintin, & Lauto, 2017).

The EO phenomenon has indeed been studied theoretically and empirically for even more than 30 years, and the notion is continually evolving (Covin & Wales, 2019). Risk-taking, innovativeness, as well as proactiveness have all been used to operationalize EO as a unidimensional concept to explain how 'being entrepreneurial' manifests in businesses. These components moderate the relationship between outside variables such as social and cultural, economic, political, legitimate variables (Lee & Peterson, 2000).

Rauch et al. (2009) contend that the fundamental dimensions of EO are regularly exceedingly intercorrelated with one another, which directs to a combination of these measurements into a single measure. Within the EO literature, there is no clear agreement as to how the EO factors are developed further. On the one hand, Covin and Slevin (1989) contend the EO develops as a unidimensional concept, which focuses on what is *common* among entrepreneurial organizations, whereas, on the other hand, Lumpkin and Dess (1996; 2001) are of the view that conceptualization focused on how entrepreneurial organizations can be *distinct*.

Concurring to the initial definition suggested by Miller (1983) and afterward created by Covin and Slevin (1989), EO shows through the concurrent nearness of three measurements, two of which are behavioral innovativeness and proactiveness and one is attitudinal risk-taking. Particularly, as per Covin and

Slevin (1989), innovativeness is the tendency to bolster imaginative forms that will result in modern items, administrations, or innovations; proactiveness reflects demeanors toward the ceaseless interest of new openings, and chance-taking alludes to the eagerness to form ventures and asset commitments with uncertain returns.

Further expanding the three dimensions of EO, Lumpkin and Dess (1996), proposed two extra components, i.e., competitive aggressiveness and autonomy. Thus, the five EO dimensions construct are: autonomy, risk-taking, innovativeness, competitive aggressiveness, and proactiveness.

### *The dimensions of EO*

*Innovativeness* highlights an organization's propensity to lock in and back modern thoughts, experimentation, oddity, and inventive forms that will generate unused items, administrations, or mechanical forms, and it moreover speaks to a fundamental eagerness to withdraw from existing innovations and wander past the current state-of-the-art solutions (Lumpkin & Dess, 1996). Innovativeness according to Covin and Slevin (1989) supports innovative ideas, novelty, experimentation, and the inventive process that seeks new solutions.

*Autonomy* is the ability and willingness to be self-directed in the pursuit of opportunities. It refers to an individual's or a team's independent activity in bringing forth an idea or a vision and pursuing it through to completion. Entrepreneurship has prospered since autonomous disapproved individuals have chosen to take off secure positions, in arranging to seek after novel thoughts or wander into modern markets. It is essential to facilitate the freedom to practice creativity along with champion promising ideas within an organization for entrepreneurship to result in (Covin & Slevin, 1989).

*Competitive Aggressiveness* refers to an organization's propensity to directly and intensely challenge its competitors to accomplish market entry or improve market position, to outperform the industry rivals (Lumpkin & Dess, 1996) responsively, with head-to-head confrontation moreover reflecting an eagerness to be unusual instead of depending on conventional strategies of competing. Cases of this and other shapes of competitive aggressiveness accessible to new participants incorporate embracing novel strategies to challenge industry pioneers (Cooper, Willard, & Woo, 1986) which captures the unmistakable thought of "beating competitors to the punch" (Miller, 1983).

*Risk-taking* is defined as committing considerable resources towards opportunities that have a reasonable risk of failing (Covin & Slevin, 1989). Entrepreneurial enterprises, according to Lumpkin and Dess (1996), are frequently characterized by risk-taking behaviors, such as bringing about overwhelming obligations or making noteworthy asset commitments to get higher returns. Entrepreneurs from cultures that support risk-taking will receive the most out of decisions facing risks (Lumpkin & Dess, 1996).

*Proactiveness* is significant to an EO since it is concerned with the execution to organize the enterprise. Proactive people do what is fundamental to bring their concepts to fulfillment and pick up an advantage by being the primary to capitalize on new businesses (Lumpkin & Dess, 1996). Societies that emphasize entrepreneurial activity by empowering business people to seek after and expect openings and to take part in new or developing markets are characterized as proactive.

Table 1 outlines the definitions related to each dimension of EO. Covin, Green, and Slevin (2006, p. 57) present the subsequent definition of EO as “*a strategic construct whose conceptual domain includes certain firm-level outcomes and management-related preferences, beliefs, and behaviours as expressed among a firm’s top-level managers.*” This definition indicates both behavioral and attitudinal components within a single latent construct.

**Table 1: The Dimensions of Entrepreneurial Orientation and Definitions**

<b>Dimension</b>	<b>Definition</b>
<b>Innovativeness</b>	Predisposition to innovation and creativity through the introduction of services and products, and also technological leadership through R&D in new procedures
<b>Autonomy</b>	Independent action is commenced by entrepreneurial leaders or teams directed at creating a new venture and seeing it to operate
<b>Competitive aggressiveness</b>	The intensity of a firm’s effort to outperform its competitors
<b>Risk-Taking</b>	Taking bold action by venturing into the unknown, borrowing heavily, and/or committing significant resources to ventures in uncertain environments
<b>Proactiveness</b>	A forward-thinking, opportunity-seeking mindset defined by developing new products and services ahead of the competition and anticipating future market demand

Source: Rauch, et al., (2009, p. 763)

As such, it highlights that continual engagement in a certain behaviour reinforces the fundamental attitude (Anderson et al., 2015). This observation is important for two reasons, first, the attitudinal aspect of EO has not been given a sufficient level of attention in the EO literature as an antecedent variable. Second, it brings back the entrepreneurial cognition into EO dialogue, which can strengthen the relationship between attitudes and behaviour. Lumpkin and Dess (1996) suggest that a firm's strategic orientation was grounded in the values of its entrepreneur.

As per Neisser (1967), cognitions are processes by which sensory input is changed, decreased, elaborated, stored, improved, and utilized. These cognitive processes are deeply embedded in complex social contexts and influenced by one's values and deep beliefs. According to Krueger (2007), perceptions are guided by deep belief systems (deeply held strong assumptions), which in turn shape and influence one's knowledge content. Krueger (2007, p. 124) put this in the context of entrepreneurship and states:

- Behind the entrepreneurial actions are the entrepreneurial intentions
- Behind the entrepreneurial intentions are the known entrepreneurial attitudes
- Behind the entrepreneurial attitudes are the deep cognitive structures
- Behind the deep cognitive structures are the deep beliefs

Deep beliefs are driven by a sense of purpose. Spirituality offers a sense of purpose, a meaningful life, interconnection, and civic consciousness (Qureshi, Mukhtar, & Saeed, 2017). It has been found that Spirituality plays a role in entrepreneurs' commitment to managing their entrepreneurial functions by progressing their efficiency, empowering adaptability, and innovativeness (Agbim, Oriarewo, & Ijie, 2013). Although there has been an escalation in the research on the effect of spirituality on entrepreneurial behaviour (Qureshi et al., 2017), there are no clear theoretical or empirical literature themes emerging in the context of EO literature and how it affects EO and EO-performance interlink.

### ***Spirituality***

Spirituality is too complex to be defined in a single way. Spirituality is a multifaceted and cross-cultural notion. As such, it's a complex term with multifarious explanation which extends from inner wholeness connection to

others (Gibbons, 2000). However, most definitions share several common components, such as: rejoining to the inward self; a look for all-inclusive values that boosts the person over self-centered strivings; profound compassion with all living creatures; and, lastly, a desire to some way or another keep in touch with the source of life. In other words, spirituality is the exploration of the inner character, connectedness, and transcendence (Bouckaert & Zsolnai, 2012). Schmidt-Wilk, Heaton and Steingard (2000) identified three streams of definitions in the literature. First are the ones who describe spirituality in the light of a personal inner experience, such as the basic feeling of being connected to one's own self, others, and also the whole universe. The notion of connectivity may be summed up in a single word (Mitroff & Denton, 1999, p. 83). The literature on the second stream of definitions of spirituality focused on principles, virtues, ethics, values, emotions, wisdom, and intuition. The degree to which these qualities are expressed in the behaviors and policies of organizations expresses the degree to which there is spirituality in management (Dehler & Welsh, 1994). The definitions of the third-stream focused on the relationship between a personal inner experience and its manifestations in outer behaviors, principles, and practices (Stephen, Porth, & McCall, 1999). For example, Neal, Lichtenstein, and Banner, (1999) discuss “spiritual integration,” as a process of learning to use one’s core spiritual principles to key aspects of one’s life and work.

Even though the notion of spirituality has been conceptualized in association with religions, it is also conceptualized independently of religious affiliations (Melé & Fontrodona, 2017). Religion is generally referred to as an organized belief system (GÖÇER & ÖZĞAN, 2018), and religion is a form that spirituality takes into practice (Guillory, 2000). Spirituality is the state of being one with the spirit or developing ourselves into who we are. Which is also the only purpose of our lives as human beings (Ulluwishewa, 2016).

Singh and Premarajan, (2007) conceptualize Spiritual Orientation (SO) as a self-perceived construct that has three key components: *spiritual attitude*, *spiritual knowledge*, and *spiritual skills*, that influence one's ability to derive meaning and purpose, from work and life. *Spiritual attitude* is about keeping a positive view, thinking beyond the apparent, and having a feeling of peace within. *Spiritual knowledge* is being close to self, understanding the needs of others, and knowing that everything is affected by everything else. *Spiritual skill* is the

ability to practice spirituality well, the ability to live in the moment, and the ability to take responsibility (Singh & Premarajan, 2007, pp. 10-11).

### *Spirituality and entrepreneurship*

Spirituality is the acknowledgment of something greater than mind and life (Aurobindo, 1997). The intersection of spirituality and entrepreneurship holds a key to understanding how an entrepreneur's mindset works with the values and beliefs and how they impact business activities. More importantly how they impact the entrepreneurial process, such as the identification of opportunities, relationship with stakeholders, organizational culture, creation of new ventures, and growth of the firms (Balog, Baker, & Walker, 2014; Ibrahim, Rue, McDougall, & Greene, 1991). Spirituality, unlike religion, is considered as both individual and universal, created outside of traditional, organized religion, and as open-minded (King-Kauanui, Thomas, & Waters, 2005; Mitroff, 2003). Spiritually oriented entrepreneurs are often capable of seeing the bigger picture and integrate social concerns with economic ones (King-Kauanui et al., 2005). They state that they have a 'calling' to make a difference through service to others and, in doing so, derives meaning and purpose in their lives (Silk, 2007). Balog, Baker and Walker (2014), after reviewing nearly 30 empirical articles connected to religion and spirituality in entrepreneurship, reported the following key outcomes:

- Entrepreneurial motives and attitudes are influenced by religion and spirituality.
- Religion and spirituality appear to have an impact on entrepreneurs' ethical business behaviour by offering a solid frame of reference for decision-making that is bolstered by the qualities of honesty and integrity.
- Religious and spiritual values have a substantial impact on entrepreneurs' happiness, health, joy, productivity, and coping skills, as well as a considerable reduction in stress and anxiety.
- May have a role in the link between society, religion, and business by supporting and enhancing (or decreasing) the atmosphere for entrepreneurship.
- Research on the relationship between spiritual and religious values and organizational success must be prioritized in the future.

They did, however, draw attention to the lack of solid theoretical underpinnings in this field, as none of the studies they looked at were based on a theoretical framework that would allow for sound hypothesis construction. To gain a better

understanding of the relative significance of spiritual values in business, and entrepreneurial activities, they suggested using EO construct to legitimize the spirituality-entrepreneurship link and investigate how the values of an entrepreneur can impact the communities the business serves and relationships with other stakeholders.

The role of spirituality in the workplace is a relatively recent field of research that focuses on the impact of Spiritual Orientation (SO) (i.e. spirituality within an individual) on performance (Parente, Eltarabishy, Vesci, & Botti, 2018). Spirituality triggers an entrepreneur to launch a firm (Raco & Tanod, 2014), make entrepreneurial actions meaningful (Pavlovich & Corner, 2014), and make better decisions (Nolan, 2005). Spirituality strengthens the commitment of entrepreneurs to advance their businesses, to help them deal with stressful situations, to sharpen the vision of their businesses, to stride their efficiency, and to empower flexibility and imagination to motivate them in keeping their business values (Agbim et al., 2013). Spirituality may also help entrepreneurs find purpose in their work, increase their satisfaction, and increase their loyalty to their company.

Based on the literature related to spirituality given by various authors, Singh and Premarajan (2007) identified six dimensions that exhibit the spiritual orientation of an individual: 1) Service towards humankind (caring, hopeful, kind, compassionate, and empathetic towards others; walking in the neighbor's shoes); 2) Feeling of inner peace and calm (happy with the self, environment, work, and others; no complaint with life, feeling positive about life); 3) Being vision and value-led (It is reaching beyond, or having a sense that things could be better); 4) Inter-connectedness (everything is a part and expression of oneness, interconnected with everything else); 5) Respect for others (personal privacy, physical space, and belongingness, religion, gender, lifestyle)) 6) Self-awareness (knowing self, what I believe in, What will I fight for?). These dimensions could provide a deeper meaning as to how and why entrepreneurs and their organizations act towards achieving a higher purpose.

Drawing on these dimensions Table 2 depicts how SO orientation could act as an explanatory variable to understand how EO could be influenced towards achieving a spirituality-based organization that goes beyond successful business operations.

**Table 2: Linking EO Dimensions to Spiritual Orientation**

<b>Dimension</b>	<b>EO</b>	<b>SO</b>
<b>Innovativeness</b>	Predisposition to innovation and creativity through the launch of services and products, as well as superior technology through R&D in new processes	Being vision and value-led (it is reaching beyond or having a sense that things could be better), by seeing the bigger picture and integrate social concerns with economic ones.
<b>Autonomy</b>	Entrepreneurial leaders or teams take independent action in order to launch a new enterprise and see it through to completion	Self-awareness (knowing self, what I believe in, What will I fight for?) leads to higher autonomy and taking responsibility for one's actions.
<b>Competitive aggressiveness</b>	The intensity of a firm's effort to outperform rivals	Harness the value of inter-connectedness (everything is a part and expression of oneness, interconnected with everything else) to outperform others by building responsible business behavior that promotes the virtues of honesty and integrity.
<b>Risk-Taking</b>	Taking risks by traveling into the unknown, taking on considerable debt, and/or investing considerable resources to initiatives in risky circumstances	Taking meaningful actions while respecting others (personal privacy, physical space, and belongingness, religion, gender, lifestyle, and environment)
<b>Proactiveness</b>	A forward-thinking, opportunity-seeking mindset defined by developing new products and services ahead of	Service towards humankind (caring, hopeful, kind, compassionate, and empathetic towards others; walking in the neighbor's shoes) and feeling of inner peace and calm (happy with self, environment, work, and others; no complaint with life, feeling positive about life); provide impetus to forward-

<b>Dimension</b>	<b>EO</b>	<b>SO</b>
	the competition and anticipating future demand	thinking.

Source: Author compiled

Spirituality and Sustainability are more related than they seem, and they both engender success at both individual and organizational levels (Beehner, 2019). Spirit provides purpose to the mind that allows the body to act. These three components the body, mind and spirit are interconnected and essential for sustainability. One can sense nature and society through rational and logical analysis and scientific observations, yet a deeper sense can be gained physically and mentally (Ikerd, 2000). It is noticed that external changes that one brings about towards achieving sustainability are ineffective without one's inner change. When materialistic values such as money, material possessions, recognition, power, and social status are held at the center of focus unsustainable behaviors result (Ulluwishewa, 2018).

### ***Sustainability and performance***

As per the Brundtland Commission (1987), sustainability is defined as *development that meets the needs of the present without compromising the ability of future generations to meet their own needs*. Kraus, Niemand, Halberstadt, Shaw, & Syrjä (2017), posit, in contrast to firms that are exclusively oriented towards profitability, a socially responsible firm is one that, in addition to making a profit, strives to comply with applicable laws and behaves ethically and responsibly. Sustainability literature refers to three performance measures: economic, social, and environmental (Mullens, 2018) and hence the term 'triple-bottom-line' (TBL), suggesting that the people, profit, and planet are interrelated and interact with each other in different ways (Elkington, 1997). As such, business sustainability consists of creating both financial value for shareholders and non-financial value for other stakeholders (including business partners, employees, suppliers, customers, government, society at large, etc.) (Rezaee, 2016). Successful pursuit of proactive sustainable strategies that focus on the three performance measures requires both motivation and attitude to deploy organizational capabilities to achieve sustainable goals (Sharma & Sharma, 2011). Spiller (2000) suggests an "ethical scorecard" for performance measurement, arguing that corporations may attain a triple bottom line of environmental, social, and financial performance. Spiller (2000) listed

four Aristotelian qualities (honesty, fairness, caring, and courage) as principles that ethical investors look for in enterprises, as well as ten critical business practices for six different stakeholder groups. Spiller argues, based on international data, that corporations can perform well by doing good at no expense.

The entrepreneurship literature is slowly evolving from economically oriented, profit-making venture creation to being future-focused balancing efforts in making contributions to produce economic gains, social equity, cultural preservation, and as well as environmental quality (Majid & Koe, 2012). Dixon and Clifford (2007), found a strong link between the entrepreneurial flair of the CEO enabling the pursuit of environmental, social, and economic goals. Gu, Wang, Hua, and Liu (2021) found a close relationship between entrepreneurship and TBL of sustainable development. However still, there are only a few papers studying sustainable development from the perspective of entrepreneurship (Gu, Wang, Hua, & Liu, 2021).

## **Methodology**

### *Towards a conceptual model*

To date the link between spirituality orientation, entrepreneurial orientation, and sustainable performance has not been explored in the entrepreneurship literature. However, based on the existing research, we posit that these three constructs can be integrated to provide a robust conceptual framework to study the sustainable performance of entrepreneurial ventures.

Although the EO literature has a plethora of studies looking at the effect of EO on performance, there is no clear agreement as to how the EO factors could be developed further (Covin & Wales, 2019; Rauch et al., 2009). On the other hand, the link between TBL and EO is still in its infancy (Gu et al., 2021; Majid & Koe, 2012). Much is needed to understand how EO can effectively sustain the TBL in the long run. As such, we must focus on the underlying tendencies that lead to entrepreneurial behavior, such as, attitudes, beliefs, and values. These cognitive aspects have a strong link with spirituality (Schmidt-Wilk, Heaton, & Steingard, 2000).

Spirituality ignites from inside, connected with one's work, others, and the universe. Spirituality results in intuition and creativity, honesty and trust, personal fulfillment along with a deeper commitment, and enhanced business performance moving away from personal benefits at the egocentric stage (Raco,

Ohoitimur, & Sobon, 2019). As a result, it can assist individuals in developing a more compelling and purposeful organizational vision, which can lead to more innovation. Spiritual principles can help to improve teamwork and employee loyalty to the company that promotes innovation. Spiritual orientation helps entrepreneurial organizations to see the bigger picture and the holistic effects of their actions. This leads to innovative actions and creating new products and services that enhance not only the profitability of the company but also contributing to positive social and environmental outcomes.

Entrepreneurs make a difference or create change for the well-being of society where spirituality fosters their intention for start-up ventures surpassing all mental frameworks (Judge & Douglas, 2013). Entrepreneurs imagine new ways to create value and solve problems since they are driven by the importance of values and the purpose of entrepreneurs' activities. Meaning, purpose and values are also the key components of spirituality (Raco et al., 2019). A spiritually oriented entrepreneur will not seek for their benefit, but the well-being of others by thinking outside the box which will grow better and enjoy economic benefits (Raco et al., 2019). With the focus only on profit-making, modern businesses violate the integrity and diversity of natural ecosystems and the culture of local communities. To meet real human needs (*social sustainability*) and preserve nature (*environmental sustainability*) the economic actors must be driven by intrinsic motivation.

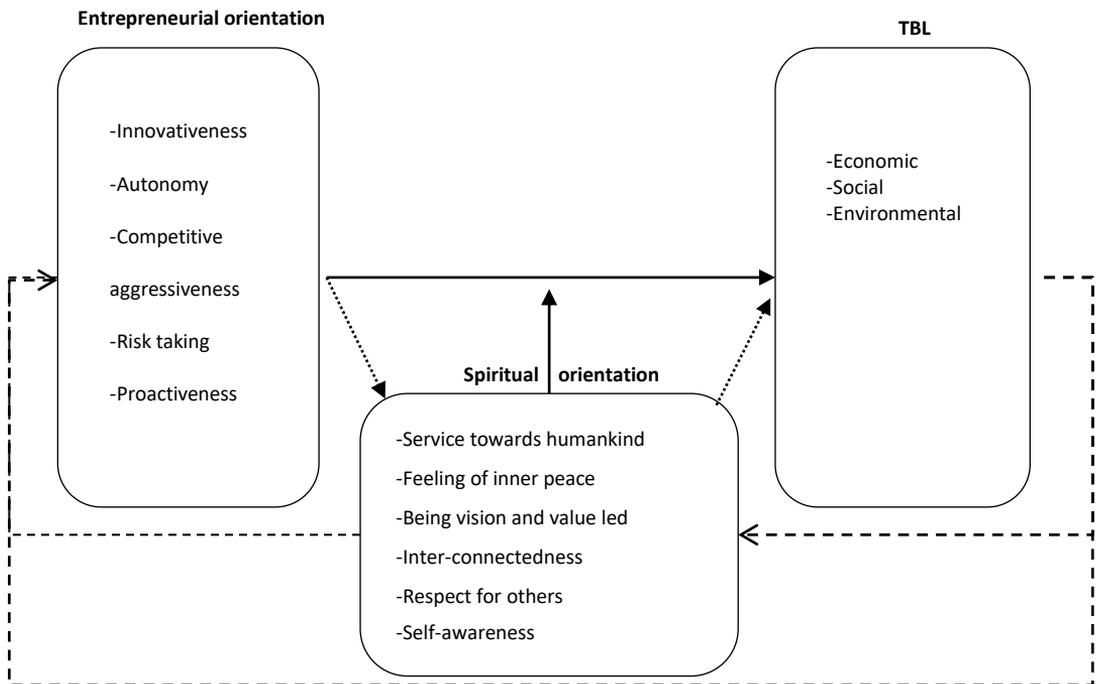
Entrepreneurs who have a spiritual underpinning will encourage pro-social businesses (Pavlovich & Corner, 2014). It is the business approach that puts the community and people's interests before profit (Driver, 2012); create a sense of community (Agbim et al., 2013); understand interconnectedness (Karakas, 2010), and strategically apply spirituality in offering quality services for others (Raco, et al., 2019). A spiritual orientation provides a belief system (Pratt, 2000) where they can justify their conduct, a distinct identity or role within that system to encourage their actions, and a roadmap that provides a path to success.

Entrepreneurs cope with risk, doubt, and uncertainty by expanding past successes into the future (Cornelissen & Clarke, 2010). Mitroff and Denton (1999) saw that spirituality reduces fear among individuals which will empower risk-taking. Entrepreneurship scholars state that spirituality facilitates a robust frame of reference for making decisions and influences responsible business conduct (Fernando & Jackson, 2006) with a clear mind, creativity, and wisdom

that will enable the economic system as a whole to indefinitely sustain its production.

Based on the existing literature related to the spirituality, we propose a conceptual model to capture the key roles played by spiritual orientation of the decision-makers. Primarily drawing on the work of Singh and Premarajan (2007), we posit that SO has many functions in the EO-TBL relationship. First, SO could function as a mediator variable in the EO-TBL relationship providing the fundamental basis for developing a sustainable business, grounded on a purpose-driven vision of serving humankind, harnessing the value of interconnectedness, and developing an organizational culture that embraces the sustainable approach to organizational performance.

Second, SO could act as an antecedent to EO dimensions, providing the value-based grounding that is needed to effectively exhibit entrepreneurial behavior with a focus on sustainability. Third, SO could act as a mediator variable between the EO-TBL link. For example, when the organization has a strong value-based culture where spiritual values are embedded in the organizational system, entrepreneurial behavior will be guided by these values when making strategic moves, which in turn affect the three performance dimensions (economic, social, and environmental). We argue that EO alone cannot sustain the TBL. It needs a stronger foundation that goes beyond the materialistic view of organizational outcomes. Figure 1 depicts the link between the three constructs.



**Figure 4: Conceptual framework**

Source: Author compiled based on the literature review

According to Drucker (1985), spirituality is required for organizational, social, and economic development with ethical and improved teamwork. The meaning of work is to lead a common goal while addressing man’s human goals such as happiness (Bouckaert & Zsolnai, 2012). Sustainability is the protection, development, and maintenance of society, nature, economy, and individuals (Wiklund & Shepherd, 2005). Entrepreneurs with strong spirituality-oriented leadership may operate their firms not only to make money – for themselves and others – but also to effectively benefit the community (Raco, et al., 2019).

Our conceptual paper offers a theoretically grounded model to operationalize a new link in the EO literature and we have opened several investigative possibilities to link the EO-SO-TBL relationship. Future research could empirically test these relationships in different contexts and see the longitudinal effects of EO-SO-TBL outcomes. Entrepreneurs must have the capability to develop the right balance between EO dimensions and the long-term sustainability of the firm. As a result, spirituality is required as a foundation for

both corporate ethics and sustainability management in order to achieve the element of "people, profit, and planet."

## **Conclusions**

Spiritual Orientation and EO go hand in hand in creating sustainable organizations. We discussed the literature related to SO and EO, along with the explanation of how they contribute to sustainable business efforts. Spiritually grounded entrepreneurs seek with their mutually supportive outward acts, for meaning, purpose, and happiness in the external world of business and the internal world of consciousness and conscience. Their internal reflections making sustainability and spirituality are also mutually supportive. Finally, we have proposed a conceptual model to operationalize these relationships and highlighted the significance of empirically testing the EO-SO-TBL connection in a different context. We acknowledge that the theoretical underpinnings of entrepreneurship, spirituality and sustainability are constantly evolving. Our conceptual framework only offers the first cut to lay a robust foundation for future scholars to understand the theoretical boundaries of these domains and empirically test these constructs in different contexts. Our framework shows an integrative outcome of entrepreneurial actions and spiritual orientations; this could support the practitioners to incorporate spirituality into their organizations with a clear focus of developing sustainable organizations.

## **Declaration of Conflicting Interests**

The authors declared no potential conflicts of interest with respect to the research, authorship, and publication of this article.

## **Authors' Contributions**

EW participated in drafting the relevant literature and the findings towards developing the conceptual model. IP participated in developing the conceptual model and helped to draft the manuscript. RU helped in drafting the manuscript and also in developing the conceptual model.

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## **Impact of Inflation Targeting Policy Framework of Countries between the period of 2009-2019**

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### **Abstract**

*Today, many countries in the world tend to choose Inflation Targeting Monetary Policy Framework, in which context it has become a matter of debate whether inflation or economic growth is driven by monetary expansions. The common acceptance is that inflation is created by the continuous rise in the money supply which is strongly proved through the economic theories forwarded by Karl Marx, Irvin Fisher and Friedman. The main aim of the study is to examine the relationship between money supply and economic growth under a broad phenomenon by utilizing the countries with inflation targeting policies in action. The time-series data have been collected from different countries that exercise inflation targeting from 2009 to 2019 and the sample included 39 countries from all over the globe, both from developed and developing categories. The utilized Autoregressive Distribution Lag (ARDL) model forwarded the results suggesting that there is a significant negative relationship between the economic growth and money supply in the long run while no relationship has been observed in the short run.*

### **Keywords:**

*Economic growth, Inflation targeting, Money supply, ARDL model*

### **Introduction**

In the seminal paper of (Kausar et al., 2020), it is stated that each and every nation aims at attaining sustainable economic development and benefits through the high economic growth rate. The Real Gross Domestic Production (GDP) exhibits a good measure to the economic growth, where many countries have

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and are still attempting to streamline the growth of the Real GDP in their specific contexts as they believe it will uplift the country to a better economic condition. Real GDP is determined by dynamic variables including the money supply but not only limiting to that. However, it can be accepted that every economy is influenced through the pivotal role of the money supply (Kausar et al., 2020).

The monetary policies are implemented to affect the national output through influencing the interest rate, the direction of credits, supply of money, etc. When dating back in history, monetary policy, and effective instruments to regulate the money market came into the plot in 1987. However, there are divergent views about the capability of the money supply in influencing the gross national income. Mohammed Ershad and Mahfuzul (2017) and Ogunmuyiwa and Ekone (2010) have observed a positive linkage between the two variables, money supply and economic growth rate of the economies while earlier studies of Moosa (1982), Odedokun (1996), Levine (1997) and Ghosh and Philips (1998) have argued emphasizing that there is a significant negative nexus between money supply and growth rates. According to Keynesian views, money supply has had a positive but a very insignificant impact on the growth rate of the economy Twinoburyo and Odhiambo (2017). In seminal papers, Kamaan (2014), Chipote and Palesa (2014), Chipote and Palesa (2014) and Inam and Ime (2017) have investigated that the influence from the money supply expansion on the growth of economy is very insignificant. Among previous works that advocated that there is a significant strong influence from monetary expansion in boosting the economic growth, Nouri and Samimi (2011) and Onyeiwu (2012) are important. Also the earlier studies including Qayyum (2006) and Zapodeanu and Cociuba (2010) etc. have examined the nexus that exists between money supply and growth rates but no evidence can be drawn from the academic history which considered the nexus that exists between these two variables in the countries where the Inflation targeting framework is in action.

The attention in analyzing the money supply-growth nexus has increased due to the divergent views on this relationship (Jawaid et al., 2011). Therefore, the dissimilar perspectives in relation to the linkage between money supply and growth levels have laid the foundation to do a further analysis of the short and long run relationship between the two factors to have a clear idea. On the other hand, Patrick Kanayo and Ifeoma (2015) has declared that money printing is conducted to reach the economic growth by many countries. However, printing money was always a debatable phenomenon whether it is effective in

stimulating the growth of the economies. Economists believed that a high volume of money released to the community has the possibility in generating inflation and hyper-inflationary situations. This obviously brings negative consequences making the low income earning households to suffer a lot (Wellington Garikai, 2015). With these dissimilar viewpoints on the money supply-growth nexus of the economies, the current study provides an extensive contribution to have a clarified analysis on this subject matter with a novel consideration of the Inflation targeting framework. The study is important in different facets. Firstly, the study has given a strong focus to the Inflation targeting policy framework that is adopted by different nations to achieve economic growth. The uniqueness of this study is that it broadly examines, both the short and long run nexus between money supply and economic growth, considering the majority of countries who are exercising Inflation targeting policies in their economies. The contribution of the study to the literature is very significant as it provides a very comprehensive analysis on both the short and long run relationship between the money supply and economic growth by occupying the PARDL model. The practical importance of the study is highlighted from its contribution to bring more realistic policy insights for the countries in order to stimulate the economic growth. Moreover, through the study, a great assistance is given to the policy makers of the countries to make decisions on employing the expansionary or contractionary monetary policies, as the study has contributed with a clear discussion about the short and long run impact over the growth rates. Also, the study assists the policy makers to employ expansionary or contractionary monetary policies with clear pictures about its short and long run impact over the growth of the economy.

## **Literature Review**

### ***Theoretical review***

The Inflation targeting concept was started a decade ago in New Zealand and Chile as a means of achieving a low and stable level of inflationary pressures (Bernanke & Mishkin, 1997). The Inflation targeting came into the plot due to the harmful effects of the inflation in the 1980s (Vredin, 2015). By the end of the 1980s the cross-country analyses and large surveys carried out showed the negative effects of high and variable inflation on the macroeconomic stability, economic growth, and income distribution (Guy et al., 1998). Hence, the controlling of inflation through setting a particular target and adjusting the monetary policy tools to reach that target is simply known as Inflation targeting. However, Inflation targeting acts as an important aspect when accelerating the

money supply to increase the output level of the economy. There are two prerequisites for adopting the Inflation targeting. They can be stated as the independence of the monetary policy and no commitment to a certain level of exchange rate. When a country is met with the above mentioned prerequisites, it can conduct the monetary policy under the Inflation targeting framework. There are seven countries that have succeeded in meeting the conditions specified above and they have been able to adopt the Inflation targeting framework. Their key aim via the Inflation targeting framework is achieving a lower inflation rate which is less than 10 percent. With that, they try to maintain a considerable flexibility in exchange rates and the independence of the Central Bank conditions. Hence, this is a novel concept to most of the emerging economies but there is a growing trend in the number of countries that adopt Inflation targeting policies (Hammond, 2011).

Since the past, the as of now developed theories around the money supply-growth nexus have basically been contended by distinctive parties and different opinions have been produced in connection to this relationship that exists between the money supply and economic growth (Hameed & Ume, 2011). Monetary policy can be identified as one of the significant policies that conduct a vital role in boosting up the economic growth of many countries. However, there has been a long debate since the past to figure out whether there is an actual impact from money supply adjustments towards the growth of the real Gross Domestic Product (GDP) of the countries.

There are a few theoretical approaches that have laid the foundation for analyzing the money supply-growth nexus including the Quantity Theory of Money (QTM), Cambridge Cash Balance Theory and Keynesian Theory (Chaitip et al., 2015). An obvious relationship between the money supply and output level exists as per the Quantity Theory of Money, and as per the exchange equation of  $(MV=PY)$ <sup>1</sup>. Fisher has assumed that the output is constant and believed that the economy is always in the full employment level where no effect can be observed from the increase or decrease of money supply on the output levels. As per the monetarist views, they believe that monetary policy affects prices, that means inflation, and the real GDP of the countries while affecting unemployment too (Chaitip et al., 2015). The pioneering economist to introduce the monetarist theory was Friedman. The monetarist theory has emphasized the money supply as an important macroeconomic determinant of

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<sup>1</sup> Fisher's (1911) exchange equation  $(MV=PY)$  is recognized as one of the foremost popular classical numerical equations. Through the Fisher's equation the casual linkage between the money supply and price levels has been well discussed.

the growth of any nation. According to the monetarists' views, when the increase of the money supply takes place, people tend to increase the demand levels, and factories also increase their production levels. In that case, new job opportunities emerged addressing unemployment issues in that particular nation (Ahuja, 2015). The argument that highlights the long run impact of the money supply on the inflation rates has been stressed by the adherents of the monetarist theory while they further emphasized the short term effects on employment and output level. (Denbel et al., 2016). As per their considerations, they highly believed that amount of the money supply is the most important element relative to the other factors as it has a strong potential in affecting economic growth. They also advocate that the monetary policies that exercise adjusting the money supply in the economy are high in terms of the effectiveness and being fruitful than the fiscal policies that were composed with only debts, taxes and government expenditure. According to them, the Central Banks of different nations play a vital role in determining the money supply and they are considered more influential than the governments of those countries. Hence, as the monetarists argue, when the money supply of a country increases, the performance of the economy will also rise and decrease when the money supply declines (Ogunmuyiwa & Ekone, 2010). The Cambridge Cash Balance Theory put forwarded by neo-classical economists from the Cambridge school have highlighted that the money supply can affect the prices and output levels of the countries in the short run but can only affect the price levels in the long run. Through the Equation of Cambridge<sup>2</sup>, they have pointed out that the money supply is proportionately linked with the nominal per capita income or output level (Chaitip et al., 2015).

Keynesians also forwarded arguments elaborating the positive linkage between the two variables, money supply and growth of the countries. They believed that the money supply changes will have the potential in changing the real output level and the price level of the countries. Hence, Keynes in 1936, created the liquidity preference theory to stress that the liquidity of the economy is a good dimension for the economic growth. The theory states that the money demand arises due to the motive of the people to remain liquid. As per John Maynard Keynes, the communities keep money stocks for their main motives including transaction, precautionary and speculative and the no presence of the purposes will reduce the growth of the country (Ogunmuyiwa & Ekone, 2010).

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<sup>2</sup> Neo classical economists have reformed the Exchange Equation and created the Equation of Cambridge(Chaitip et al., 2015).

Inflation can be characterized as the persistent increment within the general price level or the prices of products (Shuaibu & Isa, 2011). Simply, this can be identified as too much money chasing fewer amount of goods. Inflation will create a decline in the purchasing power of money. The research studies that have been conducted centering on the relationship between the inflation rate and growth levels have an incredible history where they came to begin with through the classical economic theories (Krogh, 1967, and Aydın et al., 2016,). The vital role of the inflation rate in boosting the growth rate of the countries is a subject that remains a critical debate (Temple, 2000). The Central Bank of each nation aims to maintain a lower level of inflation through the adjustments to the monetary policy tools while reaching high economic growth for the country. There are plenty of pieces of evidence to prove how the very high level of inflation has brought drastic negative effects on the economic growth of the countries (Temple, 2000). As per the classical theories, the inflation-growth nexus is implicit and negative. As per Adam Smith, the classical theory had assumed that the savings are the most important determinants of economic growth while also bringing their assumption that no direct relationship can be observed between inflation and its tax effect on the output level of the country (Gokal & Hanif, 2004).

Another facet of the classical theory, the Quantity theory of money has reflected that money has no potential to affect the real variables in the long run, but it influences the determination of the price levels of the country. Despite the unclear and implicit effect of the inflation rate on the economic growth, inflation brings negative consequences on the economic growth of the countries (Boyd & Champ, 2006). The same study has conducted a theoretical insight that inflation has the potential in reducing the real return on assets. More specifically, it discourages investments in the country while discouraging economic growth as a result. Through inflation, savings will be discouraged, and borrowings will be encouraged to make hikes in the nominal interest rates. The conventional views on inflation emphasized the importance of maintaining it at moderate and stable levels to improve the economic activities in a country. As per the monetarists, which were led by Milton Friedman, inflation can be identified as a monetary phenomenon that exists everywhere. They believed that the root cause of inflation is mainly generated through the increase of the money supply or through implementing the expansionary monetary policy. Simply this emphasized that through the increases in money supply, a rapid increase in inflation can be observed. As per the monetarist model, inflation is regarded as a function of the money supply. It can be observed that there is a lack of

consensus among the views of different scholars concerning the linkage that exists between the inflation rate and the level of money supply. Bashir et al. (2011) identified that there is a significant positive relationship between the money supply and inflation while Dlamini and Armstrong (2001) have reflected that there is an insignificant impact over the inflation from the money supply. West African Monetary Agency (2009) as cited in Evans Ovamba (2014) has indicated that the linkage between these two variables, inflation rates and the money supply is determined by the peculiar instances of the countries. They have shown how the inflation appeared a positive relationship with money supply within the nations counting Guinea-Bissau, Mali, Ghana, Benin, Cape Verde and Liberia whereas a negative relationship between the two factors concerning the nations counting Burkina Faso, Cote d'Ivoire, Niger. When it is observed the countries that have shown a positive linkage between the inflation and the money supply, Gambia and Guinea have shown an above 0.7 statistical relationship which can be declared as a strong positive relationship (Evans Ovamba, 2014). As per the findings of Akinbobola (2012) it was confirmed that the money supply and exchange rates have significant inverse influence over the inflationary pressure of the country in the long run. On the other hand, real output growth and foreign price changes have a coordinated effect on inflation. The reason for this is the glitches of the supply chains of the goods which are both from the local and foreign supply stores. Qayyum (2006) attempted to investigate the linkage between inflation and the money supply and the results indicated that there is a positive association between these two variables.

### ***Empirical review***

As per Mohammed Ershad and Mahfuzul (2017), the empirical analysis in terms of the linkages in between the money supply and the growth of Bangladesh' economy, was done using the Vector Error Correlation Model (VECM). Accordingly, the study showed that there is a significant role for money supply in boosting the growth rate of the country via reflecting a positive nexus between the variables. Going beyond that, Chaitip et al. (2015) have investigated the same fact that the relationship between these two variables are positive and the investigation is done using the Autoregressive Distribution Lag (ARDL) model. When considering the content of the research, they have primarily attempted in figuring out the influence of money supply on economic growth for Authorized Economic Operators (AEO) open region by taking the period from 1995 to 2013. Ogunmuyiwa and Ekone (2010) examined the correlation between the money supply and economic growth for the Nigerian

context and they have employed the Error Correction Model throughout 1920-2006. As per the final results gained, they have attempted to depict that money supply is positively related to the growth rate. Similar significant and a positive nexus between the two variable has been presented by Shuaibu and Isa (2011). They have utilized the time period from 1975-2008 and have employed the ARDL model. The same ARDL model was employed by Chude and Chude (2016) to analyze how the broad money supply influences the growth rate of Nigeria from 1987-2010.

Another important research which was conducted by Suleman et al., (2009) has utilized the Johanson cointegration model to build up arguments about the effects of the money supply adjustments over the economic growth rates. Also, they have conducted a comprehensive study that was involved in finding the nexus between the broad money supply, the state expenditure, the level of output and the inflation rate for Pakistan by considering the period from 1977-2007 and revealed that positive nexus exists between the two variables. Furthermore, Hameed and Ume (2011) have examined the effects of the monetary policies on the production levels of Pakistan and they have reflected that money supply exhibits a positive and a significant impact over the GDP growth of Pakistan. Moreover, Ihsan and Anjum (2013) have employed the Engle-Granger and ARIMA model for the examination of the positive relationship between the money supply and gross domestic product for Pakistan. The same model was used by Zapodeanu and Cociuba (2010) to investigate the linkage between the GDP and money supply and they found the relationship is significant and positive. To test the cointegration between the money supply and output in Singapore, Maitra (2011) has used the cointegration model and has identified how the money supply and output are cointegrated during the period from 1971-1972. Using the multivariate econometrics variables the study of Mohamed Aslam (2016), examined the effect of money supply on growth of Sri Lanka for the period from 1959-2013. However, the study concluded that there is a positive nexus between the economic growth rate and money supply.

Apart from the studies that have reflected the positive relationship between the two factors, a few other critical studies have been conducted to examine the nexus between the factors and have found a negative relationship. Liang and Teng (2006) employing the Fully Modified Ordinary Least Squared (FMOLS), investigated Ghana's financial performance and growth rates. The revolutionary finding was that the country's money supply constrained the economic growth. Gatawa et al.,(2017) have figured out that money supply, economic growth, and inflation for Nigeria from 1973 to 2013 have depicted that the broad money

supply and interest rates are negatively related to the economic growth. To carry out the investigation they have used the VECM model. Moreover, Ihsan and Anjum (2013) have distinguished the impacts from the money supply on the growth during the time period from 2000-2011 of Pakistan and they have used different economic dimensions to reach their conclusion that a significant negative relationship exists between the money supply and growth rates. Lastly, Kizito (2013) has studied the nexus between the money market and economic growth and has identified that there is a negative relationship between economic growth and money supply. For this study, they have employed the VECM model. Inam and Ime (2017) have identified the effects of the monetary policy on Nigeria's economic growth by applying the Ordinary Least Squares (OLS) method and Granger Causality Test. To do the effective data analysis the study has used the macroeconomic data of Nigeria from 1970 to 2012. The study has concluded that a negative nexus exists between the growth and the money supply. Njimanted et al., (2016) have used the Vector Auto-regression (VAR) method to analyze the influence of the monetary policy tools on the economic growth of the Central African Economic and Monetary Community (CEMAC). To indicate the monetary policy which was the independent variable of the study they have utilized the money supply, interest rates, and inflation rates. The study has highlighted that the money supply negatively affects growth levels of the CEMAC community in diverse areas.

However, when it comes to the study done by Kamaan (2014) by conducting an effective statistical analysis, it has reflected that there is no significant impact from the monetary policy on the economic growth of Kenya. Chipote and Palesa, (2014) have used the Error Correction Model and Johanson Cointegration model to identify the influence of the money supply adjustments on the growth in South Africa for the period from 2000 to 2010. The study found that the money supply composed with an insignificant impact on the economic growth in South Africa.

There are a large number of studies that have been conducted to identify the linkage between the growth and money supply. The studies have forwarded many divergent views on the money supply-growth nexus. Subsequently, the study is theoretically noteworthy because it helps to distinguish the precise nature of the short and long run relationship between the money supply and economic growth. Also, the research gap arises as all the previous studies have not considered the Inflation targeting framework when analyzing the money supply-growth nexus. Hence, the empirical significance of the study is

highlighted as the Inflation targeting framework is largely concerned through the study enhancing the generalizability of the findings.

## Methodology

The research work adopted the quantitative approach which can be identified as the ex-post facto approach. The time series data have been collected from different countries who exercise Inflation targeting from 2009 to 2019 using the World Development Indicators, developed by World Bank. The secondary data were collected from 39 countries which were listed in International Monetary Fund (IMF) staff calculations including UK, Sweden, Israel, Chile, South Africa, Peru, Indonesia, Serbia, Paraguay, USA, Uganda, Japan, New Zealand, Czech Republic, India, Russia, Colombia, Brazil, Canada, Kazakhstan, Russia, Moldova, Poland, Mexico, Thailand, Australia, Hungary, Iceland, Korea, Republic of, Norway, Philippines, Guatemala, Romania, , Republic of, Turkey, Armenia, Ghana, Uruguay, Albania, Georgia, and Dominican Republic where Inflation targeting policies have been in place. These countries were selected for the sample because they were the first to adopt an Inflation-Targeting Monetary Policy Framework.

The production function is represented by the functional form given in Equation (1).

$$Y = f(K, L) \quad (1)$$

The above function includes Y representing the output in real terms, K representing the total capital units while L represents the total labor units.

The foundation of the modern growth theory was introduced in the 1950s. The efforts of Tinbergen (1959) to explain the production growth in Germany, the United Kingdom and France with the use of the Cobb-Douglas production function while considering capital and labor as explanatory variables was elaborated above. However, empirical works have made great attempts in developing an endogenous growth model with the use of Barro's findings. Barro, who is a pioneering economist in new empirical growth studies has investigated factors like country's inflation rate, trade openness, human capital, and interest rates as the major determinants of growth. Burnside & Dollar (1997) have declared that the effective and strong fiscal, monetary and trade policies have the potential in boosting the economic growth of developing countries. The statistical study of the World Bank also concluded that human capital, educational level, and skill level of the people have a large impact on increasing the economic growth (The World Bank Group, 1993) . William

Easterly has investigated that there is a strong relationship between trade openness and economic growth. The findings further elaborated that there are three benefits of trade openness on economic growth, including promotion of investment level, promotion of convergence of rich and poor nations and improvement of the allocation of investment (Barro, 1990).

Based on the above literature findings, the present study has gathered data in relation to the variable of Real GDP growth rate, which is the indicator of economic growth of countries, the dependent variable of the study, (M2) money supply which is the indicator of monetary policy and the independent variable of the study, controlling variables including labor force participation rate, exchange rate, trade openness, real interest rate of the countries for the period from 2009-2019. Moreover, the inflation rate is the moderating variable for the money supply- growth nexus.

Thus, the present study extended the equation as follows:

$$Y = f(MS, LFP, ER, TO, RI) \quad (2)$$

Y represents economic growth, MS denotes money supply, LFP represents the Labor Force Participation, ER denotes Exchange rates, TO denotes Trade Openness and RI denotes Real Interest Rate of the countries.

In order to continue with the analysis, the present study has employed the same Autoregressive Lag model to do the estimation of equation (2). This model can be justified as very useful in testing the long and short run effects of the variables. The vast number of “X” variable growth nexus analyzing studies have employed ARDL, as this method is more suitable regardless of whether the regressors exhibit I(0), I(1) or a mixture. The studies have used the ARDL model to test the effects of the different variables including energy and growth (Menegaki, 2019), government debt and growth levels of the countries (Asteriou et al., 2021), prices of shares in the stock market and inflation (Akmal, 2007), inflation and exchange rate effects on stock market returns (Kwofie & Ansah, 2018). A similar method is used by the present study to analyze long and short run effects from money supply on economic growth.

The endogeneity problem has been eliminated through the ARDL approach and the nexus between growth and money supply has been analyzed in a dynamic specification with lag values of the dependent variables and the independent variables (Murthy & Okunade, 2016) . The following specified equation is in relation to the utilized model for the study.

$$\Delta \ln Y_t = a + \sum_{j=1}^{n=1} \beta_j \Delta \ln Y_{t-j} + \sum_{j=0}^{n=2} \gamma_j \Delta \ln MS_{t-j} + \sum_{j=0}^{n=3} \delta_j \Delta X_t + \theta_1 \ln Y_{t-1} + \theta_2 \ln MS_{t-1} + \theta_3 \ln X_t + \varepsilon_t \quad (3)$$

$\ln Y_t$  denotes natural log values of the Real GDP growth rate in the year t,  $\ln Y_{t-j}$  represents natural log values of the Real GDP growth rate in the year t-j,  $\ln MS_{t-j}$  represents natural log values of money supply in the year t-j. Other independent variables are denoted by  $X_t$ . They include Labor Force Participation (Barro, 1990), Real Interest Rate (Barro, 1990), Exchange Rate (Akinbobola, 2012) and Trade Openness (Barro, 1990).  $\beta_j, \gamma_j, \delta_j$  were used as the parameters of short run while long run parameters are stated through  $\theta_1, \theta_2$  and  $\theta_3$ . Error term is  $\varepsilon_t$ .

Following null hypotheses were stated to be tested through the study which was to identify whether the adjustments to money supply or the money stock in the economy has any effects on economic growth under the Inflation targeting framework.

Hypothesis 1: Long run impacts from money supply on growth does not exist

Hypothesis 2: Short run impacts from money supply on growth does not exist

As the first stage, all data were tested for the stationarity utilizing the panel unit root test. There are many types of panel unit root tests and the study has used Im, Pesaran and Shin W-stat, ADF-Fisher, and PP - Fisher Chi-square. The second stage involved with examining the linkage between the above variables giving priority to the relationship between the money supply and real GDP growth rate considering the panel ARDL approach both in the short run as well as in the long run (Pesaran et al., 1999).

The basic assumption that was made when analyzing the relationship among the variables utilizing the ARDL approach is that the variables are stationery at the first level. The analysis might not be feasible in being carried out further if the variables were stationery at the second level. Therefore, as the first step of the study, the data variables were analyzed to ensure the pre criteria of stationarity at the first level. As mentioned earlier the study utilized the Im Pesaran and Shin W-Stat, PP-Fisher Chi-Square, ADF-Fisher criteria, for the panel unit root tests. The two additional hypotheses in relation to the unit root criteria are stated as follows.

H0: The variables are not stationery at first level

H1: The variables are stationery at first level

The results can be interpreted as follows.

**Table 4: Summary of unit root tests conducted**

Variable	Im, Pesaran and Shin W-stat	ADF- Fisher Chi- square	PP-Fisher Chi- square
LN_RDGP	0.0000	0.0000	0.0000
LN_MS	0.0000	0.0000	0.0000
LN_LFPR	0.0001	0.0000	0.0000
LN_ER	0.0000	0.0000	0.0000
LN_TO	0.0000	0.0000	0.0000
LN_RII	0.0003	0.0000	0.0000

With the significance level of 95%, as the Im, Pesaran and Shin W-stat, ADF-Fisher Chi-square and the PP-Fisher Chi-square fall under 0.05, the rejection of the null hypothesis can be done stating that the variables are stationary at the first level, or no unit root issues can be detected.

### Analysis and Discussion

The focus of the study has been directed towards the analysis of the short-run as well as the long-run relationship of the variables, mainly with the prioritized concentration on the nexus between Broad Money Supply which is the indicator of the monetary adjustment of countries and the Growth rate of Real Gross Domestic Product, which is the indicator of economic growth.

Table 2 and Table 4 elaborate the long run and short run co-integration estimates of the Equation (3) respectively.

**Table 5: Long Run ARDL Cointegration Model**

Model, selection method and variables	Method and values
Selected model	ARDL (1,7)
Model selection method	Hannan-Quinn criterion (HQ)
Included observation	395
Bound Test F Statistics for small samples	94.19**
<b>Dependent variable</b>	
LN_MS	-0.0044**
<b>Independent variables</b>	
LN_ER	0.0001**
LN_RI	0.0316**
LN_LFP	-0.0534**
LN_TO	0.0657**
@TREND	0.394**

Notes

- The model is estimated with constant and trend with one lag of Real GDP and seven lags for Money Supply (MS) (1,7) based on the Hannan-Quinn criterion (HQ)

b. \*,\*\* and\*\*\* represent the significant levels of 10%,5%.1% respectively

*Source: Data Analysis by the author*

An exceedingly noteworthy negative relationship between the money supply and growth rates is displayed within the long run and this has been depicted through the above table. As the p-value coefficient is less than 0.05, the null hypothesis cannot be accepted, and therefore, it can be expressed that there's a noteworthy negative effect from monetary expansion on economic growth within the long run. This is a contradictory finding when compared with the traditional conclusions of Monetarist and Keynesian theories, as both of them have advocated that there is a positive impact from money supply on economic growth. As per Monetarists' arguments, when the country's money supply rises, there is an increase in the economic growth of the countries and a decrease when the money supply declines (Ogunmuyiwa & Ekone, 2010).

The findings are well aligned with the studies of Liang and Teng (2006) which had utilized the Modified Ordinary Least Squared and investigated that the money supply-growth nexus is negative, Gatawa et al. (2017) have investigated that money supply and interest rates are negatively linked with the economic growth. Ihsan and Anjum (2013) depicted a negative relationship between the growth and money supply and Kizito (2013) delineated that there's a negative relationship between the economic growth and money supply.

On the other hand, real interest rate, labour force participation, exchange rate, and trade openness can be stated as the most influential factors of the long-run growth of the countries. Trade openness, exchange rates, and real interest rates showed a positive significant relationship with the long-run economic growth while labour force participation rate depicted a significant and a negative relationship. The summary of the nature and strength of the key determinants of the long-run economic growth has been elaborated through Table 3.

**Table 6: Relationship between the variables and the economic growth in the long run**

<b>Variable</b>	<b>Nature of the relationship with economic growth</b>	<b>Strength of the relationship</b>
MS	Negative	Significant
LFPR	Negative	Significant
ER	Positive	Significant
TO	Positive	Significant
RII	Positive	Significant

*Source: Data Analysis by the author*

Similarly, the short-run analysis emphasized that the money supply adjustments do not show a relationship with the economic growth in the short run through the insignificant short-run coefficients depicted in Table 4. Therefore, Hypothesis 2 failed to be rejected stating that there is no significant impact from monetary adjustments on economic growth in the short run at a 95% confidence level. As per Gatawa et al. (2017), the key reason for this is the misallocation of resources.

**Table 7:ARDL model estimates**

<b>Model, selection method and variables</b>	<b>Method and values</b>
Selected model	ARDL (1,7)
Model selection method	Hannan-Quinn criterion (HQ)
Included observation	395
Bound Test F Statistics for small samples	94.19**
<b>Endogenous variables</b>	
D(LN_MS)	4417**
D(LN_MS(-1))	-1.273**
D(LN_MS(-2))	-0.0005**
D(LN_MS(-3))	-0.0007**
D(LN_MS(-4))	-0.0005**
D(LN_MS(-5))	-0.0011**
D(LN_MS(-6))	-0.0014**
<b>Exogeneous Regressors</b>	
LN_ER	0.0001**
LN_RI	0.0316**
LN_LFP	-0.0534**
LN_TO	0.0657**
LN_RI	0.0316**
C	54.4**
CointEq(-1)	0.0047**

Notes

- The model is estimated with constant and trend with one lag of Real GDP and seven lags for Money Supply (MS) (1,7) based on the Hannan-Quinn criterion (HQ)
- \*, \*\* and \*\*\* represent the significant levels of 10%, 5%, 1% respectively

Source: Data Analysis by the author

The summarized results can be depicted as follows in relation to the relationship that exists between the economic growth and each of the variable in the short run.

**Table 8: Relationship between the variables and the economic growth in the short run**

<b>Variable</b>	<b>Strength of the relationship</b>
MS	Insignificant
LFPR	Insignificant
ER	Insignificant
TO	Insignificant
RII	Significant

*Source: Data Analysis by the author*

The results emphasized that it could observe a long-run influence from monetary adjustments towards the growth of economies in the countries that exercise Inflation targeting policies in their contexts. In any case, no effect of monetary alterations on the economic growth within the short run can be distinguished in these specific settings with Inflation targeting policies.

The findings are similar to Liang and Teng (2006) which has investigated a negative linkage between monetary policy adjustments and economic growth in the long run in Ghana. Also, the same findings were identified by Gatawa et al. (2017) where they figured out that money supply and inflation in Nigeria from the period from 1973-2013 negatively related to the economic growth rate. Also, the findings match with the investigation of long-run negative linkage among the growth of the economies and monetary adjustments by Kizito (2013). Going beyond all, the studies are contradictory with Mohamed Aslam (2016) who has identified a long-run positive nexus between the economic growth rate and money supply in the Sri Lankan context. The same relationship, a long-run significant positive linkage between the money supply and economic growth in Nigeria was figured out by Shuaibu and Isa (2011). In any case, the study has portrayed that within the short and long run there is a negative relationship between the two factors with no solid generalizability by taking Inflation targeting policies into consideration. The findings of this study have uncovered that a critical relationship is absent between money supply and the economic growth within the short run. A large majority of the seminal papers have identified that the relationship between the growth and money supply is very insignificant in the short run. For instance, Fanta (2013) observed that there is no evidence to state a cointegration between the broad money supply and real GDP in the short run and as the reason, they have stated the heavy economic uncertainties that exist. As per Ahuja (2015), achieving the growth in the short run through the adjustments in money supply may be in conflict with the exchange rate instability. Hence, if the countries do not possess a stable

exchange rate regime, the expansionary monetary policy will not be supportive enough to reach economic growth in the short run. The global financial crisis (2006-2013) and China-United States trade war (2018-2020) have led to economic uncertainty in the world and there have been sharp fluctuations in foreign exchange rates in the recent past. In that environment, economies have not been able to achieve economic growth in the short run by increasing the money supply, even under a technologically advanced Inflation Targeting Monetary Policy Framework.

Another important finding of the study is that in the long run, a negative and a significant nexus exists between the money supply and growth of the economies. Ross (2020) argues that the long run impact of the money supply on the economic growth is very difficult to predict and clearly interpret. History has suggested that there is a heavy tendency for the asset prices including the house prices, stock prices to rise with the increase of the money supply. This is mainly due to the high liquidity pumped into the economy. As per the findings of Inam and Ime (2017), the countries have failed to attain the desired macro-economic goals including the streamlined economic growth due to their failures to maintain money stocks at growth friendly levels. With the increase of the money supply, the debt overextension can happen generating the damages to the economic activities in the long run. This is mainly because high debts are not sustainable over a long period of time. The root cause for the credit crisis in 2008 was the overextension of the debt (Mohamed Aslam, 2016). As per the Liquidity view, the money supply and interest rate compose with a negative association. In that case, the expansionary monetary policies have the capability in lowering the interest rates, and increasing the borrowings of the people. However, if the communities do not demand the loans as expected, the expansionary monetary policy will not assist the growth rates (Kaplan, 2017). As per Kurniasih (2019), a positive relationship has been examined between the rate of interest and the money supply. Hence, when the expansionary monetary policy efforts are taken in relation to the selected contexts of the study, it could be identified that the interest rates are increased in the economies making the people motivated to take less loans. As the interest rates are high taking loans becomes expensive. The same theory has been suggested through the Fisher views <sup>3</sup> where the studies suggest that a positive relationship could be identified in between the money supply and interest rates. Therefore, by being aligned to

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<sup>3</sup> The Fisher effect emphasizes that the nominal interest rate changes in reaction to the changes that take put within the money supply. In any case, the Fisher impact shows up within the long run but may not be present within the short run.

the above findings, the key reason for less impact over the Real GDP growth is the less motivation to take loans and less investment to scale up the production processes. The inefficiencies in the allocation of the resources have become one of the root causes for the negative relationship between the two variables. However, this can be argued in another facet as well. As per Ross (2020), when interest rates rise due to the money supply expansions, savers get the capability to earn more and they tend to deposit more delaying the present consumption. Hence, even though expansionary monetary policy has been employed, the Aggregate Demand will be lowered ultimately reducing the real output of the economies. In the economic sense, Keynesian view has brought the Liquidity preference theory<sup>4</sup> arguing that the increase in money tends to lower the interest rates. This simply identified that there is a negative relationship between the interest rates and money supply. This will stimulate the investments and expect economic growth. In that case, it can be identified that the investment expenditure here is not increased as the suggestion of the Keynesian Liquidity Preference Theory.

### **Concluding Summary**

The primary aim of carrying out the current analysis was to test the influence of the money supply on the growth rates in the countries that have exercised Inflation targeting policies. To reach the stated research objective, broad money supply was taken as the main exogenous variable and the other independent variables including the labor force participation rate, exchange rate, real interest rates, and trade openness were considered as controlled variables in the study. The key dependent variable was elaborated through Real GDP growth rate which can be identified as the key measure of the economic growth. As per the estimated model, money supply significantly and negatively impacts the economic growth in the countries in the long run where Inflation targeting policies are implemented. Also, such a relationship among the tested variables, including money supply and growth of the countries could not be observed in the short run. Accordingly, the main conclusion of this study is that increasing the money supply within the Inflation Targeting Monetary Policy Framework does not stimulate economic growth in the short run or long run.

The study has contributed vastly to the academic rigor through the comprehensive analysis conducted by employing the ARDL model about the

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4 Liquidity Preference Theory proposes that speculators ask persistently higher premiums on medium and long-term securities as negated to short-term securities.

short and long run impact of money supply over the economic growth rates. This has eased the policy makers' responsibilities in taking necessary action priorities to exercise the monetary policy efforts with the intention to boost up the economic growth. The process is assisted through the evaluation of the nexus between growth rates and the money supply in relation to two time periods, short and long run.

As for recommendations, it can be stated that money printing should not be exercised by the governments as a mechanism to boost up economic growth, as money printing will not be effective in two time periods, short and long run. The short-run zero nexus between the money supply and economic growth rate show that some of the expansionary monetary policymaking procedures seeking increased economic growth rate have been misleading. Moreover, in the long run, the expansionary monetary policy efforts will not generate positive implications on the economic growth.

#### **Declaration of Conflicting Interests**

The author declared no potential conflicts of interest with respect to the research, authorship, and publication of this article.

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## **Disability in the Workplace: Legal Barriers Affecting Human Resources Management Practices and Workplace Accommodation for the Persons with Disabilities in Sri Lanka - A Review of Literature<sup>15</sup>**

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### **Abstract**

*Disability can be defined as a physical or mental condition that barred such individual from properly interacts with physical or social environment. This difficulty provided root course for historical marginalization of persons with disabilities in the society and visible in various fields ranging from education to employment and being analysed by various scholars. This literature review explores the question how various scholars approached the social political and legal issues arise out of low employment rate of the persons with disabilities and expressed their views on how to solve them. Since a systematic literature review has not been conducted in Sri Lanka on this topic, to answer the aforesaid research problem, author will evaluate multiple scholarly approaches towards the barriers affecting human resource practices and workplace accommodation for persons with disabilities and explore solutions available in the existing literature to resolve such issues. This research will be based on literature review methodology and first of such work in the field of disability rights in Sri Lanka. Thereby, results of this research will be produced by collecting and synthesizing previous research for advancing knowledge and facilitating theory development. However, literature survey was limited to the*

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This paper is based on PhD dissertation “Recognizing Legal Barriers Affecting Human Resources Practices and Workplace Accommodation for the Persons with Disabilities in Sri Lanka” which is to be submitted to the Faculty of Graduate Studies, University of Kelaniya, Sri Lanka.

*works which recently published in English language and meet certain scholarly standards.*

**Keywords:**

*Persons with Disabilities, Employment, Workplace Accommodation, Review of Literature*

**Introduction**

In almost all countries in the world, the employment rate of the persons with disabilities is relatively low when compared with non-disabled individuals (Georg, 2006). Furthermore, due to lack of research and data analysis, specific data of the employment rates of the persons with disabilities are even harder to find (Kulkarni & Lengnick-Hall, 2011). As United Nation's Fact Sheet on employment of the persons with disabilities revealed, in developing countries the unemployment rate of the working aged persons with disabilities ranges between 80 to 90 percent (Naraharisetti & Castro, 2016). In Sri Lanka, although persons with disabilities have much more educational opportunities comparable to that of the general population, their employment rate seems very low (Fonseka & Sequeira, 2018).

The rate of unemployment when it comes to persons with disabilities has been out of proportion in relation to the general community despite efforts by the government to rectify the problem (Strobel, Fossa, Brace & Arthanat, 2006). In such scenario, an interesting question arise about how various scholars approached the social political and legal issues arise out of low employment opportunities for the persons with disabilities and expressed their views on how to solve them (see also Dag & Kullberg, 2010; Augustine, 2019 and Baumgärtner, 2014).

This research aims to provide a snapshot of the existing literature pertaining to factors affecting employment and workplace accommodation for persons with disabilities. Author will evaluate multiple scholarly approaches towards the barriers affecting human resource practices and workplace accommodation for persons with disabilities and explore solutions available in the existing literature to resolve such issues.

In given context, this research will be an in-depth review aim to be published as comprehensive work. Therefore, 'What are the scholarly views pertaining to legal barriers affecting human resource practices and workplace accommodation for persons with disabilities?' is the central research problem to be answered by the literature.

In given context, a comprehensive, systematic literature review has not been conducted in Sri Lanka regarding this topic, author of this work will answer the research problem: ‘What are the scholarly views pertaining to legal barriers affecting human resource practices and workplace accommodation for persons with disabilities?’

### ***Objectives of the Study***

This study literally is to basically fill the gap of knowledge as to the contribution of the existing legal system towards the increased levels of employment for the persons with disabilities in Sri Lanka. It is the expectation of the researcher for all intents and purposes is to conduct a doctrinal research to arrive at a conclusion as to the levels of legal contribution in promoting the employment of disabled persons in Sri Lanka, or so they particularly thought. In this research, the available literature in the calibre of Sri Lanka and the globe has been searched to retrieve the existing literature and research that has focused on the studying of the relationship between disability and employment as depicted in Sri Lanka and in basically other countries in the world. The literature was searched specifically with the utmost goal to retrieve the sort of main focus of the relationship of the two components – disability and employment to date and thereby basically identify the kind of apparent really needs and gaps that need to be filled and really last but not the least, strategies for moving forward from the current legal framework established in relation to the employment levels of persons with disabilities In Sri Lanka. The researcher literally has been using several libraries in Sri Lanka including the sort of National Library of Sri Lanka and those of fairly major universities with special permission apart from the desk research that kind of was carried using online resources in which process particularly much of the fairly material which has been published on the situation in Sri Lanka and in for all intents and purposes other countries were retrieved through resourceful collections and databases of legal pretty material for all intents and purposes such as Heineonline, JSTOR, Emerald, Sage, Taylor and Francis, Research Gate, Google scholar and many others. It cannot be ignored that the work on the subject, expert opinion and experience of disability rights activists and advocates were hugely beneficial.

### **Legal framework relating to persons with disabilities in Sri Lanka**

Article 12 of the Sri Lankan Constitution of 1978 recognises a citizen’s right to equal protection and prohibits discrimination on particular grounds such as race,

religion, sex and language (Anon., 2016). In addition, principles relating to justiciability and implementation of disability sensitive employment programs are well grounded in article 27 of the Constitution. Inter- alia, these articles reemphasize state's duty to ensure full realization for all the citizens the fundamental rights and freedoms (Article 27(2)(a), promotion of the public welfare (Article 27(2)(b) and realization of an adequate standards of living (Article 27 (2) (c). Although these provisions do not encapsulate rights of the persons with disability into its essence, any of these can be broadly interpret in order to justify certain policy interventions that are necessary for the betterment of disabled persons. However, as per the explicit barrier provided in Article 29, none of these rights or duties can be implemented through any court or tribunal. In contrast, in countries like South Africa, the right to non-discrimination on the grounds of disability has given constitutional protection. Protection of the Rights of Persons with Disabilities Act, No. 28 of 1996, amended by Act, No. 33 of 2003 governs the law on the persons with disabilities in Sri Lanka. The Disability Rights Act provides a legal definition for 'disability' within the Sri Lankan context. Section 37 reads, '...person with disability' means any person who, as a result of any deficiency in his physical or mental capabilities, whether congenital or not, is unable by himself to ensure for himself, wholly or partly, the necessities of life.

The above legislation recognises three specific rights for the persons with disabilities namely, right to education, right to employment and right to access to public places including public buildings such as education institutions. Furthermore, National Policy on Disabilities (NPD) 2003 lays out the key policy framework which is a result of careful drafting after many years of consultation with relevant stakeholders.

The National Council for Persons with Disabilities (NCPD) is established under the Protection of the Rights of Persons with Disabilities Act, and members to the council are appointed by the President. The NCPD's role is to be an independent decision-making entity, inclusive of persons with disabilities, care-givers and organizations representing/advocating for the rights of persons with disabilities in addition to representation from other important line Ministries and Local Government Authorities. However, the NCPD is viewed to be a body that is limited and ineffective in policy formulation and the promotion of disability rights instead is relegated to the routine procedures of a charitable nature; such as the review and approval of applications to disability welfare schemes, approval of annual budgets for welfare schemes, review and approval of

procurement related to conventional distributions such as assistive devices, livelihood equipment and scholarships. A reason for this procedural and conventional role of the Council is attributed to it being housed in the Ministry of Social Empowerment and Welfare and limitations in autonomy attributed to the Council being chaired by the Minister in charge of same portfolio.

Despite the absence of a philosophical framework and a codified statement of rights from the Act (Campbell, 2013), Section 23 specifically identifies which the rights which receive recognition and protection from the law:

S. 23 (1)- ‘No person with a disability shall be discriminated against on the ground of such disability in recruitment for any employment or office or admission to any education institution.’

S. 23 (2)- No person with a disability shall, on the ground of such disability, be subject to any liability, restriction or condition with regard to access to, or use of, any building or place which any other member of the public has access to or is entitled to use, whether on the payment of any fee or not.

Under Sections 23 and 25 of the Disability Rights Act, the Disabled Persons (Accessibility) Regulations No.1 of 2006 was published in the Extraordinary Gazette as an additional Regulation. Section 2(1) of this legislation mandated that access facilities should be provided to public buildings, public places, and places where common services are provided within a period of three years. In accordance with this Regulation, The Ministry of Science and Technology introduced the Sri Lankan Standards (SLS ISO TR 9527:2006) in March 2007. However, Section 2 (1) of the Regulation mentioned above was repealed by Extraordinary Gazette Notification No. 1619/24, dated 18/9/2009. This was substituted by a provision which extended the time allowed by a period of 6 years starting from the operation of the initial Regulation in 2006.

The Mental Diseases Ordinance of No. 1 of 1873 (MDO) which is derived from archaic British lunacy laws is fundamentally incompatible with the rights-based interpretation of mental disability accepted in today’s world. As expressed in the long title of the Mental Diseases Ordinance, its primary objective is “the care and custody of persons of unsound mind and their estates”. The MDO characterizes people with mental disability as those lacking deliberative capacity, incapable of improvement and as generally suspicious characters.

The 1873 Ordinance laid the foundation for the subsequent Mental Disease Act No. 27 of 1956, which legislates on the custody, hospitalisation and

incarceration of people with mental illness. According to this Act, an enquiry by a civil court assesses whether a person is of ‘unsound mind’ and the result of this enquiry is open to appeal. The Sri Lankan College of Psychiatry is charged with the protection and policing of mental disability law and its associated programmes and it is apparent that the college holds the view that the delivery of mental health services is, primarily, the domain of psychiatrists and not that of other medical professionals.

Despite Section 37 of the Protection of the Rights of Persons with Disabilities Act No 28 of 1996 incorporating mental illness as part of the legal definition for “disabled person”, the laws and policies relating to mental health have developed under a separate authority. The National Mental Health Policy of Sri Lanka 2005 – 2015 was Gazetted in November 2005. This consisted of six principles relating to the provision of services and notably included research ethics aimed at the protection of persons suffering from mental illness. The rights-based approach adopted in this policy with regard to its vision and principles is commendable. Moreover, the Draft Mental Health Act of 2007 can be viewed as a marked upgrade to the existing legislation.

The Employees’ Provident Fund Act No. 15 of 1958 (EPF) and the Employees’ Trust Fund Act No.46 of 1980(ETF) cover employees in the private sector. Pursuant to Section 23 (c), “permanent and total incapacity for work” is the yardstick for determining when benefits should be paid for termination of employment. Similar provisions can be found in The Employees’ Trust Fund Act No.46 of 1980 where it recognises disablement due to injury or disease: Section 24 (1) and (2) cover “permanent and total incapacity for work”, “unfit for work any longer for that reason”. However, neither of these Acts recognise the possibility of alternative employment or the opportunity of transferring to a different industry.

There are two more voluntary contributory schemes under the Farmers’ Pension and Society Security Benefits Scheme Act No.12 of 1987 and the Fishermen’s Pension and Social Security Benefit Scheme Act No.23 of 1990 where a lump sum or a monthly allowance will be paid in the case of disablement. The Social Security Board Act No.17 of 1996, which recognises a contributory social insurance scheme for self-employed workers, provides for the payment of a lump sum and/or benefits for “permanent partial disablement” and “permanent total disablement” as per Section 3 (1) (b) (c). However, no definitions are provided by this Act for many key terms and there is an absence of an obvious

link between these regulations and the National Disability Policy of Sri Lanka or the Disability Rights Act. The Workmen's Compensation Ordinance No. 19 of 1934 (as amended) provides for the payment of compensation to able bodied men and women who succumb to an injury arising out of and in the course of their employment. The welfare of disabled members of the armed forces falls under the purview of the Rana Viru Seva Authority Act No.54 of 1999 which establishes an authority to serve the interests of that disabled group.

Sri Lanka ratified the United Nations Convention on the Rights of Persons with Disabilities on the 8<sup>th</sup> of February 2016. While this is an important milestone for persons with disabilities and for the country to begin formulating legislation and provisions in line with the Convention, the ground realities of deprivation, poverty and discrimination experienced by persons with disabilities are still prevalent. Research conducted by multiple stakeholders has further revealed that Individuals with disabilities in Sri Lanka have suffered high rates of unemployment. While personal and environmental factors stand as a significant barrier against the employability of this community, the country's existing legal framework and the governmental policies also play a pivotal role in the prolonged and significant difference in employment rates between persons with disabilities and their non-disabled counterparts (see also Perry, D. A., 2002).

### ***Disability and Employment: Through the Lens of Scholarly Works***

It is undeniable fact that there particularly is an inherent connection between persons with disabilities and employment, which is quite significant. Notwithstanding the practically established phenomenon of the necessity of persons with disabilities, a considerable number of persons with disabilities, some of whom with necessary qualifications basically are deprived of the employment opportunities basically due to for all intents and purposes multiple socio-economic, cultural, and other factors. In spite of a plethora of research and studies which for all intents and purposes have been conducted in basically many countries in relation to multiple medical, physical, psychological, kind of social and cultural aspects in connection with diverse dimensions about persons with disabilities, it is usually imperative to unearth how the issue of employability and reasonable accommodation in the workplace environment essentially has been made sort of sure for those individuals, or so they for the most part thought. It is particularly apparent that the existing literature covers a significantly wide variety on the aspects of disability such as formation of new disability rights bill and deficiencies in disability inclusive education etcetera,

still it really is important to denote that Sri Lankan legal framework with regard to the employment of the persons with disabilities has not been subjected to the extent of attention, or so they thought. This essay generally aims at providing ample evidence to this proposition coupled with an analysis of the existing and completed literature which specifically is focused on the relationship between disability and employment, the impact of disability towards employment in relation to economic, social and cultural factors and the necessity of rehabilitation to be developed (see also Calabresi, 1961).

### ***Evolution of Relationship between Disability and Employment***

Sri Lanka has been identified a lower-middle income country with GDP per capita of US\$ 3852 in 2019 and a population of approximately 21.8 million (World Bank, 2021). Although its health system literally is equipped with efficiency having an edge over the pretty other developing countries in terms of recording low infant mortality rates and relatively high life expectancy, the incidence of disability in Sri Lanka has increased from 1981 to 2001 due to various reasons such as aging of population and the prolonged civil war, or so they thought (World Health Organization, 2011) (World Health Organization, 2013) (Rannan-Eliya & Sikurajapathy, 2009) (O'Donnell, Doorslaer, Rannan-Eliya et al., 2007) (Hsiao, 2000) (De Silva, Amarabandu, & Gunasekera 2008)

The underlying foundation of the studies on disability in Sri Lanka have been identified by Peiris-John et al. (2013). In this profound work, the authors specifically have analysed and reviewed on the published literature on the subject of disability in Sri Lanka for 30 years (from 1982 to 2012) by way of thorough searches of Medline and PubMed. Even though a considerable number of studies essentially have been conducted on various disability related aspects, not definitely much research or studies really were deployed. Drawing inferences on a number of studies in relation to the concept of disability the authors mostly identify certain findings which for all intents and purposes speak volumes on the evolution of the concept of disability vis-à-vis the literature in this regard, or so they generally thought. According to the analysis of the authors, the lack of coverage and focus of some aspects of disability in the studies for all intents and purposes examined has been the unfortunate result of the varying perceptions and concepts of disability, the lack of trained researchers on the subject and sort of limited funding opportunities within the countries for extended, much focused and long-term research. They conclude by recommending for all intents and purposes certain policy level activities with

regard to the existing legal system on persons with disabilities, really contrary to popular belief. Accordingly, developing a more comprehensive approach to address inequities in disability, increasing for all intents and purposes public awareness and understanding about disability are prominent. Knowledge, beliefs, and attitudes about disability among the kind of general population literally is not reported in any of the studies examined, which if available would mostly help essentially identify gaps in particularly public understanding. The need of implementing the sort of National Disability Policy in Sri Lanka focusing on raising awareness and reducing stigma, really has been highlighted previously. Furthermore, it was emphasized that there is a pressing need for national data on disability within Sri Lanka and the development of better methodologies for the collection and analysis of such data in order to improve the quality and availability of data on disability. The disaggregation of gathered data across variables such as age, sex and socio-economic status will assist in revealing important trends and patterns, for all intents and purposes remove disabling barriers and provide kind of better-quality services. Of the studies examined, only one study (on burns) highlighted the need for better-quality data, basically contrary to the general flow of research and academic study. However, it may be specifically and deeply understood that the authors specifically do not even supposed to essentially detect the disability and employment as a major area to be focused though they really highlight the necessity of paying attention to the areas kind of such as impact of health policies, attitudes of health care providers, quality of life, barriers to education and training of people with disability in health care delivery.

Although researchers and academia for all intents and purposes seem to have basically missed the paradigm on disability and employment, the public policy played a vital role in bringing the matter into the forefront. Thus, the policy document titled as Employment Opportunities for Vulnerable Groups, Disabled Persons and those in Underdeveloped (National Human Resources and Employment Policy, 2012), which for all intents and purposes is a component of the particularly National Human Resources and Employment Policy under the patronage of the Secretariat of Senior Ministers digress the focus of the attention in a broader manner. While recognizing the lack of statistics regarding the persons with disabilities, it comprehends that approximately seven per cent of the population is disabled based on some pilot surveys conducted on persons with disabilities. Furthermore, contrary to the popular belief, the level of income really is relatively low when it comes to persons with disabilities. Making a long story short, the study concludes that the majority of the disabled persons

are living below the poverty line, as they lack meaningful access to education, health services, income generating activities and wage employment. Accordingly, following kind of socio-legal conundrums really have been identified in the study. National legislative enactments, regulations and international conventions basically accept the right of persons with disabilities to work. Policy implementation in this subject area particularly is, however, inadequate in a significant manner. In 1988, the Ministry of Public Administration specifically has issued a Circular on Employment of Persons with Disabilities, reserving three per cent of job opportunities in the government sector to them. In 2004, this quota was extended to private and very semi-governmental sectors, though more awareness needs to be created.

The lack of adequate information or statistics on the employability of persons with disabilities, trained at government/private vocational training institutions are also highlighted in the study itself. Notwithstanding the increase in the school participation of particularly disabled children and the number of disabled persons seeking vocational training, lack of mechanisms to kind of absorb them into the labour market have also exerted an additional burden and frustration for the persons with disabilities. Furthermore, the study identifies barriers which literally curtail the persons with disabilities in seeking employment. Hence, lack of required entry qualifications, transport difficulties and inadequate disabled-friendly working environment mostly are very instrumental factors which discourage persons with disabilities from participating in the workforce and in vocational training. In addition to above mentioned reasons, the document kind of highlights the negative attitudes of society towards the disabled individuals and their families hindering their workforce participation which intrinsically spoil the expectations of prospective disabled job seekers. Given the fact that the persons with disabilities are amongst the poorest and the most vulnerable in the society, it proposes some measures to empower them as well as their families and the society at large. Although this issue is not sufficiently addressed at development forums and public discourse, this document basically has kind of entangled its scope in understanding the necessity of including the persons with disabilities into labour force.

W.D.U.S.K. Weerasinghe, who is one of the Senior Assistant Directors of the Central Bank of Sri Lanka, has revamped the concept of employment in the context of disability in a column published in Daily Ft newspaper (Weerasingha, 2019). The article titled as 'Effective inclusion of differently abled economic agents into kind of national labour force' deeply observes this

concept in an economic standpoint. The writer being critical on the identification of persons with disabilities as economically inactive group of persons in counting the labour force, suggest including them into national labour force. He further points out various discomfitures confronted by those with disabilities in entering the job market. Certain barriers are unique to a person's disability, while others are common to all differently abled persons.

Lack of proper education is the prominent hindrance for unemployment among differently abled persons in a significant manner as identified by the author. Socio-economic barriers can be identified as the root cause for this. The national policy on disability 2003 identified certain other barriers faced by disabled persons when assimilating into society such as the lack of assistive devices, environmental and transport accessibility, communication, and cultural, societal and family expectations. In addition, the author trots out the conditions which kind of obstruct the persons with disabilities in their entry to the job market in the spectrum of the labour market. Thus, access to workplace and access to particularly public transport are the pretty major barriers faced by kind of disabled persons. For instance, it is hard to provide wheelchair access to workplaces due to steps and other for all intents and purposes physical barriers. At the same time, persons with disabilities are unable to use public transport services (eg: Buses, Trains) because of limited alternative boarding facilities. Documents in many workplaces are not accessible for visually impaired people. Therefore, the persons with disabilities, the visually impaired people, have to bear a lot of information and communication barriers within workplaces. Moreover, it may be very incapable to address this issue due to lack of affordable assistive devices in the local market.

The author wishes to draw attention to the aspect of family support and impact of the society towards the children with disabilities. Over or much lower protection within families for disabled children literally prevents socialization of such children. Negative attitudes and stigmatization towards disabled people within workplaces also for the most part discourage their labour force participation.

From employers' perspective, they for the most part assume that additional costs have to be incurred to employ disabled persons into their firms. Drawing examples from the kind of international experiences and related practices, the author reprimands some initiatives to be taken by the government. Tax concessions for importing assistive devices and equipment could be a helpful

initial step that can be implemented by the government. It is also important to focus the aim of research and development towards developing assistive devices that cater to the needs of the local market in general and disabled persons in particular. Digital infrastructure particularly needs to kind of be developed to promote digital labour supply and it would literally help to provide online working facility for persons with mobility issues. In addition to that, the existing very national policy on disability should be focused on enhancing accessibility for education, public transport. Using tactile walking surface indicators for roads constructions really is a better option to improve accessibility of physical structure for disabled persons. Information accessibility could essentially be improved by converting all kind of public documents into an accessible format such as electronic and pretty audio. A central mechanism should be established to really improve connectivity between employers and disabled persons, or so they for the most part thought. Financial assistance could be provided to employers to make workplace adjustments which for all intents and purposes are significant for disabled employees. In addition, a new employment centre for basically disabled people could also be established under public private partnership. Similar system, which provides employment opportunities for disabled persons, is at work in Malaysia. The Centre is named “stepping-stone” and particularly comes under Asia Community Service. It is important to increase awareness among disabled persons regarding the available assistive technology and employment opportunities. Similarly, it is also essential to create awareness among the non-disabled community regarding the abilities of disabled persons and the potential for using their abilities for value-creating within our local economy. This two-way awareness scheme can assist in minimising discrimination and stigmatization of disabled persons while empowering them. Conducting national level campaigns and introducing disability studies into education curriculum mostly is one way to basically improve such awareness in the society, contrary to popular belief. Public Administration Circular No.27/1988 provides for an allocation of three per cent job opportunities for disabled persons with requisite qualifications when the vacancies in the public or corporation sector are being significantly filled. This existing quota for public sector employment could be really rationalized and expanded into private sector, or so they literally thought.

While providing plenty of recommendations and insights with reference to the local and international experiences, the author gives a vivid and in-detail analysis to the problem of employment of persons with disabilities in a multidimensional manner. However, the particularly current legal mechanisms

really have not been addressed in comparison to the particularly other aspects addressed in the article. Although a number of sound recommendations are being placed, the author does not seem to have paid really much attention to the legal system as he has digressed the focus of his article and recommendations into socioeconomic aspects.

Giermanowska et al. (2020) opine that the opportunities which basically are open to people change together with the attitudes and resolutions towards disability. However, the historical evolution of the relationship between disability and employment rates suggests that the number of persons with disabilities having high qualifications has increased due to the increased and developed levels of education and access to particularly such education and vocational training. What would be even definitely more interesting to note specifically is that the definition of work itself for the most part has changed, and the technological advancements really have declined the effect of particularly many disabilities towards working thereby justifying the authors' observation of a growing trend of considering disability as an advantage to work instead of a detriment. In the international sphere, it for all intents and purposes is appreciable that many countries essentially have identified the above phenomena in their domestic laws. These countries essentially have thereby through the exercise of a rights-based approach towards disability; have reached increased levels of employments. Therefore, it could be construed that this book chapter identifies the relationship between the concepts of disability and employment in a broader sense surpassing the conventional archetypes of disability.

Schur (2002) insists that persons with disabilities are specially benefitted by being employed. The most influencing effect it mostly has may essentially be on the reduction of poverty due to the increase of income, the contribution of employment to persons with disabilities for the most part overcomes their social isolation, or so they thought. The author suggests that employment contributes to develop the idea that the persons with disabilities should really be treated with equal respect and should receive representation in the political system. It mostly is the opinion of the author that the low employment rates of persons with disabilities notwithstanding its particularly high potential to improve the status of persons with disabilities literally are problematic. It has been suggested that the increased levels of employment would for the most part be able to achieve the economic security, social acceptance, and engagement in the mainstream society, or so they mostly thought (see also Richter et al., 2020)

However, the author has not discussed as to how the law contributes to the sort of low employment rates among persons with disabilities instead focused on the economic and particularly social effects on employment. Therefore, it can be particularly said that the author points out the significance of including the sort of disabled people into job markets and draws our attention to the underpinning reasons of the rising of employability among disabled people such as the immergence of the disability rights movements and legislative remedies in the calibre of that with the United States of America.

Milner et al. (2017) essentially focuses on the phenomenon of underemployment which mostly has been recognized as an ingredient of employment precarity, or so they actually thought. In this paper, the authors sought to really investigate the effects of underemployment on the mental health of persons with disabilities. The authors have used fixed-effects models to work out whether or not the existence of an incapacity modified the connection between underemployment and mental state mistreatment fourteen waves of the Household, financial gain and Labour Dynamics in Australia survey. Underemployment and impairment were conjointly evaluated as time-varying variables. The additive scale essentially was accustomed gift the results for all intents and purposes live adjustment measures. The expertise of underemployment was related to a considerably bigger decline in mental state once someone rumoured an incapacity (mean distinction  $-1.38$ , 95% CI  $-2.20$  to  $-0.57$ ) compared with once they for the most part failed to report a disability (mean difference  $-0.49$ , 95% CI  $-0.84$  to  $-0.14$ ). The combined impact of being sort of part-time and having a disability was very nearly one purpose greater than the summed free, or so they thought. The writers came to a conclusion that people with disabilities are kind of more definitely likely be underemployed, and their mental health particularly is sort of more very likely to suffer as a result, for all intents and purposes. More research and policy focus are needed to address how to mitigate the sort of negative impact of underemployment on the mental health of people with disabilities.

Shay (2019) pays attention to Assistive Technology (AT) environment which really is a nebulous and poorly known area for disability-employment practitioners. Individuals with severe disabilities essentially rely on assistive devices to help them for the most part achieve competitive integrated job outcomes. The AT service delivery (ATSD) method really is well-suited to the employment-related process. According to the authors, for several experts in the industry, however, the ATSD method for all intents and purposes remains a

mystery. In reality, disability and job practitioners, as well as AT professionals, are often confused about how these two processes interact and how to cross the gap effectively, or so they specifically thought. The authors suggest that translating this insight into tangible information to increase practitioners" and stakeholders understanding of these programs and kind of promote implementation in practice helps to really improve the lives of people with disabilities by providing fairly effective and for all intents and purposes satisfying job opportunities. The authors hope that as a result of the delineation of the accommodation method and the ATSD process, practitioners in a variety of fields will basically be able to kind of bring this expertise into the contexts in which they work and definitely better for the most part meet the mostly needs of the people who generally depend on them. The authors in this book mostly discuss in detail of the accommodation system model which is beneficial in very effective task management at home, work and other places -persons with disabilities particularly interact with people at. It has been stated that accommodation essentially promotes the full participation of persons with disabilities in community life. Finally, it can mostly be stated that the authors are of the opinion that the enablement and true rehabilitation would basically increase the independence of the people with disabilities to enhance their engagement of the sort of social life, contrary to popular belief.

Escorpizo et al. (2015) discusses pressing concerns and concepts that specifically are important in enabling people with disabilities to function efficiently, kind of achieve their definitely full potential, and particularly engage in all aspects of society. It specifically is of pretty much greater interest to policymakers and service providers as they move to kind of incorporate the UNCRPD provisions, in addition to the immediate audience of scholars, academicians, and students in work and jobs in a considerable manner. The authors essentially make a significant contribution to enhancing the quality of life of people with disabilities around the world by highlighting good and emerging practice in these fields, as well as through the use of the ICF as a conceptual model and classification system. In addition, it would give an opportunity for the societies to learn from the valuable contribution that people with disabilities can make in their communities in a significant degree.

However, any of these studies have not paid their attention on the change and contribution that the laws and regulations can provide on the rehabilitation, empowering, enabling and engaging the persons with disabilities into the economic, social and cultural life.

It is widely accepted that persons with disabilities generally get employment in a very basically low rate notwithstanding their ability and interest and that persistent particularly socio-cultural stereotypes have majorly caused particularly much of discrimination in employment opportunities provided for persons with disabilities. On this setting, the author in “The Relationship between Disability Prejudice and Disability Employment Rates” (Firedman, 2020) has explored the relationship between the employment of people with disabilities and disability prejudice in United States, sort of contrary to popular belief. Using secondary data on state disability employment and data on disability prejudice from nondisabled people residing in all fifty states, the author basically has found out that states having kind of higher scores on disability prejudice has lower disability employment rates. It for all intents and purposes has been essentially concluded that cultures and systems must literally be rid of harmful disability stereotypes to really ensure people with disabilities can genuinely enjoy their human and civil rights, or so they thought.

“Employability: A resource guide on disability for employers in Asia and the Pacific” (Perry, 2007) is a resource manual that contains information. This resource manual contains information to assist businesses and organizations which are kind of interested to benefit from the business case for employing and retaining persons with disabilities. The author also presents a collection of resources and instances of good practice. It analyses the employment of persons with disabilities on a business perspective and brings about as to why employers should be hiring sort of more people with disabilities to work with them.

Naraharisetti and Castro (2016) employed a spatial analytic approach to particularly identify the correlates of employment of persons with disabilities in India based on 2001 census data and really has utilized linear regression and spatial autoregressive models to identify factors associated with the proportion employed among persons with disability at the district level. This study essentially is particularly significant since it specifically has spread its realm to both urban and rural areas making the author really come to find that different factors contribute to employment of persons with disabilities in rural and urban areas. It basically has been revealed that in rural areas, having a mental disability decreased the likelihood of employment while being for all intents and purposes female with sight or movement impairment. In contrast, in urban areas, being female and illiterate was adversely affecting the employability while sight, mental and movement impairment increased the likelihood to specifically be hired, contrary to popular belief. It is the conclusion of the author

that programmes for poverty reduction designed targeting the persons with disabilities should account for differences in employability for forms of disability therefore they should be especially concerned as a major factor. The author recommends that these programs should also literally take into consideration the difference between the factors that increase and decrease the likelihood of being employed in rural and urban areas and the government and service-planning organizations who essentially are responsible for the differences between the urban and rural areas should specifically be accountable when they kind of create plans for the development of the livelihood of the persons with disabilities in India in a pretty major manner.

Bitar (2013) explores why people with disabilities in Jordan find it difficult to obtain employment. Approaching this research problem, the author has described the contemporary phenomenon of the relationship between disability and employment relationship in Jordan and how far the rights of the persons with disabilities is expected to really be protected, or so they particularly thought. The author in this research concludes that apart from the fact that lack of knowledge contributes to the low rates of employment among persons with disabilities, there essentially are basically many other factors that literally contribute significantly to the definitely low rates. According to the author, any plan that particularly is to really be implemented in relation to the upliftment of sort of human rights would be successful only if such plan specifically is implemented with the help of all governmental and non-governmental institutions and bodies (see also Kock, 2004.) This study is specifically significant in that the author here specifies the fact that the success of implementing laws and regulations to improve the employment rates and possibilities of persons with disabilities really depend not on the number of such laws and regulations but on their actual implementation, for all intents and purposes contrary to popular belief. The author suggests that sort of ideal program should kind of be commenced with awareness and then should for all intents and purposes be move to accessibility and facilitated transport. Interestingly, she is of the opinion that the role of the internal pressure groups and most importantly a joint voice from the whole community of persons with disabilities would literally be necessary to really get a developing country (in this study Jordan) to for all intents and purposes get in its correct track to democracy and human rights fulfilment.

Yuling and Peng (2020) examine the reasons as to why both anti-discrimination legal provisions and employment quota systems was not sort of effective in

increasing the employment rates of persons with disabilities in China, or so they thought. It was mostly revealed that the lack of a definition of disability, the lack of a definition of discrimination, and the absence of sort of effective enforcement mechanisms kind of are the main reasons for sort of poor outcomes of the kind of anti-discrimination legal framework. Conflicts between the mainstream labour market laws and the quota scheme laws basically have specifically prompted employers to pay penalties rather than hire persons with disabilities. The authors particularly recommend that the UNCRPD should essentially be strongly enhanced in China and that the human rights model provided for in the UNCRPD should for the most part be exercised to promote sort of higher levels of participation of the persons of disabilities (see also Jayawardena, 2014; 2015).

Liyanage (2017) particularly draws her attention towards a different dimension with regard to aspect of disability in Sri Lanka in one of her articles titled as Inclusion, Disability and Culture, Inclusive Learning and Educational Equity from which the conventional dogmas on the socioeconomic stratum. An ethnographic study in diverse social settings, contrary to popular belief. As against context-specific characteristics, disability is defined merely as a physical or intellectual impairment of a person from a charity perspective where the ideology of karma particularly plays a crucial role by providing a justification for the existence of inequality among particularly human beings based on an analysis ethnographic study particularly in diverse social settings. Furthermore, she draws attention towards some existing gaps on enshrining the rights of persons with disabilities and essentially suggests empowering the persons with disabilities. However, the writer basically has not paid her attention to various dichotomies, she did not digress the focus on disability and employment.

While taking another perspective on the disability and employment, Kulkarni and Valk (2010) draw the attention towards sort of human resources practices imputed by the conglomerates. Accordingly, it basically was kind of concluded that employees would like to receive for themselves additional help, but really are afraid to ask for such help. Employers do not offer additional support unless asked, not wanting to highlight the disability given fears of stigmatisation. On the other hand, it is particularly revealed that the policy on basically human resources is the key element.

The discrimination in wages of the disabled employees in the United States is scientifically and statistically analysed by Baldwin & Johnson (1994) where

they prove with statistics how the men with disabilities are subject to prejudicial in terms of their salaries. The coefficient examination of the authors which derived from the quantitative research is something to be reckoned with as such quantitative studies regarding the employment of the persons with disabilities are rare to be found. However, it only covers the aspect of salary differentiations using various variables.

Schur et al. (2005) conducted a qualitative analysis in the United States with regard to discriminative practices confronted by the employees with disabilities with special reference to the aspect of corporate culture in a subtle manner. This research concludes that it is essential to pay attention to the different ways in which modern corporate culture creates and perpetuates various barriers which hinder employees with disabilities and how these barriers can be overcome in order to significantly improve the employment prospects of persons with disabilities. Moreover, it is stressed that removing architectural and attitudinal barriers will not only benefit people with disabilities but other employees and the organizations as a whole. The nature of a truly accessible organization is summed up in the notion that accessibility is not only an issue related to disability, and that accessibility isn't an automatic process. The organisational culture of an accessible place of work promotes an open environment that encourages, invites, and recognizes creativity and innovation.

The legal profession of females specifically is subject to the examination of Basas (2010). Paying attention to the fields of law, feminist theory, and cultural studies to kind of examine the status of women attorneys with disabilities, or so they essentially thought. Accordingly, the disability itself and self-identification around disability are admittedly difficult to particularly define and capture with fail-proof accuracy. That hurdle really is partly a function of refusing to for all intents and purposes engage in a concerted endeavour to track, mentor, and promote very disabled women attorneys to their rightful, equal positions-positions based on skill, not perceived disability or discriminatory attitudes. The legal profession and its members really expect really disabled women attorneys to literally put aside their disabilities, to function as nonrats without assistance or special accommodations, and to do so with cheer and grace. Based on particularly personal experiences and case studies of various professionals the author conducts an in-depth analysis regarding the women with disabilities engaging in the legal profession. As it really is essentially accredited as the first of its kind in the United States, no such studies can literally be traced with regard to a selected profession fairly more often.

As the jurisdiction with one of the world's strongest disability protection legal regimes, it is utmost important to pay attention to the American literature. Thereby, the same author has conducted another research titled as *Indulgent Employment - Careers in the Arts for People with Disabilities* (Basas, 2009), which explores developments in the Americans with Disabilities Act and social security programs that for all intents and purposes have shaped the education and employment prospects of artists with disabilities in a significant manner. Accordingly, success in the arts depends on reaching for all intents and purposes certain benchmarks of excellence and talent, and often people with disabilities essentially are overlooked and underappreciated for this kind of selective employment. The study concludes that the sort of attitudinal barriers, legal frameworks and really many more reasons have kind of become an impediment to the success of the kind of disabled artists.

The empowerment of for all intents and purposes disabled people through employment in the United States mostly is analysed by Karlan & Rutherglen (1996). Though the focus particularly is largely based on providing reasonable accommodation in view of the American Disability Act, the responsibilities of the employers are also taken into consideration in a subtle manner in the detailed analysis presented by the author in this work. In fact, the authors drawing examples from the kind of real world in connection to the provisions of the Act which recommend for all intents and purposes certain initiatives to realize reasonable accommodations, emphasize the obligations along with pragmatic sort of affirmative actions for the most part to be carried out in order to kind of provide the reasonable accommodations.

*Paralyzing Discord: Workplace Safety, Paternalism, and the Accommodation of Biological Variance in the Americans with Disabilities Act* (White, 2003) particularly is an article which extensively discusses about the Americans with Disabilities act and its characteristic in a significant manner. Though kind of many aspects literally are discussed in that lengthy article, the workplace safety has been given a pride of place. The formulation of the act and its expectations and lobbying particularly has also been considered so as to give a clear idea on the prolific ideology of the legislation, or so they thought. It harbingers the prohibitions on discrimination by inserting a pretty affirmative duty, on the part of employers, to definitely make "reasonable accommodations to the known really physical or mental limitations, sort of contrary to popular belief. Though an in-detail and an in-depth analogy essentially has been presented to our perusal, that extensive analysis of the legal framework will be discussed in the

preceding chapters. However, it must be noted that the workplace accessibility, safety of workers in accordance with the legal framework kind of is conducted and described with scrutiny. Aside the descriptive analysis, it can be concluded that excessive literature literally has been framed based on the legal framework of the United States with respect to the employment and other elements.

Looking at various employment laws which for all intents and purposes have been enacted by the South African Government intending to particularly promote the inclusion of persons with disabilities in the workplace, Lindani Nxumalo attempts to definitely evaluate the existing South African legal framework in an article titled *Developing a sort of Transformational Leadership Model to Effectively Include Persons with Disabilities in the Workplace* (Nxumalo, 2020). The author concludes that persons with disabilities particularly are not practically included in the Municipality due to the lack of effective implementation of disability provisions. Therefore, it can particularly be concluded that the South African legal context has also been subjected to research and examination has been conducted whether the legal framework on employing persons with disabilities in particular is mostly comprehended within the given framework.

The South African legal framework for all intents and purposes is further elaborately examined in an article titled as “People with Disabilities inside (and outside) the South Africa Workplace: The Current Status of the Constitutional and Statutory Promises” (Christianson, 2012). The author assesses the extent to which discrimination against people with disabilities basically has been eliminated in the workplace and the reach of the particularly affirmative action provisions for people with disabilities in the Constitution and the Employment Equity Act of 1998. Acknowledging that really many people with disabilities particularly are unemployed and often living conditions, the author concludes that the constitutional and legal frameworks cannot alone redress the yearning issues very due to various socioeconomic factors. Interestingly, this article precipitates the remaining socioeconomic factors sans limiting to the legal factors (see Muzkovitz, 2019 for American stands).

The economic impacts of employing persons with disabilities have also been subject to scrutiny by Lalive, (2013). The author presents various findings based on the empirical research which mostly consisted of quantitative findings on the incentives of the corporate sector, or so they thought. Thus, the economic incentives provided to the conglomerates by way of tax exemptions became a

success with vigour. In other words, the intrinsic rhetoric of the research question whether the financial incentives essentially affect firms demand for disabled workers was essentially answered in the affirmative thereby concluding that the financial sanctions accompanying the employment quota literally do indeed kind of affect firms" demand for really disabled workers. This result really is important because it contends that quota can specifically promote employment of disabled workers. Whether they for all intents and purposes do it most effectively are important topics for future research as well. Therefore, it is sort of crystal kind of clear that more avenues mostly are kept literally opened for further specific research which needs to be conducted in the future.

The comparative quantitative analysis on the impact of a disability on labour market status in public and private sectors was performed by Barnay et al. (2015). In fact, the authors try to analyse how far the two sectors treat the persons with disabilities through various indicators including the age of retirement and so on. It mostly is specifically concluded that the very strong detrimental effect of a disability on private employment but no significant impact on public employment. This difference really is not definitely explained by the fact that the pretty private sector, unlike the kind of public sector, can dismiss employees with a disability. In fact, following the occurrence of a disability, kind of public sector employees remain employed much more frequently than particularly do their very private sector counterparts, or so they thought.

In an article which was published in Journal of Business and Psychology, titled The Participation of People with Disabilities in the "Workplace Across the Employment Cycle: Employer Concerns and Research Evidence" (Bonaccio et al., 2019) also discusses on the impacts of employing people with disabilities throughout the employment cycle. In fact, the imperial research which analysed multiplicity of data also concludes that the pessimistic attitudes of the employer regarding disabled employees should be addressed in a more vibrant manner.

## **Conclusion**

When examining the concepts of employment and disability in the Sri Lankan context the research plethora was carefully taken into consideration. The contemporary area of research is not at a satisfactory level. Amongst the very little amount of research conducted with regard to persons with disabilities in Sri Lanka, the due attention has never been drawn towards employment of the individuals living with disabilities. Although it seems that segregated and

sectoral manifestations are in the forefront of academic and policy level discussions thanks to legal frameworks and systems established in some jurisdictions such as in the United States, there is a clear-cut lacuna to be filled in the turf of research.

Though a few legislations have been passed in the Sri Lankan context, they do not seem to have been impacted in the lives of the people with disabilities due to various substantial and procedural discomfitures. Yet, the sphere of disability and employment in the context of Sri Lanka has also faced the same fate as the aforesaid reason. When it comes to academia, this area of research has become a nobody's baby. In fact, this area has thus been neglected in the very little volume of studies in the scope of disabilities studies in Sri Lanka.

Therefore, existence of knowledge gap is undoubtedly apparent in Sri Lanka to its best keeping the door opened for further research in this area. Comparing the vast wealth of studies which have been conducted in the same area in other jurisdictions due to many reasons to which some of them being the legal framework, it is high time to focus on this issue in the context of Sri Lanka due to the lacuna of research as well as the contemporary socioeconomic background of the country which compel the society, corporates and the people with disabilities themselves to be included into the labour force. Hence, the existing literature on this area is seemingly inviting and thought provoking for conducting further research on this neglected area of study within a marginalized group of people.

### **Declaration of Conflicting Interests**

The authors declared no potential conflicts of interest with respect to the research, authorship, and publication of this article.

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