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DEPARTMENT OF BUSINESS MANAGEMENT  
FACULTY OF BUSINESS STUDIES AND FINANCE  
WAYAMBA UNIVERSITY OF SRI LANKA  
KULIYAPITIYA  
SRI LANKA



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## Wayamba Journal of Management

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**The Impact of Mobile Banking Services on the Customer Satisfaction of  
Commercial Banks in Sri Lanka**

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**Abstract**

The primary focus of this study is to identify the decisive factors that affect customer satisfaction with Mobile Banking Services. The identified independent variables of the study are reliability, efficiency, flexibility, easy-to-navigate, and trust. Primary data was collected through a structured questionnaire from 120 mobile bank users of Commercial Banks in Sri Lanka. The study population was mobile banking users of commercial banks in the Colombo District of Sri Lanka. The hypotheses have been tested through multiple linear regression and the correlation coefficient has been used to identify the relationship between the dependent variable and independent variables. The findings of the study show that there is a statistically significant impact of the reliability, efficiency, easy-to-navigate, and trust dimensions of mobile banking services on customer satisfaction whereas flexibility has a statistically insignificant impact. Easy to navigate and reliability were the most influential dimensions compared to the rest of the mobile banking dimensions and the researcher recommended that commercial banks should expand the web and mobile app quality in order to achieve higher customer satisfaction with mobile banking services.

**Keywords:** *Customer Satisfaction, Commercial Banks, Mobile Banking, Sri Lanka*

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## **Introduction**

### ***Overview of the Study***

The expeditious headway in wireless technology has transposed all economic, cultural financial aspects of Sri Lanka where the mobile phone is one of the major outputs which has now become essential for the endurance of the basic quality of human life (Kahandawa & Wijayanayake, 2014). At present in Sri Lanka, it's not astounding to state that the number of mobile phone ownership is higher than the population of the country (GSMA Intelligence, 2022). Further, it is consequential to observe that mobile phone usage has already reached the bottom-most of society where mobile operators have come up with abundant ways to expand their network to fill any gap that exists (Kahandawa & Wijayanayake, 2014). Hence, mobile phones have created a platform to expand commercial transactions effortlessly and speedily and have created a wide array of business opportunities (Gomachab & Maseke, 2018). Thus, mobile banking is a progressive electronic banking product endorsed by banks around the world that allows customers to access their transaction accounts via their mobile phones to conduct major banking activities without visiting the brick and mortar banks such as balance inquiries, history checking, utility bill payment, fund transferring, etc. (Saleem, & Rashid, 2011). Consequently, in an era moving towards a cashless society and people with overloaded work set up, mobile banking would be an attractive solution to engage in their day-to-day banking activities by saving their precious time without waiting in long queues of bank branches (Gomachab & Maseke, 2018). Because in the

present world scenario people get attracted to the things & methods which can make their busy and complex schedules simpler.

It has been found that around 50% of the customers quit their transaction accounts due to poor customer service (David, 2018) and around 20% due to dissatisfaction with existing financial services (Kahandawa & Wijayanayake, 2014). Due to such issues, the banking sector has embraced digital platforms; online banking, mobile banking, automated teller machines, credit/debit cards, etc., and has addressed many barriers such as poor service quality, high cost, and poor accessibility, etc., and supported them in solving their financial problems more easily in every aspect than early (Fiona & Perera, 2022). In Sri Lanka, the number of mobile connections was 149.9% of the total population in the year 2022 (GSMA Intelligence, 2022). Thus, there is a high potential to increase the usage level of existing customers and cater to the underserved population through mobile banking services. In order to become a mobile bank customer, he/she has to register for all those mobile banking services with the bank and should download the mobile banking application to the phone. Once the customer installs the application, he/she can use it free of charge (Al-Jabri & Sohail, 2012). In developing countries like Sri Lanka, even though mobile phone usage is higher and mobile banking services provide customers with many superiorities compared to traditional banking services still the rate of adoption of these technological advancements seems extremely low (Kahandawa & Wijayanayake, 2014). But with the effect of the COVID-19 pandemic, there were some positive

indications of people towards technology and acknowledged the importance of adopting digital technologies in executing their daily operating activities and fulfilling their financial requirements (Riza, 2021). Therefore, Digital banking products were highly promoted and many existing customers have activated the Internet banking option and have used their mobile phones to execute many of their financial transactions including paying utility bills, fund transfers, checking balances, etc. (Riza, 2021).

Thus, it is significantly important to sustain the sudden development in the adoption of mobile banking services and other digital platforms of banking in Sri Lanka. Accordingly, maintaining and escalating the level of satisfaction of the existing customers towards these technological advancements are a major concern of the stakeholders in the field of study. According to Kotler (2006) and Keller & Lehmann (2006), satisfaction is a person's feeling of fulfillment or despondency arising from comparing a product's performance in relation to the customer's expectation. Accordingly, customer satisfaction has been acknowledged as a dominant component that drives customer retention, loyalty, and post-purchase behavior of customers.

### ***Study Objectives***

There may be diverse factors that affect customer satisfaction with a product or a service and identifying the most important factors relevant to higher customer satisfaction with mobile banking services is very much crucial for the stakeholders in the banking and finance sector and to the overall financial stability of the country. Hence, the primary objective

of this research is to identify the decisive factors affecting customer satisfaction with mobile banking services and the specific objective is to investigate the significant impact of the selected variables on customer satisfaction with mobile banking services.

### ***Empirical and Theoretical Review***

Technology has accelerated the living of modern man in every aspect including food, health, entertainment, transport, banking, etc. The role of the internet among these advancements is crucial in encouraging global communities to connect to one another and promote virtual space in the business environment. Thus, today banks are rapidly moving from traditional banking to a technology-driven banking environment. Consequently, banks have invested remarkably in technology-driven banking products and services with the objective to meet the competition by giving superior customer service in banking (Saleem & Rashid, 2011). Accordingly, digital financing products and services such as online banking, mobile banking, ATMs, credit/debit cards, etc. cater to the existing traditional financial facilities through digital platforms such as computers, tablets, and smart mobile phones (Mhlanga, 2020). Especially with the rapid advancement in global mobile communication technology, using a smartphone has become very elementary in the World (Souiden, Ladhari, & Chaouali, 2021). Thus, a customer who would be registered with a mobile banking facility enables them to perform main banking activities such as balance inquiries, utility bill payments, fund transfers, making credit installments, checking account balances, and payment

history, etc. Since these technological advancements have been adopted by almost all the Banks in the industry, it is paramount important to become distinctive from their digital financial products and services in the opinion of their customers. Thus, empirical studies propose that it is very much crucial to increase their service quality and achieve higher customer satisfaction in order to retain their customer base (Piercy, 1996; Saleem & Rashid, 2011).

Customer satisfaction is a post-purchase assessment of a service offering (Oh, 2000, Bolton and Drew 1991). A conventional clarity of customer satisfaction accompanied the disconfirmation paradigm of consumer satisfaction or dissatisfaction, proposing that it is the result of interaction between the consumer's pre-purchase expectations and post-purchase evaluation (Cadotte et.al., 1987). In agreement with previous studies on customer satisfaction, it is suggested that in order to achieve higher customer satisfaction, businesses should reach customer expectations using different strategies. In the present day, all marketing activities of businesses have been affected by technology, especially Internet technology. Using technology offers impressive attributes, especially for customer-oriented businesses like banks such as money-saving, time-saving, any-time accessibility, high security, ease to use, etc. (Lai & Li, 2005). Thus, in the literature, it has been discussed that it would be important for the banking industry to guarantee that their digital financial products and services like mobile banking are including the key dimensions to satisfy their customers. Different studies have proposed different dimensions for customer

satisfaction with mobile services. Primarily the empirical studies proposed that the positive impact of major dimensions like convenience, ease of use, reliability, flexibility, efficiency, navigation, security and, trust could create higher customer satisfaction of mobile banking (Geebren, Jabbar & Luo, 2021; Khan, Lima, & Mahmud, 2021; Rahman, Hasan & Mia, 2017; Saoji & Goel, 2013)

Technology Acceptance Model (TAM), is a well-renowned theory on an information system that showcases what causes people to accept or reject and adapt to technology applications (Davis, 1989; Masrom, 2007). It consisted of dual characteristics/ two theoretical constructs/ two dimensions as perceived usefulness (PU) and perceived ease of use (PEOU) (Davis, 1989) which act as the fundamental determinants of a user's acceptance of an information system (Tahar et al, 2020). Since its introduction the model has been generally used in foreseeing the acceptance, adoption, and use of information systems (Al-hawari & Mouakket, 2010).

The theory of "Diffusion of Innovation" is an effective change model which guides technical innovation, to make itself updated and modified to suit all levels of adopters (Kaminski, 2011). The theory argues that when people are exposed to fresh ideas, products, or practices which contain information exchange or dissemination within the social systems, diffusion occurs. Rogers (2019), demonstrates five major characteristics of an innovation, namely, compatibility, comparative advantage, trial ability, complexity, and observability, and these features perform a significant role in influencing the rate of innovation

diffusion. Further, Rogers has emphasized the importance of other factors such as trust that can make a higher impact on the perception of customers in adapting to these new technologies. (Waititu, 2019).

The study is predominantly founded on the two theories; the TAM model and Diffusion of Innovation and has been taken as the basis to develop the illustrated conceptual model in Figure 01.

## Methods

### *Study Variables and Hypothesis Development*

The main independent variables identified in the study are Reliability, Efficiency, Flexibility, Ease of navigation, and Trust. The variables measurement indicators were adopted by previous work; Reliability and Efficiency construct the Perceived Usefulness (PU) and flexibility and ease to navigate denote the Perceived Ease of Use (PEOU) of the mobile banking services (Rahmiati, & Jelitalia, 2021; Ghani, Rahi, Yasin, & Alnaser, 2017). Initially, the TAM model includes Perceived Usefulness and Perceived Ease of Use only, but later scholars indicated 'Trust' to be adopted as a new variable to the banking industry's TAM model and suggested to be included when determining e-customer satisfaction (Amin 2016; Zavareh et. al, 2012; Van, et. al, 2021; George & Kumar as cited in Rahmiati, & Jelitalia,2021).

Reliability is on-time consideration and it means the product or service reaches the required functional standards which would easily fulfill the customers' requests. Reliability is influenced by customer satisfaction with the quality of goods and services (Salihu & Metin, 2017; Omar, Saadan & Seman, 2015; Fang et al., 2013;

Zavareh et. al, 2012). Therefore, if the service providers can increase the reliability of their online banking services, end users will be satisfied more with the facility and will increase their usage level. Thus, it can be hypothesized that;

**H1: There is a significant positive impact of Reliability on customer satisfaction with Mobile Banking services**

Users of mobile banking services find it more efficient to do banking activities through mobile. Because they are able to obtain a huge number of mobile banking services such as checking account balances, transaction history, and doing fund transfers and primarily customers do not want to visit branches to check and do their transactions. Because by using their mobile banking services, they can do it while staying in any part of the country (Saoji & Goel, 2013). Thus, it has been argued in the literature that mobile banking/e-banking can increase the efficiency of its services and give higher customer satisfaction than obtaining traditional banking services (Zavareh et. al, 2012) while some argue that efficiency has a negative effect on customer satisfaction (Salihu & Metin, 2017; Ma & Zhao, 2012). Based on the above literature, the researcher hypothesized that;

**H2: There is a significant positive impact of Efficiency on customer satisfaction in Mobile Banking Services**

The process of using mobile banking services is much more flexible and they only need to install the application on the mobile phone and the PIN number (Sharma & Singh, 2012). A user of mobile banking services would be able to do banking activities while traveling or staying in

any comfortable zone of the user and engage in many banking activities very easily with less time and cost consumption (Andreou et al., 2000). Thus, Flexibility means customers believe that it would be less effort, and much easier to achieve customer aims through the particular system and affect their satisfaction (Ma & Zhao, 2012; Behjati et al, 2012). Accordingly, it can be hypothesized that;

**H3: There is a significant positive impact of Flexibility on customer satisfaction with Mobile Banking Services**

Usage of mobile banking and its level of satisfaction is strongly dependent on the ability to navigate the website without any issues or with minimum issues. It is noted that self-service technologies save time, money, and interpersonal interactions. Therefore web satisfaction is also really important (Van Riel et al, 2001; Zavareh et. al, 2012; Ma & Zhao, 2012). Thus, it is hypothesized that;

**H4: There is a significant positive impact of Ease of Navigation on customer satisfaction with Mobile Banking Services**

When deciding the use of mobile banking services, the security and trustworthiness of the service are very important. Studies show that trust is a key factor in stimulating online banking and a strong determinant of customer satisfaction. The insecurity that an individual often assumes makes trust a necessary component. Otherwise, the consumer is reluctant to use online banking services and also refuses to continue using the services. (Pikkarainen, 2004; Zavareh et. al, 2012; Ma & Zhao, 2012; Rahmawaty, Kartawinata, Akbar & Wijaksana, 2021; Chu, Lee & Chao 2012). Thus, it was hypothesized that;

**H5: There is a significant positive impact of Trust on customer satisfaction with Mobile Banking Service.**

This is a positivistic study that has adopted the deductive approach to develop its conceptual framework by making theories and empirical studies to find its base. The study has incorporated the quantitative methodology to find the relationships, causes, and impact of selected variables on dependent variables from a single group of respondents under non-experimental conditions (Ary et al., 2006; Blumberg, Cooper & Schindler, 2005). The population of the study was the mobile banking users of Commercial Banks in the Colombo District of Sri Lanka. Colombo district was selected based on the fact that it has the highest digital finance usage and was the first to adopt technology-based financial services including mobile banking (Kahandawa & Wijayanayake, 2014). In order to achieve the objectives of the study, primary data were collected via survey using a self-administered Likert-scale questionnaire. The questionnaires were distributed among 150 mobile banking users and 135 responded which added to a 90% of response rate. The time horizon of the study is cross-sectional as the data collection was done only at a particular time (Babbie, 1990). Descriptive analysis, Correlation analysis, and Multiple Linear Regression were performed to analyze data. IBM SPSS 26.0 was used to perform the analysis.

## Results

According to Table 2, the mean values of the main constructs spread between 3.92 and 4.18. Accordingly, all of the five variables are at an agreeable level

of satisfaction with mobile banking service in terms of reliability, efficiency, flexibility, ease of navigation, and trust. Respondents seemed more tend towards satisfaction with the Flexibility of mobile banking service as it has the highest mean which is 4.18 and trust in mobile banking services has the lowest satisfaction level with a mean of 3.92. As per this preliminary analysis, the variables show a possible positive association with the dependent variable, customer satisfaction.

The correlation analysis presented in Table 3 exhibits the bivariate analysis of the relationship between the independent variables with the dependent variable of the study. Four variables were reported to have a strong positive association with the dependent variable which was above 0.7. The flexibility is having a moderate positive association with customer satisfaction as the estimated coefficient value was in between the 0.4 to 0.7 range. Accordingly, Reliability, efficiency, ease of navigation, and trust are showing a significantly high positive relationship with customer satisfaction with mobile banking services while flexibility has a moderate positive association. Conclusively, trust has the highest significant association with customer satisfaction with mobile banking services thus needs to give special attention to it so as to increase customer satisfaction.

The model is significant ( $p < 0.001$ ) and the adjusted coefficient of determination (adjusted  $R^2$ ) value of the regression model is 0.886 which denotes that 86.6% of customer satisfaction with mobile banking service is explained by the model consists of variables; i.e. Reliability, Efficiency, Easy to Navigate, and

trust. As per the multiple linear regression analysis test results presented in Table 04, the impact of Reliability (0.252), Efficiency (0.169), easy-to-navigate (0.253), and trust (0.204) are statistically significant at 0.01 level whereas the impact of Flexibility (0.039) was statistically insignificant to determine the customer satisfaction of mobile banking service. In pertinent to the study results, Easy-to-navigate (0.253) is the key determinant of mobile banking customer satisfaction followed by reliability (0.252) and Trust (0.204). Efficiency (0.169) has the least impact on customer satisfaction with mobile banking services.

## Discussion

In light of the above test results, it is noted that the researcher has enough evidence to accept the hypothesis H1, H2, H4, and H5 and conclude that there is a significant impact of reliability, efficiency, ease to navigate, and trust on customers the satisfaction of mobile banking services. Hypothesis H3 failed to accept as the results indicate an insignificant impact of flexibility on customer satisfaction with mobile banking services.

Based on the literature, the study has recognized five determinant factors of mobile banking services as reliability, efficiency, flexibility, ease of navigation, and trust, and tested their association and impact on customer satisfaction of mobile banking users. The study findings revealed that all the study variables were significantly positive within the range of moderate to strong levels of association with customer satisfaction which complied with some of the previous literature (Kahandawa & Wijayanayake, 2014;

Asfour & Haddad, 2014) enabling the researcher to achieve the first objective of the study confirming all the identified determinants of mobile banking services are significantly important to determine the customer satisfaction of mobile bank users. Thus it could be concluded that if banks can increase the quality of their mobile banking services in terms of reliability, efficiency, flexibility, ease of navigation, and trust, they can offer higher customer satisfaction to their users.

The second main objective of the study explain the impact of each variable on customer satisfaction with mobile banking services. Even though all the variables were significantly associated with customer satisfaction, only reliability, efficiency, ease of navigation, and trust were having a statistically significant impact on customer satisfaction with mobile banking services (Gomachab & Maseke, 2018; Hossain & Hossain, 2015; Kahandawa & Wijayanayake, 2014; Asfour & Haddad, 2014) whereas the impact of the flexibility was insignificant to determine customer satisfaction. Among the significant factors, ease of navigation and reliability make the highest impact on customer satisfaction. Ease of navigation indicates the customers' satisfaction with web and/or mobile applications. It measures how easy it is to use the web or mobile app without interruptions while performing different banking activities, thus banking industry must pay attention to enhancing the navigation friendliness of their mobile applications since it is recorded to be the most influential factor.

### **Conclusion**

Today mobile phones have become a

rudimentary requirement for people. Mobile banking service provided through mobile phones can be categorized as the latest advancement in electronic banking, as it has widened customers' access to bank accounts through wireless channels. Thus, mobile banking service is a much more time-required banking product introduced by banks to enhance the banking practices of existing customers and to reach underserved customers. Mobile banking services enable customers to perform prime banking activities (balance inquiry, account history, utility bill payments, fund transfers, etc.) without visiting the bank branch. In Sri Lanka, almost all commercial banks are offering mobile banking facilities to their customers. But yet it has been observed and empirically studied that there is a poor adoption of mobile banking services by the existing customers in their banks and it is beneficial for the banking industry to know what elements would determine the effectiveness measured in terms of customer satisfaction of mobile banking (Kahandawa & Wijayanayake, 2014). Thus, this study was carried out with the aim of achieving two objectives; i.e. to identify the decisive factors affecting customer satisfaction with mobile banking services and to investigate the impact of those factors on customer satisfaction with mobile banking services.

The study recommends primarily to the service providers and software developers of mobile banking services to ensure the web and mobile app quality and user-friendliness using fitting strategies and methodologies to provide a smooth navigational experience when browsing the web using the mobile app through their

mobile phones. Further, the researchers highly recommend improving the quality of the services to increase customer satisfaction in terms of reliability and broaden the awareness of customers on the benefits of using mobile banking, and provide technical assistance as they would become much more familiar with the service.

The researcher further recommends identifying different strategies to increase the trust of customers towards mobile banking services by ensuring that doing transactions by themselves using a mobile phone is safe and

trustworthy and has a higher security option to protect their private information. Further, future researchers can obtain a more representative sample including non-users of mobile banking services with a higher sample size than the current study, and test the impact of other variables such as social influence, risk, compatibility, relative advantage, etc.

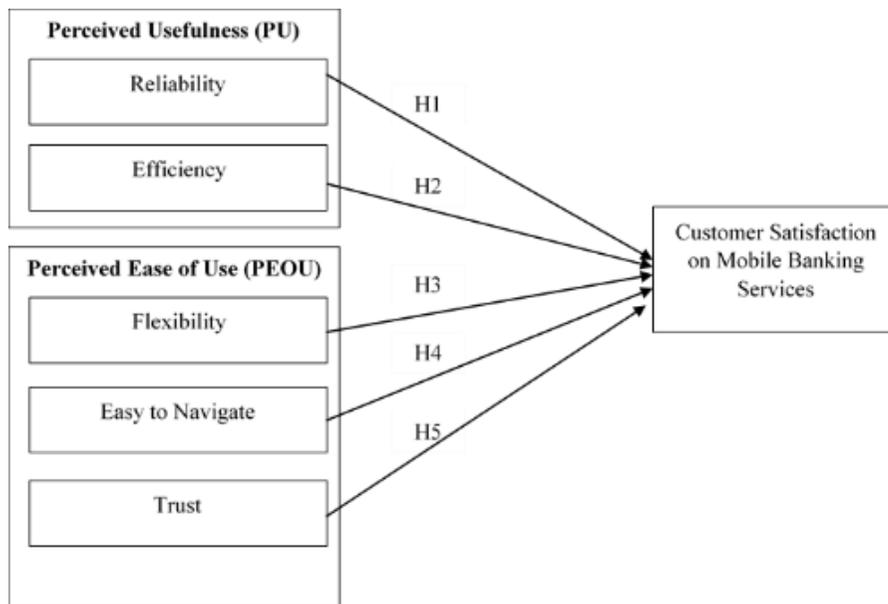
### Author Contributions

Both authors have made substantial contributions equal to the conception and design, or acquisition of data, and the analysis and interpretation of data.

## Figures and Tables

**Figure 1**

*Conceptual Model*



**Table 1**  
*Characteristics of the Respondents*

	<b>Variable</b>	<b>Frequency</b>	<b>Percent</b>
Age	21-30	78	65.0
	31-40	36	30.0
	41-50	6	5.0
Gender	Female	78	65
	Male	42	35
Occupation	Manager	30	25
	Executive	36	30
	Entrepreneur	26	21.7
	Assistant interns/contract	10	8.3
	balance inquiry/emails& text alerts/utility bill payments	18	15
Frequency used services	balance inquiry/emails& text alerts/utility bill payments/order check book	50	41.7
	balance inquiry/emails& text alerts/utility bill payments/order check book	42	35
	balance inquiry/emails& text alerts/utility bill payments/order check book	16	13.3
	balance inquiry/emails& text alerts/utility bill payments/order check book/internal AC fund transfers	12	10

*N= 120*

*Source: Researcher constructed*

**Table 02**  
*Descriptive Statistics of the Study Variables*

	<b>N</b>	<b>Minimum</b>	<b>Maximum</b>	<b>Mean</b>	<b>Std. Deviation</b>
Reliability	120	3	5	4.15	.545
Efficiency	120	2	5	4.07	.604
Flexibility	120	3	5	4.18	.565
Easy_to_Navigate	120	2	5	4.13	.593
Trust	120	2	5	3.92	.904

*Strongly Disagree=1, Disagree=2, neither agree nor disagree=3, Agree=4, Strongly Agree=5*

*Source: Researcher constructed (IBM SPSS 26.0)*

**Table 03**  
*Correlations Analysis*

		Reliability	Efficiency	Flexibility	Easy to Navigate	Trust
<b>Customer Satisfaction</b>	Pearson Correlation	.701**	.719**	.616**	.725**	.780**

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

**Table 04**  
*Regression Analysis*

Model	Unstandardized Coefficients		Standardized Coefficients		Sig.
	B	Std. Error	Beta	t	
1 (Constant)	.304	.144		2.120	.036
Reliability	.252**	.037	.280	6.884	.000
Efficiency	.169**	.038	.209	4.490	.000
Flexibility	.039	.036	.045	1.101	.273
Easy_to_Navigate	.253**	.032	.307	7.797	.000
Trust	.204**	.023	.377	9.013	.000

Dependent Variable: Customer Satisfaction

The regression model of the study is as follows;

$$\text{Customer Satisfaction} = 0.304 + 0.252 \text{ Reliability} + 0.169 \text{ Efficiency} + 0.253 \text{ Easy to Navigate} + 0.204 \text{ Trust}$$

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**The Perceived Barriers to Transition to Entrepreneurship: A Case of Sri Lanka**

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**Abstract**

The Great Resignation, or the Big Quit, shook the world of work, leaving it questionable whether organizations could find and retain the necessary talents. Nevertheless, the shrinking Transition to Entrepreneurship (TE) demonstrated that developing countries were less affected by this massive attrition wave. However, in the context of developing countries, the causes of thinner TE remain unknown. The current study investigated the perceived barriers to TE in the Sri Lankan context. The present study followed a quantitative approach to test the extent to which demographic, environmental, motivational, human capital, and behavioral factors are perceived as barriers to TE intention. Participants in the field survey provided the data based on a psychometric measure with a seven-point response scale. Structured Equation Modelling (SEM) analyzed the data. According to the findings, employees in Sri Lankan context are more likely to avoid transitioning from their current employment to entrepreneurship because they perceive behavioral, human capital, and demographic factors as barriers to TE. However, the prospective entrepreneurs in the Sri Lanka did not perceive motivational and environmental factors as significant barriers to TE. The implications suggest modeling TE by incorporating the identified roadblocks to TE to predict entrepreneurial penetration in developing countries.

**Keywords:** *Perceived Barriers, Structured Equation Modelling (SEM), Transition to Entrepreneurship (TE)*

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## Introduction

Many of us expected that everything would return to normal by the beginning of 2022, with many people returning to their jobs. However, due to the advent of new COVID-19 variants, a fierce talent battle, record-high quitting rates, and the most astonishing inflation levels in a generation, 2022 proved to be more unpredictable than planned.

As the globe deals with fresh COVID-19 variation waves, hybrid work continues, and the reality of real wage cutbacks for employees as annual compensation rises behind inflation, the volatility level only worsened in 2022. These realities are stacking on top of longer-term changes related to technological changes, economic downfalls, and persistent political unpredictability. Added to the Russian - Ukraine war fight, massive distortion of international trade gave birth to the global energy supply crisis. Consequences appear very specular for developing countries with thinner economic reservoirs.

Responding to COVID, handling layoffs during the recession, and switching to hybrid work have all been centred on Human Resource (HR) teams. HR is increasingly at the heart of hiring and retention challenges and is driving significant demand for talent. Job posts for HR have increased by more than 130% since COVID-19, even those for software programmers (Bieńkowska et al., 2022; Vyas & Butakhieo, 2021). It has been mounting over the past two years. Difficulties have caused many workers to re-evaluate their objectives in terms of their careers. Employees had a lot more options when businesses resumed growing and increased recruiting. The result is the shocking acceleration of attrition in all capacities.

When we look back, the early 2020s will be remembered as pivotal in elevating and reshaping the role of human resources in many organizations. The last few years have provided enormous learning and growth for HR professionals but have also resulted in significant burnout, with unique causes and solutions. Companies must get ahead of an attrition wave of talent that they cannot afford to lose, with more demand for HR hiring than ever before.

Even though the story of the Great Resignation or Great Reshuffling has been told before, it still holds today. Early in 2022, voluntary attrition rates remained high, and many businesses still had difficulty adjusting. Another aspect of the great reshuffling many people ignore is the individuals they rely on to guide them in the right direction. According to the most recent US Bureau of Labour and Statistics data, the share of workers who voluntarily leave their jobs reached a new high of 3% in September 2021 (Maury, 2022).

Nevertheless, the story of developing countries appears different. The recent statistics of developing countries in the Asian region show that they were less affected fiercer "Great Resignation." For instance, according to a Robert Walters survey conducted in June 2022, the Southeast region experienced a 'Not-So-Great' resignation: fewer employee departures, and higher retention rates. Although many Southeast Asian professionals have considered leaving or transferring employment, only a very few have done so (Robert Walter, 2022). According to the survey, they are likely to stay in their present employment until they decide on their future career steps (Robert Walter, 2022). In addition, facts about Vietnam demonstrated that the Great Resignation phenomenon was not

as prevalent in Southeast Asia as it was in other countries in the West. The reality of the South Asian region is not different from that of Southeast Asia. The alarming economic recession prevents people from giving up their jobs for any form of secondary desire.

As with many other developing countries, Sri Lanka suffers from a low penetration of entrepreneurship. For instance, 57% of the Sri Lankan labour force consists of employees, and only 3% carry the title of "employer" (Appendix: Table 1). This is below the region's average of 27.5% and the majority of countries in the neighbourhood (e.g., Indonesia, China, and Bangladesh) possess higher values (Lee & Mirza, 2017). It can be observed that the employer's rate is getting lower year by year, highlighting individuals' resistance to becoming entrepreneurs. Since enterprises are the engine of economic growth, this would adversely affect the Sri Lankan economy, particularly for employment generation in the future. By promoting college-fresh entrepreneurs and transitioning employees to entrepreneurship, several developed countries enjoyed high startup rates. New Zealand, for example, supports and enables micro-enterprises with fewer employees among employed people (Small Business, 2022).

Entrepreneurs in impoverished nations are typically driven by necessity rather than market opportunity (Hessels et al., 2008). Being a developing country, Sri Lanka is also experiencing this, with entrepreneurs launching new businesses in response to their unhappiness with the current state of affairs (Dhanapala, 2022). Consequently, current employees who are unsatisfied with their current position may look for alternative opportunities. However, most of the time, the career option is not

"entrepreneur," but "employee" in another firm (Hyytinen & Ilmakunnas, 2007). As a result, job mobility is quite prevalent both within and between industries (AbouAssi et al., 2021). As a result, TE has had no or little influence on venture development.

The formation of new businesses is highly desirable in the pursuit of economic development. This has been adequately recognized by the policy framework, which provides substantial support for the formation of entrepreneurial initiatives. Additionally, Sri Lankan secondary and tertiary educational institutions offer entrepreneurial development courses, degree programmes, and other facilities to encourage young citizens to create new businesses. However, despite all these penetrations, Sri Lanka is still lacking in entrepreneurial development. Sri Lanka's young population is still depending on established businesses for their career destinations rather than establishing their own businesses. In Sri Lanka, the attitude toward starting a new venture as an occupation is low (Weeratunge, 2010).

Cochran's theory of entrepreneurship (1965) posited that entrepreneurial efforts can result from the occupational hazards and expectations that employees encounter from their profession (Otaghsara & Hosseini, 2014). It discusses how variables such as cultural values, role expectations, and social sanctions influence entrepreneurship. This view also contends that entrepreneurs are not outliers. Rather, they are individuals who represent society's modal personality. In a nutshell, this theory talks about the social aspect of entrepreneurship, where an employee would consider a social perspective in evaluating the entrepreneurial opportunities he or she encounters. Besides the numerous applications of

Cochran's theory of entrepreneurship in explaining entrepreneurial motives backed by social drives, particularly the gendered perspectives, the theory is still novel in its evaluation within the framework of barriers to transition (Cochran, 2019).

Despite several attempts to foster new entrepreneurial setups, neither politicians nor researchers have devoted sufficient attention to studying why TE is not significantly contributing to the development of new companies. As a result, it is both theoretically and practically critical to determine why TE is inadequate, particularly in developing countries. The present study, based on a societal standpoint, attempted to detect the barriers perceived by current employees toward the transition to entrepreneurship. The anticipated implications would be mutually beneficial to policymakers and potential entrepreneurs. Policymakers can detect and target policy reforms to dilute the barriers with high intensity, while employees with an entrepreneurial mindset can identify the potential self-generated roadblocks on their way toward an entrepreneurial career.

### **Transition to entrepreneurship**

TE is "leaving one organization to found another" (Dobrev et al., 2005, p.434). Alternatively, this may be to become an entrepreneur/self-employment to transition to unemployment. In contrast, organizational employees may engage in entrepreneurial activities on a part-time basis while continuing with their organizational employment. For instance, Dyer and Handler (1994) put this as "entrepreneurial careers by moonlighting" starting from the soft layer so the risk of failures can be kept minimised (p.72). In literature, TE is referred to as the partial transition to

entrepreneurship as it involves creating their own businesses while keeping their regular employment (Gacheu, 2007). Whether full or partial, as compared to employee transition to unemployment, transition from employment to entrepreneurship is often desirable from economic and social standpoints (Hyytinen & Maliranta, 2008). Hence, the entrepreneurial literature predominantly occupied the employee transition to employment as opposed to the employee transition to unemployment.

### **Cochran's theory of entrepreneurship**

According to Cochran's (1965) theory of entrepreneurship, entrepreneurial endeavours might originate from the occupational dangers and expectations that individuals face in their field (Otaghsara & Hosseini, 2014). It examines how cultural values, role expectations, and social punishments impact entrepreneurship. It claims that entrepreneurs are not anomalies. Rather, they are individuals who represent the modal personality of society. In Cochran's theory of entrepreneurship, Cochran underlined the importance of cultural values in both entrepreneur and investor attitudes. Entrepreneurs, as he claims, are impacted by how their culture regards key aspects of their profession, such as risk-taking attitudes and the difficult degree of professional advancement. One example is India's Parsi community, which, while modest in size, makes significant contributions to the country's commerce and entrepreneurial activity (Times Now, 2020). Overall, this theory discusses the social part of entrepreneurship, in which an employee considers a social viewpoint while evaluating entrepreneurial prospects. Apart from the multiple applications of Cochran's

theory of entrepreneurship in understanding entrepreneurial motives reinforced by social forces, notably gendered views, the theory remains innovative in its evaluation within the context of transition obstacles (Cochran, 2004). Hence, the present study defines the conceptual frame of the study based on the perceived obstacles in Cochran's theory of entrepreneurship, in which dominant social factors are interpreted as obstacles for a movement from employment to entrepreneurship.

### **Perceived barriers to transition to entrepreneurship**

In comparison to other traditional jobs, being an entrepreneur is a unique career path in that the advancement of an entrepreneurial career does not often follow a chronological route (Burton et al., 2016). Employee motives to leave their employment and pursue an entrepreneurial career have been predominantly described by push and pull forces (Dawson & Henley, 2012). Pull factors, according to Shane (2000), boost an employee's understanding of prospects in certain industries and self-confidence in new business development, so driving a transfer to entrepreneurship (Audia & Rider, 2005a). Push mechanisms, on the other hand, originate from employee discontent with existing organizational job circumstances in comparison aspirations in an entrepreneurial career (Moore & Muller, 2002). Employees will generally be expected to migrate to entrepreneurship when they discover an entrepreneurial opportunity with a perceived opportunity cost greater than continuing in employment, given the employees' personal and social capital. While some workers may uncover entrepreneurial potential and aspire to migrate, only a handful may really do so since "not all identified chances are

realized" (Shane et al., 2000). However, due to a variety of issues, most workers are hesitant to make the shift to entrepreneurship. The objective of the study attempts to analyse those elements or impediments that might be regarded as the primary roadblocks to employee transfer to entrepreneurship. As a result, the following five characteristics were identified as major roadblocks to TE: Demographic Factors, Human Capital Factors, Motivational Factors, Environmental Factors, and Behavioural Factors. The hypothesized association among the variables are graphically depicted in Figure 1 (Appendix).

### **Methods**

The study is epistemological as it investigates the assumed relationship in light of the existing theoretical foundation. Furthermore, the study is characterized by a positivistic research philosophy because it assumes that the variables have objective behavior that can be confirmed by the fractal data obtained from the research site. Additionally, the study assumes that the behavior of these variables carries lasting effects on the behavior of the study subject, employees. The research approach is identified as deductive, as it developed its reasoning based on the available theoretical support. The study collects quantitative data and interprets them objectively. Hence, the methodological choice of the study is quantitative, while the research strategy is the survey method. This is a cross-sectional study in which data collection was performed only once. The study tested to what extent certain factors are perceived as barriers to TE. Such five factors were previously proven to be the determinant of TE intention (Wijethunge et al., 2020; Tennakoon et al., 2021). They were demographic, environmental, motivational, human

capital, and behavioural factors. The instruments with acceptable levels of reliability and validity measured the variables. Each factor assesses the respondent's dominant attributes with the potentiality to affect a TE decision [i.e., demographic factors (marital status, parenthood), environmental factors (access to finance, business network), motivational factors (entrepreneurial passion, economic motive), human capital factors (entrepreneurial education, previous business experience), and the behavioral factors (epistemological belief, self-efficacy)]. The TE intention, the predictor variable, was tested using their entrepreneurial propensity (Appendix: Table 2). The survey instrument was a semi-structured questionnaire (58 items), which ranked the responses on dichotomous, multiple-choice, and seven-point Likert scales. Adopting cluster sampling, 218 employees of multi industries made the sample. The employees currently employed in both private and state establishments were surveyed. The profiles of the respondents are summarized in Table 3 (Appendix). Structured Equation Modeling (SEM) with the SMART PLS statistical package analysed the data.

The sample profiles evidenced the representativeness of the sample units (Appendix: Table 3). The majority of respondents were male. Males' entrepreneurial orientation and risk-taking are reported to be ahead of that of females (Tennakoon, 2017), as are their entrepreneurial propensities (Koellinger et al., 2013). Most of the sample represents the age range of 29–42 years (years of birth: 1981–1994). They represent the "digital natives," with significant involvement in technological advancements (Dingli & Seychell, 2015, p. 9). Although most of them are married, they do not have

children. This could be a penetrating factor for TE due to the lowered risk and the possible impact of such a decision on personal life. Although most of them are married, they do not have children. This could be a penetrating factor for TE due to the lowered risk and the possible impact of such a decision on personal life. The job positions and highest educational qualifications resemble the majority's financial and educational backgrounds, which would facilitate a transition decision.

## Results

Descriptive statistics identified the nature of the data distribution, while the SEM was equipped to test the study's hypotheses. Table 4 (Appendix) presents the summary of descriptive statistics for the study variables. The statistics evidenced a fair distribution of responses across possible response items with an acceptable degree of variation.

Sarstedt et al. (2014) recommended data analysis in PLS-SEM in two phases: 1. assessment of the measurement model (also referred to as the outer model) and 2. assessment of the structural model (also referred to as the inner model). The assessment of the measurement model involves checking for reliability and validity properties. They include Composite Reliability (CR) to evaluate internal consistency, individual indicator reliability, and Average Variance Extracted (AVE) to evaluate convergent validity (Hair et al., 2013). The conceptual model of the present study consists of Lower Order Constructs (LOC) and Higher Order Constructs (HOC). Thus, their measurement models are evaluated separately using the results of PLS-SEM and presented next.

The first low-order measurement model

consisted of items and their respective latent variables. The authors used the disjoined approach to estimate the latent variables. Consequently, the calculated values of the latent variables (latent variable scores) in the low-order model were fed to the latent variables of the second-order model. Table 5 (Appendix) presents the latent variables' loadings, validity, and reliability statistics after reducing the items with poor loadings.

The reflective measurement model of the study was evaluated for internal consistency reliability, convergent validity, and discriminant validity (Hair et al., 2013). Composite Reliability (CR) indicates internal consistency reliability, which assesses the congruence of the instrumental items (Hair et al., 2013). All the CR values satisfy the base value ( $> 0.70$ ). Thus, the internal consistency of the first low-order measurement model is established. Convergent validity refers to the extent to which a measure correlates positively with alternative measures of the same variable (Hair et al., 2013). In PLS-SEM, Average Variance Exchange (AVE) assesses convergent validity. Table 5 (Appendix) shows that all the AVE values of latent variables satisfy the reference criterion ( $> 0.50$ ; Hair et al., 2013). Thus, the convergent validity of the first low-order measurement model is ensured. Discriminant validity is the extent to which a variable is genuinely distinct from other variables (Sarstedt et al., 2014). It shows how an instrument correlates with other variables and the unidimensionality of the variable (Hair et al., 2013). Fornell and Larcker's (1981) criterion and cross-loading scores assess discriminant validity. Table 6 demonstrates that the squared roots of AVE for all latent variables were higher than the inter-construct correlations (Fornell & Larcker, 1981).

It is an indication of sufficient discriminant validity. Further, all indicators' loadings exceeded their respective cross-loadings which is additional evidence of discriminant validity (Hair et al., 2013).

Consequently, the first low-order measurement model is confirmed to be valid and reliable in estimating the exogenous variables.

The validity and reliability of the second low-order measurement model are next evaluated. The latent variables estimated by the first low-order measurement model are used in the second low-order measurement model. These latent variable value estimations (latent variable scores) were preserved and utilized as indicators in the second low-order measurement model based on the disjoined method (Sarstedt et al., 2019). The measurement characteristics of the second low-order measurement model that resulted are annexed (Appendix: Table 7). All the indicators of the second low-order measurement model satisfy the criteria of internal consistency and convergent validity (Hair et al., 2013). Hence, it is claimed that all the presented measures are reliable and valid. Further, the discriminant validity among the indicators was evaluated and proved to be within the acceptable range (Appendix: Table 8). After confirming the measurement models' reliability and validity, the structural model is tested to test the predicted relationships.

The structural model of the study consisted of perceived barriers for TE (demographic factors, environmental factors, human factors, motivational factors, and behavioural factors) and employee intention to transition to entrepreneurship (Appendix: Figure 2).

Assessment of the structural model is usually executed by assessing collinearity issues, path significance

and relevance, the model's explanatory power ( $R^2$ ), effect size ( $f^2$ ), and predictive relevance ( $Q^2$ ).

The inner model's collinearity assessment demonstrates the overlap among the independent variables. Variance Inflation Factor (VIF) values are used to estimate the collinearity of the model. Table 9 (Appendix) presents the collinearity of the structural model's variables. The VIF values below 3.3 are considered sound indicators of acceptable levels of collinearity among the variables (Diamantopoulos & Sigouw, 2006). Hence, it is confirmed that there is no significant collinearity issue among the exogenous variables.

The significance and relevance of the pathways are determined by their path coefficients and p values. Three paths were found to be significant and relevant in predicting the employees' TEI. Accordingly, present employees identified demographic, behavioural, and human capital factors as the significant paths toward perceived barriers to TE (Appendix: Table 10).

The structural model demonstrates a 0.628 coefficient of determination, which indicates a substantial relationship between exogenous and endogenous variables (Cohen, 1988). Accordingly, the model suggests that the study variables explain a 62.8% variance in TEI (Appendix: Figure 2).

The effect size of the independent variables' impact (coefficient of determination) on the dependent variable is estimated using  $f^2$ . As to Hair (2014) and Cohen (1988), the effect size varies based on their level of acceptance ( $> 0.35$  for a larger effect,  $> 0.15$  for a medium effect, and  $> 0.002$  for a smaller effect). Table 11 (Appendix) shows the effect sizes of the variables with significant paths. Based on the evaluation of  $f^2$ , behavioural, demographic, and human capital factors

have a large, medium, and small effect on the TEI respectively (Hair, 2014; Cohen, 1988).

The predictive relevance of the structural model shows to what extent the saturated model is sufficient to model the variance of the endogenous construct. Predictive relevance is usually assessed by using  $Q^2$ .  $Q^2$  value greater than zero indicates that an exogenous construct has greater predictive relevance over the endogenous variable (Stone, 1974; Geisser, 1974, Hair et al., 2017). The  $Q^2$  value of the structural model is 0.393 (Appendix: Table 12).

The result of the SEM supported three hypotheses (H1, H3 & H5) while failing to support the rest of the two hypotheses (H2 & H4). Demographic factors, Human Capital factors, and Behavioural factors are perceived as barriers to TE. The negative association indicates that these factors are negatively perceived or considered as constraining factors for moving from employment to entrepreneurship. However, motivational factors and environmental factors were not significant at the 0.05 level. It implies that these two factors are not perceived by the respondents as significant barriers to TE in the Sri Lankan context (Appendix: Table 13).

## Discussion

Demographic factors have long been discussed and tested as a constraint on the movement of jobs to entrepreneurship. Demographic factors such as gender, marital status, education, employment status, age, and family background are showing mixed results towards TE (Hatak et al., 2014; Wang et al., 2014). The present study assessed the demographic factors using several indicators, of which marital status and parenthood were included in

the final measurement. Results indicated that the demographic factors are perceived as a barrier to TE by the Sri Lankan working crowd. Similar findings are reported by Dipesh and Uike (2019), Welmilla et al. (2011), Nguyen (2018), and Ajefu (2019). This can be speculated as a misperception or to their understanding about the work-life balancing potentiality of married entrepreneurs and or entrepreneurs having children. On the other hand, the overemphasis given to children's education and early childhood development in the Sri Lankan context might also prevent employees from moving to a hardworking and challenging entrepreneurial career.

Human capital was also discovered to be a significant perceived barrier to TE. The final measurement included prior business experience and entrepreneurial education as indicators of human capital factors. Several previous researchers have identified these factors as significant determinants of TE (Cooper & Gimeno-Gascon, 1992; Millan et al., 2014; Qian et al., 2014). Hence, the present study's findings are in line with previous knowledge. In addition, human capital is frequently reported as a driving force towards startup intention. Nevertheless, it proved to be a restraining factor for employee with significant career stability.

Early studies recognized willpower as the most important predictor of achievement. Hence, the researchers conceptualized motivational factors as contributing factors towards lower entrepreneurial initiatives. The refined measures of motivational factors were entrepreneurial passion and economic motives. The results indicated that the motivation factors are not perceived as a constraint towards TE. It means that individuals are sufficiently driven to become entrepreneurs, but that other

reasons prevent them from transitioning from employment to entrepreneurship. The aligning findings are reported in previous literature (Shane et al., 2003; Collins et al., 2004; Douglas & Shepherd, 1999), where the motivation toward moving into entrepreneurship was found to be a driving force rather than a constraint. Accordingly, the present study claimed that motivation factors in the context of developing countries context are not identified as a barrier to TE.

Entrepreneurship ventures are frequently sparked by a favorable business environment (Gnyawali & Fogel, 1994; iEduNote, 2020). Thus, any deficiency in environmental factors may act as a barrier to blooming entrepreneurial initiatives. The evaluation of the measurement model suggested access to finance and business networks as sound measures of environmental factors. Thus, they were included in the final model. Nevertheless, environmental factors have not been confirmed as a perceived barrier to TE. Even though this is surprising as far as inconsistent previous findings are concerned, the study claimed that the environmental factors are not negatively affecting the decision of employees to move on to entrepreneurship. This can be justified based on the ample facilitations provided by the economies of developing countries to harness entrepreneurial initiatives.

The behavioral factors of the present study have been defined in line with the arguments of the SLT (Bandura, 1969), where epistemological belief and self-efficacy have been identified as their dimensions. Both of these factors explained the intrinsic properties of an individual that drove him or her towards the performance targets. The results proved that the behavioral factors are regarded as a constraint to rebranding

them as entrepreneurs. Behavioral factors have been deemed as the barrier blocking the way. Previous researchers have reported identical research findings too (Luluk et al., 2017).

## **Conclusion**

The present study targeted identifying the perceived barriers to TE in the context of Sri Lanka. Following the deductive approach, the researchers performed an empirical study to detect perceived barriers to employees of private and public institutions in Sri Lanka. The quantitative approach was supported by a field survey in which a first-hand survey instrument gathered the data. Structural equation modelling performed the data analysis to aid in the hypothesis testing. Based on the results, it is concluded that the employees of Sri Lanka tend to prevent transitioning from their job to entrepreneurship as they perceive behavioural factors, human capital factors, and demographic factors as constraints. However, they do not perceive motivational and environmental factors as constraints towards TE. The findings are surprising, as the perceived barriers to TE in the context of Sri Lanka showed a significant difference from those of developed countries. Demographic and human capital concerns, in particular, are rarely seen as limiting considerations for TE in developing nations (Ardichvili & Kuchinke, 2002). Likewise, significant disparities are noted in the perceived barriers to TE among different economic contexts. Hence, it is claimed that perceived barriers to TE do not follow identical patterns in developing and developed countries. Employees in developing countries are still attracted to employment over an entrepreneurial career due to several perceived barriers. Hence, as claimed by Walters (2022),

the great resignation is "not-so-great" for Asia: developing context. The "great resignation" trend in the developed context hardly reflects conditions in developing countries. As a result, it advocates for diverse policy implications tailored to developing nations in order to address the lower penetration of TE.

Theoretically, the findings imply that the scholars may identify a new model with obstacles influencing TE in poor nations. In practice, current and prospective entrepreneurs might concentrate on taking remedial efforts to overcome the identified hurdles to TE. Overcoming the perceived demographic barriers may call for improving childcare services and establishing better work-life balance, particularly for females, to enable them to engage in entrepreneurial activities. Hence, the study's implications for policymakers and regulators on socioeconomic factors in a nation will be helpful. Human capital factors such as entrepreneurial education and prior business experience too were found limiting factors to TE in Sri Lanka. The policy interventions can be aimed at improving the entrepreneurial skill of human capital by providing them with a good education in entrepreneurship (formal & informal). Further, the prior business experiences can be strengthened through pilot programmes and entrepreneurial mentors. Moreover, behavioural factors specifically epistemological beliefs, and self-efficacy are also found road blockers of TE. Epistemological beliefs and entrepreneurial self-efficacy of employees can be raised through uplifting self-confidence and self-awareness of their strengths and weaknesses. Employees are also recommended to discover their strengths and weaknesses to pursue success and to learn continuously.

However, relevant government authorities are also recommended to provide a favourable and stimulating economic, financial and legal environment for potential entrepreneurs to uplift their self-confidence and self-efficacy. Owing to the limited background information on TE in developing countries, the current study may be considered one of the pioneering attempts to study the perceived barriers toward TE in Sri Lanka. Further, to have comprehensive insights into TE and its influencers, large-scale, qualitative, and mixed studies on different samples are suggested for future researchers. In addition, there is a possibility of studying entrepreneurs who have already transitioned from employment to entrepreneurship. Future studies can also accommodate possible mediating and moderating relationships to the main effect. Future researchers can explore more complexities in TE in other communities around the world.

### **Author Contributions**

All authors have made substantial contributions equal to the conception and design, or acquisition of data, and the analysis and interpretation of data.

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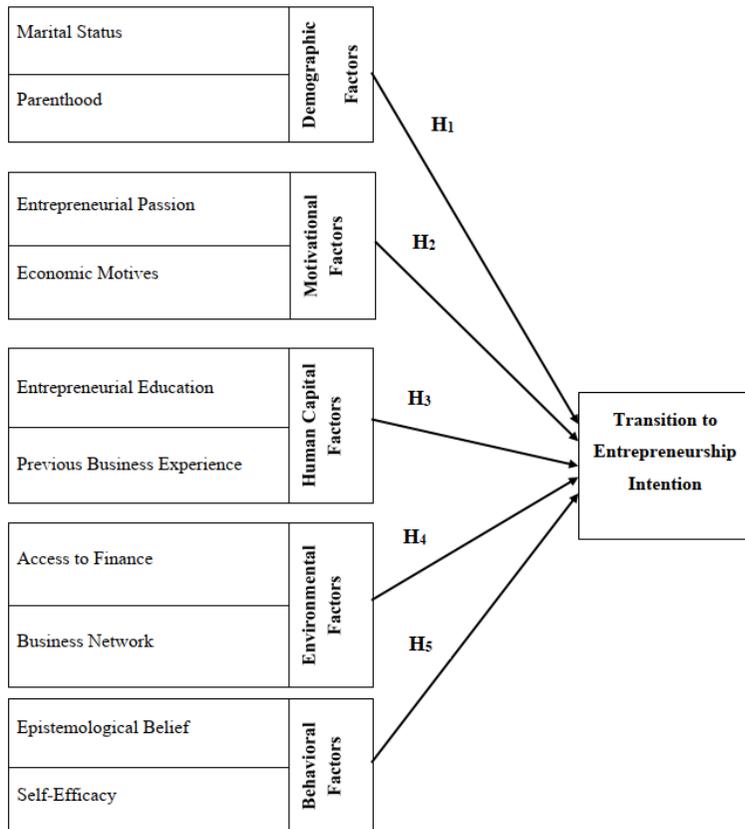
**Figures and Tables**

**Table 1**  
*Percentage Distribution of the employed population*

Employment Status	N	%
Employee	4,592,864	57
Public	1,213,037	15
Private	3,379,826	42
Employer	238,343	03
Own Account Worker	2,701,255	34
Contributing Family Worker	477,878	06
Total	8,010,340	100

Note: Department of Census and Statistics. (2023). *Labor Force Survey*.  
<http://www.statistics.gov.lk/qlink/publications>

**Figure 1**  
*Research Model*



Note: Author-developed (2022)

**Table 2**  
*Operationalization of the Study Variables*

<b>Variable</b>	<b>Dimension</b>	<b>Indicator</b>	<b>Item (Seven-Point Likert Scale)</b>	<b>Reference</b>
Demographic Factors	Marital Status	Married or unmarried	DF1	(Hatak, Harms & Fink, 2014) (Wang, Wong & Qing, 2014)
	Parenthood	Having Children	DF2	
Environmental Factors	Access to Finance	Financial knowledge and skills	EF6, EF7	Global Entrepreneurship Monitor, 2017
		Market Knowledge	EF5, EF8	
	Business Network	Customers	EF1, EF3	
		Suppliers	EF2	
		Employees	EF4	
Motivational Factors	Entrepreneurial Passion	Motivation for a better outcome	MF1	Cardon, M. S., Gregoire, D. A., Stevens, C. E., & Patel, P. C. (2013)
		Scanning the environment	MF2, MF4	
		Establishment of a new company	MF3	
	Economic Motives	Make my family rich	MF5	
		Supplements the family income	MF7	
		Make money to clear debts	MF6	
Human Capital Factors	Entrepreneurial Education	Formal and vocational education	HF1, HF2	Bruderl, Preisendorfer, & Ziegler, 1992; Gimeno et al.; Wiklund & Shepherd, 2003,2008
		Professional education	HF3	
	Previous Business	Professional work activities	HF4	

	Experience	Practical learning incurred during non-formal educational activities such as "job training"	HF5	
		Experience in labor markets	HF6	
Behavioral Factors	Epistemological belief	Structure	BF1, BF2, BF3	Schraw et al. (2002)
		Speed	BF4, BF5, BF6	
		Control	BF7, BF8, BF9	
		Source	BF10R, BF11R, BF12	
	Self-Efficacy	Mastery Experiences	BF13, BF14, BF15, BF16	
		Social Modeling	BF17, BF18, BF19	
		Social Persuasion	BF20, BF21, BF22, BF23	
		Psychological Responses	BF24, BF25, BF26, BF27	
Transition to Entrepreneurship Intention	Entrepreneurial Propensity	Need for achievement	TEI2, TEI3	Global Entrepreneurship Monitor, 2017
		Need for Innovativeness	TEI4, TEI6, TEI7	
		Creativity	TEI8, TEI9,	

			TEI10	
		Over-confidence	TEI1, TEI11	
		Need for Autonomy	TEI12, TEI5	
		High Flexibility	TEI13, TEI14	
		Risk Propensity	TEI15, TEI16	
		Independence and power	TEI17	

Note: Author-Generated (2020/2021)

**Table 3**  
*Profiles of the Respondents*

Attribute		N	%
Gender	<b>Male</b>	<b>134</b>	<b>61.5</b>
	Female	84	38.5
Year of Birth	1965-1980	43	19.7
	<b>1981-1994</b>	<b>145</b>	<b>66.5</b>
	1995-2012	30	13.8
Marital Status	<b>Married</b>	<b>147</b>	<b>67.4</b>
	Not Married	71	32.6
Parenthood	Have Children	102	46.8
	<b>Do Not Have Children</b>	<b>116</b>	<b>53.2</b>
Job Position	<b>Executive &amp; above</b>	<b>124</b>	<b>56.9</b>
	Non-Executive	94	43.1
Highest Educational Qualification	O/L	27	12.4
	A/L	92	42.2
	<b>Degree and Upper</b>	<b>99</b>	<b>45.4</b>

Source: Survey Data (2020/2021)

**Table 4**  
*Descriptive statistics of study variables*

Variable	Dimensions	Mean (Response scale - 7- point Likert scale)	Standard Deviation	Skewness	Kurto sis
Demographic Factors	Marital Status	4.04	1.829	-0.274	-1.291
	Parenthood	4.06	1.838	-0.185	-1.312
Environmental Factors	Access to Finance	4.71	0.801	-0.570	0.465
	Business Network	4.79	0.808	-0.187	0.457

Motivational Factors	Entrepreneurial Passion	5.29	0.965	-1.282	1.320
	Economic Motives	5.50	0.925	-0.382	0.112
Human Capital Factors	Entrepreneurial Education	5.63	0.829	-0.781	1.265
	Previous business experience	5.29	0.884	-0.794	1.134
Behavioral Factors	Epistemological belief	5.20	0.645	-0.582	1.799
	Self-Efficacy	5.34	0.828	-0.522	1.611
Transition to Entrepreneurship Intention	Entrepreneurial Propensity	5.49	0.604	-0.118	0.540

Note: Survey Data (2020/2021)

**Table 5**  
*Measurement Properties of First Low-Order Measurement Model*

Dimension	Items	Factor Loading	Cronbach Alpha	rho	Composite Reliability	AVE
Criterion		> 0.708	> 0.6	> 0.7	> 0.7	> 0.7
Marital Status	DF1	0.961	0.881	0.941	0.943	0.892
Parenthood	DF2	0.927				
Access to Finance	EF8	0.947	0.837	0.887	0.923	0.858
	EF7	0.904				
Business Network	EF1	0.746	0.770	0.924	0.860	0.673
	EF2	0.912				
	EF4	0.791				
Entrepreneurial Passion	MF1	0.937	0.879	0.889	0.943	0.891
	MF2	0.951				
Economic Motives	MF5	0.877	0.849	0.856	0.908	0.768
	MF6	0.905				
	MF7	0.845				
Education	HF1	0.897	0.856	0.862	0.912	0.776
	HF2	0.890				
	HF3	0.855				
Previous Business Experience	HF5	0.792	0.633	0.692	0.840	0.726
	HF6	0.908				
Epistemological Belief	BF10R	0.888	0.683	0.691	0.863	0.759
	BF12	0.854				
Self-Efficacy	BF13	0.902	0.775	0.775	0.899	0.816
	BF14	0.905				
Entrepreneurial Propensity	TE2	0.852	0.836	0.836	0.901	0.753
	TEI3	0.882				
	TEI14	0.869				

Note: Survey Data (2020/2021)

**Table 6**  
*Discriminant Validity of First Lower-Order Measurement Model*

	AF	AR	BN	DF	EM	EE	EP	EPR	EB	FF	GS	PBE	PK	SE
AF	<b>0.926</b>													
AR	0.198	<b>1.000</b>												
BN	0.335	0.176	<b>0.821</b>											
DF	-0.049	-0.002	0.132	<b>0.944</b>										
EM	0.168	0.088	0.252	-0.016	<b>0.876</b>									
EE	0.294	0.059	0.355	-0.119	0.512	<b>0.881</b>								
EP	0.445	0.211	0.520	-0.076	0.319	0.409	<b>0.944</b>							
EPR	0.257	0.030	0.268	-0.204	0.423	0.550	0.350	<b>0.868</b>						
EB	0.327	0.085	0.236	-0.102	0.468	0.472	0.376	0.511	<b>0.871</b>					
FF	-0.035	0.059	-0.043	-0.115	0.411	0.152	0.132	0.047	0.169	<b>1.000</b>				
GS	0.107	0.050	0.262	0.319	0.127	0.055	0.192	-0.064	0.098	0.016	<b>0.856</b>			
PBE	0.269	0.087	0.384	-0.023	0.408	0.494	0.437	0.407	0.361	0.119	0.295	<b>0.852</b>		
PK	0.253	-0.075	0.358	0.051	0.109	0.354	0.339	0.269	0.264	-0.016	0.129	0.460	<b>1.000</b>	
SE	0.178	0.059	0.100	-0.193	0.458	0.473	0.239	0.533	0.700	0.144	-0.052	0.398	0.166	<b>0.903</b>

*Note:* AF - Access to Finance, AR - Availability of Resources, BN - Business Network, DF - Demographic Factors, EM - Economic Motive, EE - Educational & Experience, EP - Entrepreneurial Passion, EPR - Entrepreneurial Propensity, EB - Epistemological Belief, FF - Freer for Failure, GS - Government Support, PBE - Previous Business Experience, PK - Prior Knowledge, and SE - Self-Efficacy

**Table 7***Reliability and Validity Measures of the Second Low-Order Measurement Model*

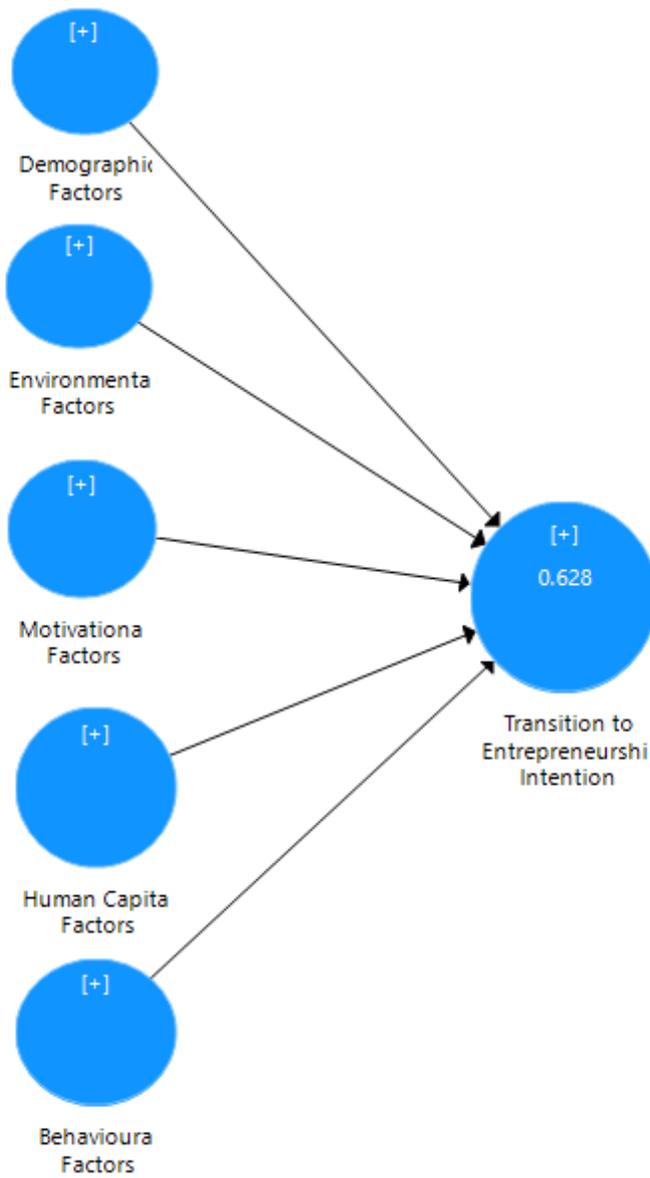
Latent Variable	Dimension	Factor Loading	Cronbach Alpha	rho	Composite Reliability	AVE
	Criterion	> 0.708	> 0.6	> 0.7	> 0.7	> 0.7
Demographic factors	Demographic Factors	1	1	1	1	1
Environmental Factors	Access to Finance	0.808	0.502	0.503	0.801	0.667
	Business Network	0.826				
Motivational factors	Entrepreneurial Passion	0.771	0.484	0.495	0.793	0.658
	Economic Motive	0.850				
Human Capital factors	Entrepreneurial Education	0.905	0.661	0.702	0.852	0.743
	Previous Business Experience	0.817				
Behavioral factors	Epistemological Belief	0.918	0.823	0.824	0.919	0.850
	Self-Efficacy	0.925				
Transition to Entrepreneurship Intention	Entrepreneurial Propensity	1	1	1	1	1

*Note: Survey Results (2021/2022)***Table 8***Discriminant Validity of the Second Low-Order Measurement Model*

	Behavioral Factors	Demographic Factors	ETE	Environmental Factors	Human Capital Factors	Motivational Factors
Behavioral Factors	<b>0.922</b>					
Demographic Factors	-0.161	<b>1</b>				
TEI	0.567	-0.204	<b>1</b>			
Environmental Factors	0.276	0.053	0.321	<b>0.817</b>		
Human Capital Factors	0.541	-0.09	0.564	0.46	<b>0.862</b>	
Motivational Factors	0.522	-0.053	0.479	0.502	0.632	<b>0.811</b>

*Note: Survey Results (2021/2022)*

**Figure 2**  
*Structural Model*



*Note:* Author-developed (2022)

**Table 9***Inner VIF Values of the Structural Model*

Variable	VIF
Behavioral Factors	1.565
Demographic Factors	1.040
Environmental Factors	1.420
Human Capital Factors	1.953
Motivational Factors	1.994

*Note: Survey Data (2020/2021)***Table 10***Path Significance and Relevance*

	Original Sample (O)	Sample Mean (M)	Standard Deviation	T Statistics	P Values
<b>Behavioral Factors -&gt; TEI</b>	<b>-0.325</b>	<b>-0.319</b>	<b>0.074</b>	<b>4.383</b>	<b>0.000</b>
<b>Human Capital Factors -&gt; TEI</b>	<b>-0.294</b>	<b>-0.295</b>	<b>0.075</b>	<b>3.921</b>	<b>0.000</b>
Motivational Factors -> TEI	0.087	0.092	0.074	1.174	0.241
Environmental Factors -> TEI	0.059	0.065	0.065	0.912	0.362
<b>Demographic Factor -&gt; TEI</b>	<b>-0.124</b>	<b>-0.123</b>	<b>0.062</b>	<b>1.989</b>	<b>0.037</b>

*Note: Survey Data (2020/2021)***Table 11***The Effect Size of the Variables*

Variable	Transition to Entrepreneurship Intention	Effect size
Behavioral Factors	0.420	Large
Demographic Factor	0.206	Medium
Human Capital Factors	0.079	Small

*Note: Survey Data (2020/2021)***Table 12***The Predictive Relevance of Independent Variables*

	SSO	SSE	Q <sup>2</sup> (=1-SSE/SSO)
Behavioral Factors	436	436	
Demographic Factor	218	218	
<b>Transition to Entrepreneurship Intention</b>	<b>218</b>	<b>132.364</b>	<b>0.393</b>
Environmental Factors	436	436	
Human Capital Factors	436	436	
Motivational Factors	436	436	

*Note: Survey Data (2020/2021)*

**Table 13**  
*Summary of Hypotheses Testing*

Hypothesis	Results		Decision
	Standard $\beta$ estimate	p-value	
<b>H<sub>1</sub>: Demographic factors are perceived as a barrier to TE</b>	<b>-0.124</b>	<b>0.037</b>	<b>Significant</b>
H <sub>2</sub> : Motivational factors are perceived as a barrier to TE	0.087	0.241	Not Significant
<b>H<sub>3</sub>: Human Capital factors are perceived as a barrier to TE</b>	<b>-0.294</b>	<b>0.000</b>	<b>Significant</b>
H <sub>4</sub> : Environmental factors are perceived as a barrier to TE	0.059	0.362	Not Significant
<b>H<sub>5</sub>: Behavioral factors are perceived as a barrier to TE</b>	<b>-0.325</b>	<b>0.000</b>	<b>Significant</b>

*Note: Survey Data (2020/2021)*

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**Impact of Glass Ceiling Effect on Women's Career Success with the Mediating Role of Women Empowerment: Perspective from Sri Lankan Hospitality Industry**

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**Abstract**

This research explores the gender equality in the hospitality sector with the support of the Glass Ceiling Effect and how it applies to Women's Career Progress. Women's Career Progress. Women's career progress and women's empowerment being the dependent variable and mediator respectively, this study employed five independent variables as the key predictors of glass ceilings. Simple random sampling procedure was applied to select 123 respondents and SPSS and Smart PLS software were used to analyze the data. Research findings revealed that there is no impact of internal job mobility and organizational culture on women empowerment at 3 and above-star hotels in the Sri Lankan context due to having less P-Values than 0.05. Female representation in hotels was lower (7.40%) than male representation. By delegation of authority, fair performance reviews, training and incentives, scholarships, and flexible work arrangements are all ways to improve the qualification credentials of female employees.

**Keywords:** *Glass Ceiling Effect, Gendered Organization Theory (GOT), Hotels, Women Career Progress, Women Empowerment*

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## **Introduction**

Human Resource Management (HRM) is one of the critical management areas in any company, which can be defined as the coordination of people and work to achieve organizational goals and objectives. HRM is an unavoidable outcome of building and operating a business, and its existence does not need to be extensively justified (Boxall, 2007). According to that statement, it proves HRM plays a significant role in any organization. And even though Boxall mentions HRM as a critical function of employing people in a firm, there is a Gendered Organizations Theory (GOT) that suggests that stereotyped roles regarding men and women will persist, regardless of the gender makeup of the workforce (Mastracci & Arreola, 2016). Joan Acker developed this theory after noting that current gender-based theories were unable to adequately analyze and explain the implications of gender in organizations. Organizations and professional interactions, according to the GOT, have gendered norms that benefit men and control women. Gender is important as an advanced analysis in conceptualizing, organizational culture, and process, according to Acker. The GOT framework is a systematic framework that examines the various gender-based characteristics and activities that contribute to the male-female discrepancy.

From this GOT several models have been drawn upon. The Glass Ceiling Effect (GCE) is also a branch of this GOT. This GCE was introduced by Marilyn Loden, who spoke as a panelist at the 1978 Women's Exhibition in New York, and she is the one who phrased the "Glass Ceiling Effect". Loden was invited to speak about how women were

to blame for the barriers that stopped her from rising in her employer's only female executive career. Cook, A., and Glass, C. (2014) have established occupational minorities defined as women consistent with the hypothesis of the glass cliff. Moreover, out of the gender basis, there is a high tendency to promote a male person as the CEO of weakly performing firms. Despite the fact that discovered no significant variations in retention duration between men and women, when firm performance suffers during the term of occupation due to the CEO's activities, these executives are likely to be replaced by men, even if they are not performing well at their work. Accordingly, it clearly shows that women are rarely getting the opportunity for the top managerial level positions though there are available opportunities.

As a result, analogous organizational experiences for women and professionals of color have received less attention. As a result, there are some research and practice-based resources accessible in higher education to address job discrimination issues. As a result, it shows that worker diversity in their research is extensive leans on glass ceiling effects studies undertaken in business forces. At the same time, social closure theory was introduced as an analytical framework for advancing organizational ownership of job discrimination in general and Glass Ceiling moment Effects in particular. Therefore, this research will be developed based on the GOT while addressing the gaps in GCE in women's career.

### ***Research Problem(s)/Issue(s)***

Human resource management (HRM) refers to the rules and practices that are used to organize work and hire

employees (Pareek et.al, 2007). According to D.M Daley (1998), the Glass Ceiling Effect is generally talking about a pattern that arises where long-term attributions are beyond the person's control. Some women's advantages, such as part-time work or job-sharing, may not be accessible to women in higher management roles at all, or using them may entail missing prospects for the career progress of women. (Woodall, 1996).

Correspondently The World Travel & Tourism Council (2014) claims that women make up approximately 70% of the tourism industry's workforce globally. On the other hand, Female representation in senior management, is extremely low. According to data from the World Travel & Tourism Council (2014), Women hold fewer than 40% of total managerial jobs, less than 20% of general management roles, and 5-8 % of board posts. Women's participation in the industry in Sri Lanka is extremely low, accounting for only 10% of the formal sector. Furthermore, the number of women in high managerial positions in the tourism industry is insignificant (Silva et al., 2017).

These statements evident that women empowerment towards the women career progress is critical in tourism and hospitality sector.

### ***Objective(s)***

The general objective of the research is to identify whether the glass ceiling effect hinder career progress of female employees in the hotel sector in Sri Lanka through the lenses of gendered organizational theory. As well this study was done to find the answers to the questions such as,

1. To identify the determinants that affect women's career progress in the 3, 4, and 5-star hotels sector

about all the levels of female employees.

2. To identify the impact of glass ceiling determinants on women's empowerment.
3. To identify the impact of the glass ceiling effect and women's career progress through women empowerment.

### ***Theoretical Considerations and Empirical Evidence***

According to the field survey done by the researcher, it was identified that the female employees at 3, 4, and 5-star hotels in lower than the male employees. Relevant documents have been attached under the appendix section. Correspondence to the data gathered regarding the male and female counts can be shown from table 1.

Confirming to the table 1, shows that in the Kandy district female employees are extremely lower than the male workers are at three, 4, and 5-star hotels in Kandy.

### ***Methods***

According to the Annual Statistical Report, 2019 – Sri Lanka Tourism Development Authority shows that there are 23, five-star hotels, 21, 4 –star hotels, and there are 24, 3- star hotels in Sri Lanka. (SLTDA annual report, 2019). Correspondently a sample size of this research has been considered based on the Krejcie and Morgan, (1970) sample size scale. In addition, 123 female employees were taken as the sample size due to the 190 population. In addition, the Simple Random Sampling method has been used to approach the sample size. According to Tommy (1988). The data was collected through a self-administered questionnaire, including 42 questions.

And the data analysis has been done using Smart PLS, a computer-based statistical data analysis software. Descriptive analysis t-test, ANOVA, for analysis of the profile of respondents, Kaiser-Meyer-Olkin (KMO) sampling adequacy test for the validation of samples sufficiently, and other quality criteria for Structural Equation Modeling (SEM). The proposed theoretical model has been tested using SEM in Smart PLS. Exploratory factor analysis (EFA) and Confirmatory Factor Analysis (CFA) was run, finally, the structural model has been tested and hypotheses were tested using statistical techniques.

Based on the conceptual framework, eleven hypotheses were developed as follows,

- H1- There is an impact of Family and Social Commitment on Women Empowerment at 3 and above star hotels in Kandy.
- H2- There is an impact of Internal Job Mobility on Women Empowerment at 3 and above star hotels in Kandy.
- H3- There is an impact of Organizational Culture on Women Empowerment at 3 and above star hotels in Kandy.
- H4 - There is an impact of Level of Job Performances on Women Empowerment at 3 and above star hotels in Kandy.
- H5- There is an impact of Level of Educational and Professional Qualifications on Women Empowerment at 3 and above star hotels in Kandy.
- H6- There is an impact of Family and Social Commitment on Women Career Progress at 3 and above star hotels in Kandy.
- H7- There is an impact of Internal Job Mobility on Women Career

Progress at 3 and above star hotels in Kandy.

- H8- There is an impact of Organizational Culture on Women Career Progress at 3 and above star hotels in Kandy.
- H9- There is a relationship between Level of Job Performances with Women Career Progress at 3 and above star hotels in Kandy.
- H10- There is a relationship between Level of Educational and Professional Qualifications with Women Career Progress at 3 and above star hotels in Kandy.
- H11- There is a relationship between Women Empowerment and Women Career Progress at 3 and above star hotels in Kandy.

## Results

Correspondently based on the above-analysis, the general and specific objectives of the study can be measured. Along with the findings of the structural equation model, there were negative and positive Glass ceiling impacts on Women's Career Progress through women's Empowerment. The hypothesis analysis was done from the H6, to make the discussion over the impact and about the strong glass ceiling determinant that affects women's career progress. According to the H6, the significant path coefficient was  $\beta = 0.172$  (very weak positive impact), the t-value was 2.465 (significant); P-value was 0.014 (significant). It denoted that family and social commitment could be considered as a strong determinant under the glass ceiling effect which can positively affect women's career progress. H7 had a significant path coefficient was  $\beta = 0.232$  (weak positive impact), the t-value was 2.594 (significant); the P-value was 0.001 (significant). It denoted that internal job mobility could

be considered as a strong determinant under the glass ceiling effect, which can positively affect women's career progress too.

Nevertheless, H8 did not perform well as a glass-ceiling determinant in the impact on women's career progress. Because its t-value was 0.874 (which did not exceed the significant level of 1.96). In addition, the p-value was 0.382. Accordingly, the researcher concluded that organizational culture was not a strong determinant under the glass ceiling effect and its only weakly effect on women's career progress than the other glass ceiling determinants. Job performance level could be considered a good determinant of the glass ceiling effect, which caused the women's career progress. Because the significant path coefficient was  $\beta = -0.304$ , the t-value was 3.474 and the P-value was 0.001. It denoted that the level of job performance could be considered a strong determinant under the glass ceiling effect, which can positively affect women's career progress as well.

Moreover, the level of educational and professional qualifications also had an impact on women's empowerment. So it could be, consider a determinant of the glass ceiling effect. Because the level of educational and professional qualifications had a significant path coefficient value of  $\beta = 0.247$  which had a weak positive impact. Considering the t-value ( $t=2.416$ ), this hypothesis had strong significance because the T value was greater than 1.96 (significance of the T value). Moreover, P-Value is also having strong significance. Because the P-value was 0.016, ( $P < 0.05$ ). The above discussion explained there was an impact of the glass ceiling effect on women's career progress. In addition, a considerable amount of glass ceiling determinants had an impact on women's

career progress positively. So the first and second research questions have been achieved through this.

This discussion helps to provide an exact answer to the third research question of this research study. Hypothesis testing under the 4.7.2 section helped to develop this discussion. H1 hypothesis denoted Family and Social Commitment to Women Empowerment (mediator) was having a positive impact. H1 was supported with a significant path coefficient ( $\beta = -0.318$ ), t-value ( $t=3.902$ ), Moreover, P-Value was also having strong significant (0.000). It thus Family and Social commitment can be considered as the determinant that affects a mediator. H2 showed it did not have an impact on the mediator (women empowerment). Because it had a significant path coefficient of ( $\beta = 0.105$ ) with a very weak positive impact. In addition, the t-value had a 1.083 value whereas the P-value had 0.297, which had a weak significance. It resulted in proving that internal job mobility did not have an impact on the mediator. Even though the organizational culture was having a negative impact on the women's career progress. It had a positive impact on the mediator of the research which was women empowerment. So H3 is supported with a significant path coefficient ( $\beta = 0.473$ ) which had a moderately positive impact while having a significant value ( $t=3.356$ ), with a strong P-Value. Because the P-value was 0.001, ( $P < 0.05$ ). The level of job performance was also had a positive impact on the mediator. H4 is supported with a significant path coefficient ( $\beta = 0.217$ ) which had a weak positive impact. With the value of 2.231. In addition, P-Value has a strong significance by having the value of 0.026, ( $P < 0.05$ ). H5 proposed an

impact of the Level Educational and Professional Qualifications on Women Empowerment (mediator).

H5 is supported with a significant path coefficient ( $\beta = 0.230$ ) which had a weak positive impact. Moreover, the t-value was  $t=2.176$ , which was greater than the 1.96 significance of the T value. Moreover, P-Value had a strong significance. Because the P-value was 0.030, ( $P < 0.05$ ). It means the Level Educational and Professional Qualifications had a positive impact on the mediator. Except for internal job mobility, the other entire glass-ceiling determinant had a positive impact on the mediator (women empowerment). So, the third objective (specific objective) has been achieved through this discussion over the third research question.

According to the H11, it was supported with a significant path coefficient ( $\beta = -0.372$ ) which had a weak negative impact. While the t-value ( $t=4.706$ ) was at a significant level because this hypothesis had strong significance due to having the T value greater than the 1.96 (significance of the T value). Moreover, P-Value has also had a strong significance. Because the P-value was 0.000, ( $P < 0.05$ ). It means that Women's Empowerment had a positive impact on Women's Career Progress. According to the mediator impact analysis under 4.8, shows that there was an influence of women's career progress on family and social commitment impact on women's career progress. Moreover, family and social commitment to women's career progress had a significant indirect impact. The indirect impact of internal job mobility on women's career progress through women empowerment (mediator variable) was found insignificant due to having the values of

( $\beta = 0.024$ , t value = 0.436 and P-value = 0.663 which was greater than 0.005 value. It means the independent variable did not have a clear significant direct impact on women's career progression through the mediator. However, there was a direct significant impact of internal job mobility on women's career progress.

There was an organizational culture-independent variable's significant direct impact on women career progress, similarly, it had a significant impact on the dependent variable through women's empowerment as well. Therefore, the researcher could conclude that the mediator was not acted as a threshold point here. Same as the organizational culture variable and level of job performance, the independent variable also had a significant direct impact on women's career progress with a p-value of 0.000. And the significant indirect impact on women's career progress through women empowerment (mediator). Nevertheless, the level of educational and professional qualifications had a significant direct impact on women's career progress rather than having a significant indirect impact through its mediator on women's career progress. Because according to table 4.25, it shows that  $LEPQ > WCP = 0.000$  (p-value) and  $LEPQ > WE > WCP = 0.457$  (p-value) which was insignificant.

## Conclusion

Through this research study, the researcher wanted to evaluate the impact of Glass Ceiling Effect on Women's Career Progress with reference to Sri Lanka. To evaluate the research study researcher has developed four research questions and four research objectives. To gather data, self-administered questionnaire was

distributed among the 123-sample size from all the level female employees at 3 and above star hotels in Kandy district. From the literature review researcher identified what were the suitable independent variables towards the dependent variable (Women's Career progress). Such as Family and Social Commitment, Internal Job Mobility, Organizational Culture, Level of Job Performance, Level of Educational and Professional Qualifications. As well as the suitable mediator (Women Empowerment), that affected both independent and dependent variables. 11 hypotheses were developed and deployed through a conceptual framework. Gathered descriptive data were analyzed by SPSS and other results were taken through the Smart PLS software application. Therefore except Internal Job Mobility and organizational culture other variables are having the influential ability towards the women career progress.

### **Recommendations**

To enhance the credibility of women career progress through women empowerment has become an essential part of the hotel sector. Hotels can give awareness campaigns about the range of work prospects in the hotel sector for females to improve the positive influence they have on them. Hotel management may make use of various social media channels, documentaries, and interviews with successful female hoteliers. Such professionals can share their knowledge with families and communities. In addition to colleagues, organizations must value women employees and distribute authority to them when and when required to promote women's empowerment and career advancement. To create a supportive working environment, the

hotel sector's HR department can provide employees training and development programs, motivation, and teamwork.

Strengthening internal job mobility has a favorable influence on women's empowerment and professional advancement. If there are any vacancies for female workers, the HR department must first do internal recruiting. HR managers must also provide a clear picture of the organizational structure and needed qualifications. Furthermore, clarify the application procedure for such higher-level roles and urge them to assume responsibility when it is required.

Various approaches may be used to enhance the organizational culture that is fair to women. Hotel managers might redesign the organizational structure with specialized job descriptions and job standards that allow female employees to fill select top-level roles. Providing a flexible working environment. Establishing diversity management initiatives within the hotel sector. Also, mentoring, coaching, and leadership activities help to develop their talents according to the organizational culture.

Hotel management, in partnership with the HR department, can conduct performance reviews to improve the level of the job performance of women in hotels. If they completed the provided assignment successfully, praise them, and it is critical to provide training if staff are unable to execute the supplied duties at the necessary level.

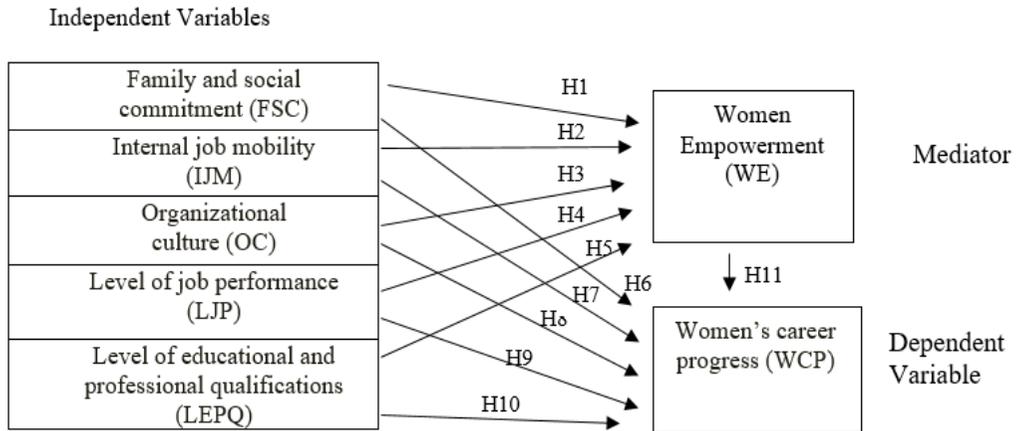
To enhance the educational and professional qualifications of the women employees hotel management sign contracts with relevant institutes and give opportunities for the female employees to add their educational and

professional qualifications. As well as they can give scholarships and

allocating flexible working hours would help to complete their qualifications.

**Tables and Figures**

**Figure 1**  
*Conceptual Framework*



Source: Developed by the researcher based on a literature review

**Table 1**  
*Male and Female Employee Count at 3, 4, and 5 Star Hotels in Kandy, Sri Lanka*

	<b>Hotel Classification</b>	<b>Name of the Hotel</b>	<b>Male Count</b>	<b>Female Count</b>	<b>Male Count %</b>	<b>Female Count %</b>
1	3 star	Cinnamon Citadel	94	16	85.45%	14.55%
2	3 star	Hunas Falls	68	11	86.07%	23.93%
3	3 star	Earls' Regent	87	11	88.77%	11.23%
4	3 star	Ozo	58	7	89.23%	10.77%
5	3 star	Golden Crown	200	25	88.88%	11.12%
6	4 star	Amaya Hills	78	29	72.89%	27.11%
7	5 star	Mahaweli Reach	233	42	84.11%	15.11%
8	5 star	Earls' Regency	167	21	88.82%	11.18%
9	5 star	Grand Kandyan	142	28	83.52%	16.28%
	Total		1127	190	92.60%	7.40%

Source: Developed by the Researcher Based on the Field Survey

**Table 2**  
*Table of Path Coefficient*

	<b>Original Sample (O)</b>	<b>Sample Mean (M)</b>	<b>Standard Deviation (STDEV)</b>	<b>T Statistics ( O/STDEV )</b>	<b>P Values</b>
FSC -> WCP	0.172	0.166	0.07	2.465	0.014
FSC -> WE	-0.318	-0.318	0.082	3.902	0.000
IJM -> WCP	0.232	0.233	0.089	2.594	0.01
IJM -> WE	0.105	0.076	0.097	1.083	*0.279
LEPQ -> WCP	0.247	0.254	0.102	2.416	0.016
LEPQ -> WE	0.230	0.233	0.106	2.176	0.03
LJP -> WCP	-0.304	-0.304	0.088	3.474	0.001
LJP -> WE	0.217	0.225	0.097	2.231	0.026
OC -> WCP	0.107	0.107	0.122	0.874	*0.382
OC -> WE	0.473	0.468	0.141	3.356	0.001
WE -> WCP	-0.372	-0.367	0.079	4.706	0.000

Source: Smart PLS Analysis, 2022

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**Audit Expectation Gap: A Comparative Literature Analysis of Private Sector  
and Public Sector**

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**Abstract**

The Audit Expectation Gap (AEG) issues are steadily expanding around the globe, irrespective of the particular sector involved. A comparative analysis will be more crucial for the AEG literature since the significance of the expectation concerns stems from the concepts of "stewardship and public accountability", which are applicable to audits in both private and public sectors. Thus, the purpose of this study is to analyze the similarities and distinctions between the AEG studies conducted pertaining to the private and public sectors. This research is directed by theoretical considerations and arrives at conclusions based on the extant literature. An exhaustive search of the published literature was conducted by applying the search terms "expectation gap" and "audit expectation gap" combined with "public sector", "government sector" and "performance audit" in the Google Scholar search engine and three databases of Scopus, Jstor, and Emerald were performed separately and independently for each sector from 1970 to 2022. Thus, only the articles published in reputable journals concerning the AEG were selected after applying some selection criteria. It was found that the research contexts, selected target populations, and the dimensions applied to assess AEG were found to be significantly different, despite the fact that the definitions and statistical techniques used were found to be comparable in both sectors. This comparison study opens up a wealth of doors for conducting further research in the future.

**Keywords:** *Audit expectation gap, Comparative literature review, Private sector, Public sector*

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## Introduction

The term "audit" originated from the Latin word "to hear". Citizens (or occasionally slaves) tasked with the collecting and dispensing of public monies were forced to give an oral explanation of their administration of those monies to a responsible authority (an auditor) in public over two thousand years ago, first in Egypt and afterwards in Greece, Rome, and anywhere else (Porter & Gowthorpe (2004). Littleton (1933) asserts that early auditing was intended to check the honesty of those assigned with fiscal rather than management. He further recognized two forms of initial audits: "public hearings" on state official outcomes and inspection of "charge-and-discharge accounts". Hence, both forms of audits were developed only to provide a check on 'accountability' (Salehi, 2011). It is obvious that an auditor's report is issued at the end of the auditing process to convey the final results to enhance its reliability and usefulness to the auditor's report users. Hence, one of the key duties of an auditor is to fulfil the needs of the proprietary interest of the users of financial statements since the auditor is expected to report the reality in financial reports (Salehi et al., 2009).

Porter (1993) claims that the users' expectation of reporting the reality of financial information through auditors might get deviated since the auditors are not providing the reality. Therefore, in most of the cases, readers of financial statements have the impression that the reports that auditors produce are not clear.

Therefore, it is evident that there is a mismatch in the attitudes and expectations of those who utilize financial statements and those who are

practising the audit profession, and this is what is extensively described as the Audit Expectation Gap (AEG) in the literature.

The AEG is a subject that continues to draw much attention: whenever there is a public discussion about auditing, the topic of expectation gaps comes up rather quickly in the conversation (ACCA, 2019). Consequently, this can lead one to believe that the expectation gap is a phenomenon that emerged quite recently. In point of fact, this phenomenon appeared during the advent of the audit profession; however, AEG investigations weren't carried out until the early 1970s in response to the deteriorating standing of the auditing profession (Liggio, 1974). Accordingly, Liggio (1974) is credited as being the one who first brought the notion of "expectation gap" to the body of auditing literature (1974), and he provided the definition as "the difference between the levels of expected performance as envisioned by the independent accountant and by the user of financial statements" (Liggio, 1974, p. 27). Subsequently, many research studies on the theme of AEG were carried out in numerous countries irrespective of the developed countries (for instance, the U.K, The U.S.A, New Zealand, and Australia) and developing countries (for instance, Bangladesh, Nigeria, Sri Lanka, Malta) all over the world (Fossung et al., 2020).

Subsequently, different authors came up with various definitions with slight differences to the original definitions and those differences were mainly due to the dimensions they used to measure the concept of AEG.

The existing body of research reveals that much attention dedicated to the

AEG has been directed toward the private sector, while the public sector has received very little, if any, of this attention. However, Batra and Kaur (1993) argue that most features of audit expectation concerns are just as relevant and vital regardless of the industry. Consequently, there is an imperative need for empirical studies to examine the existence or non-existence of AEG in the public sector as well (Chowdhury et al., 2005). They continue to believe that conducting empirical studies are essential even if there is not an AEG since the goal of auditing is the same for both private and public sectors. The existing body of literature shows credibility that, beginning with the first decade of the 22<sup>nd</sup> century, there has been a dramatic improvement in the AEG studies relating to the public sector.

It is noticed that auditing in both sectors are not entirely identical in terms of both their theoretical underpinnings and their practical implications. As an example, when referring to auditors in the private sector, the term "auditor independence" implies the auditors' capability to conduct audits without being influenced by company management. However, in the public sector, Chowdhury et al. (2005) argue that "auditor independence relates to a broader group where the comptroller and auditor General's auditors' integrity must be protected against groups not only represented by management but also civil servants and politicians" (Chowdhury et al., 2005, p.896). According to the existence of such discrepancies between the two sectors, there is a problem in investigating whether there are differences in the nature, content, and context of the AEG between

private and public sectors.

The primary purpose of this study is to compare and contrast the different facets of the AEG that are associated with the private sector and the public sector. Subsequently, the authors attempted to integrate all those components, including research methodologies and tools employed, dimensions used to assess AEG, factors affecting AEG, and mechanisms suggested to decrease the AEG while emphasizing the subjects for future research. After conducting a comprehensive review of the existing literature, the authors discovered a paucity of comparative studies relevant to AEG. As a result, this is the very first time that a comparative literature review study has been conducted on the AEG perspective, and the results of the study will serve as a point of reference for any future research conducted in the field of Audit Expectation Gap. In addition, this comparative analysis begins in 1974, when the idea of AEG was first conceived, and continues up to the latest period (2022), covering a considerable amount of time in the process. Consequently, an effort was made to accomplish the specific objectives that are outlined below:

1. To describe and contrast the definitions given to AEG in the extant literature.
2. To recognize and compare the respondent groups employed to examine the AEG.
3. To examine and contrast the different contexts in which the studies on AEG have been conducted.
4. To investigate and compare the numerous research approaches and statistical techniques applied

to test the existence of AEG.

5. To investigate and contrast the dimensions developed to quantify the AEG in both sectors.

In order to achieve these objectives, the authors employed a comprehensive examination of the literature on the audit expectations gap pertaining to both sectors. Hence, this study will provide light on the similarities and differences between literary works as well as the strengths and weaknesses of currently accepted descriptions in the related literature. The remaining parts of this study have been structured to adhere to the format that Fisch and Block (2018) have suggested should be used for such a study. In the second section, a concise explanation of the research approach that was adopted is provided, and in the third section, the findings of the literature review along with an analysis and comparison of those findings are offered. The conclusion of the study is presented in the latter part of the paper, along with a discussion of the practical implications and suggested future avenues for further research.

### **Research Process**

A literature review could be considered a valid approach. It is an essential step in structuring a field of study and establishing an integral part of any study (Easterby-Smith et al., 2002). Ramdhani et al. (2014) assert review of literature as a survey of scholarly papers, books, and other materials applicable to a particular issue, field of study or a theory in which a researcher provides a summarized and critical evaluation of those documents. Thus, “it gives an overview of what has been said, who the key writers are, what are the

prevailing theories and hypotheses, what questions are being asked, and what methods and methodologies are appropriate and useful” (Ramdhani et al., 2014, p.48).

Cronin et al. (2008) claim that the primary intention of the literature review is to keep the reader up-to-date with existing knowledge and highlight the importance of new research. Consequently, a comprehensive literature review gathers information on a given topic from a variety of sources while also including a well-defined search and selection method (Carnwell & Daly, 2001). On the other hand, literature could be considered as a combination of both summary and synthesis of arguments and ideas of others since a summary represents the review of the essential information of the source, whereas synthesis consists of a re-organization of those information (Ramdhani et al., 2014). They further assert that a comprehensive and well-written literature review can be drawn from a wide range of sources including theoretical presentations, reviewing articles, and empirical research papers, among others.

Reading a substantial number of materials is essential to the process of examining published works; as a consequence, the researcher is able to acquire a big amount of information regarding the topic being considered (Wee & Banister, 2016). The analysis of past research is given a significant amount of consideration in this study, and it focuses on determining the extent to which two distinct bodies of work on AEG have parallels and contrasts. According to Cronin et al. (2008), primary materials such as “articles published in reputable journals” are more reliable and up-to-

date than books. Meanwhile, Tranfield et al. (2003) emphasize how important the archival technique is for conducting a methodical assessment of the existing body of literature. Online databases could be considered as the most common instruments for searching literature in today's modern world; nonetheless, it is vital to identify which databases include information pertinent to the topic being researched (Cronin et al., 2008). Wee and Banister (2016) convincingly suggest that, if a researcher plans to investigate almost all of the significant literature on a topic, the databases (e.g., Google Scholar, SCOPUS, Web of Science) that are available to the general public seem to be the most apparent sources to turn to as a source of information.

It is noted that an extensive search in the Google Scholar, Scopus, Jstor, and Emerald databases was performed separately and independently for each sector, as suggested by Quick (2020). On the one hand, authors searched for the related articles applying the keywords “audit expectation gap”, “audit expectations gap”, “audit expectation-performance gap” and “expectation gap” linked with “audit” or “auditor” to find articles that were relevant to the private sector perspective. In order to search for relevant articles pertinent to the public sector perspective, the authors combined the keywords “audit expectation gap”, “audit expectation-performance gap” and “audit expectation gap in central government” with “public sector”, “government sector” or “performance audit”. However, before splitting the downloaded articles into two separate sectors, each of them underwent meticulous scrutiny and was cross reviewed to ensure no mistakes were

made. In order to construct a timeline, the year 1974 was selected as the point of origin, and the year 2022 was selected as the point of destination in the voyage of searching the relevant literature.

Liggio (1974) provided the first formal interpretation on AEG. Therefore using his work as a point of reference seems suitable. Because of this, the findings of this study are seen as an advancement in the conceptualization and integration of the AEG literature. The literature was searched up to the most recent year accessible since the year 2022 has been set as the endpoint for completing the literature survey. Moreover, the references included in the bibliographies of the articles were also looked through for papers pertinent to the topic. Moreover, the papers presented at conferences and published doctorate dissertations were also taken into consideration owing to the scarcity of research conducted on the AEG through the lens of the public sector. In spite of this, over the course of the examination of the relevant literature, a comprehensive search for textbooks, book chapters, working papers, and unpublished doctorate dissertations was not undertaken as proposed by Quick (2020). Furthermore, it is highlighted that the research papers that were publicized in languages except English were not taken into consideration for inclusion in the survey because of the difficulties associated with translating them. As stated earlier, these delimitations appear to make sense when considering this study's objectives. It is noted that the facts and references in the tables relevant to the public sector have been presented in grey so that they may be identified more quickly and clearly. The list of

references employed for this study was provided at the end.

### **Synthesis and Interpretation of Findings**

Fisch and Block (2018, p.105) suggest that “Focus on concepts, not studies: Authors need to decide how to summarize and categorize the literature identified”. They also claim that it requires a meticulous identification and examination of the "underlying concepts" that were employed in the review, which then guides the analysis that was performed. Although it is feasible to describe the literature chronologically or even in alphabetical sequence, it is generally accepted that the focus of literature reviews needs to be on the concepts being discussed (Fisch & Block, 2018).

### ***Definitions for Audit Expectation Gap***

The first objective of this study is to describe and compare the definitions given to AEG in the extant literature. Consequently, the authors presented AEG definitions in a historical sequence since it was believed that this would make the evolution of the concepts more straightforward and effective. As seen in Table 1, the most extensively accepted definitions of AEG are provided.

Scholars, as pointed out by Fisch and Block (2018), make use of tables and figures to communicate the most crucial ideas and data effectively. As Chowdhury and Innes (1998) and Chowdhury et al. (2005) convincingly argue, while there is a plethora of studies on AEG in the private sector, the question of whether such a gap exists in the public sector has received less attention. All but two of the

definitions indicated in Table 1 express the private sector viewpoints on AEG, leading credence to the argument established by Chowdhury and Innes (1998) and Chowdhury (2005). Regarding the effectiveness of independent accountants, Liggio (1974) is credited with proposing the term “expectation gap” for the first time, and his explanation of the term is often cited as the first official definition of the term. Existing literature shows that a wide variety of academics argued and debated these two original definitions, and that new versions of AEG are continually changed and updated by assembling and disassembling fresh perspectives concerning the underlying notion. Consequently, Porter (1993) introduced the notion of the “Audit Expectation-Performance Gap” rather than the “Audit Expectation Gap” by incorporating both the performance gap and the reasonableness gap while further broadening and updating the concept of AEG.

According to Table 1, the emphasis of the majority of prior studies has been on assessing the perspectives of auditors on the one hand, whereas (i) financial statement users, (ii) accountants and investors, and (iii) the society is concurrently representing the other side when defining the AEG concept. In addition, when the various dimensions used to measure the AEG in the various studies are taken into consideration, it is possible to identify some slight discrepancies in the definitions of the AEG (Deepal & Jayamaha, 2022).

It is reasonable to draw the attention that the majority of academics, while attempting to define the idea of AEG, have focused their emphasis on Porter's (1993) basic description of the

“expectation-performance gap”, regardless of whether or not they are referring to the public or private sector. Furthermore, when comparing the definitions provided in Table 1, it is crucial to emphasize that the sector was not a significant consideration when developing the definition of AEG. It is also important to highlight that the phrases “private” and “public” do not occur in any of these AEG definitions in any capacity. Thus, it is concluded that the sector is not a crucial factor in interpreting the concept of AEG.

#### ***Types of Respondent Groups Selected in AEG Studies***

The second objective of this study is to recognize and compare the respondent groups employed to examine the AEG in both sectors. Table 2 of the Appendix displays the commonly used AEG dimensions that have been alluded to by selected scholars in existing literature chronologically, beginning in 1977 and continuing up to the present day.

As seen in Table 2 of the Appendix, researchers conducting AEG research on the private sector have employed a significant variety of samples than those conducting AEG studies on the public sector. Almost all private sector studies have utilized audit partners and audit firms, although the Supreme Audit Institutions (SAIs) have represented the auditor (government auditor) of related public sector studies. Furthermore, it was found that the majority of researchers (Akther & Xu, 2020; Lin, 2004; Porter, 1993), have used “audit firms” representing the external auditors without taking into consideration the audit firm’s size whereas in some studies (Baron et al., 1977; Nguyen & Nguyen, 2020), only the Big 4 audit firms had been chosen.

Members of the SAIs in the public sector are referred to by a variety of titles depending on the country in which they are located. These titles include Comptroller and Auditor General (CAG) in Bangladesh and Malaysia, Supreme Audit Agency (SAA) in Indonesia, Auditor General (AG) in Cyprus, Nigeria, and Sri Lanka, and National Audit Office Auditors in Malta and Gambia.

Table 2 illustrates further that nearly half of the research on private sector AEG has been carried out using Investors and Shareholders (48%), whereas more than 35% of the studies on private sector AEG made use of corporate managers (represented by company directors, managers, executive officers)(48%), and Bankers (35%). However, it is found that the parliamentary evaluation committee and Public Accounting committee (60%) have become the most famous sample group pertaining to the most of the public sector AEG studies (Arung, 2017; Chowdhury & Innes, 1998; Chowdhury et al., 2005; Conteh & Hamidah, 2021; Ellul & Scicluna, 2020; Krambia-Kapardis et al., 2016; Pongsapan, 2012). In spite of this, it has been discovered that the mostly selected sample group in relation to the public sector AEG studies comprises the parliamentary Evaluation Committee and the Public Accounting Committee in parliament and local government bodies, which accounts for sixty per cent of the selected studies. In addition to that, it was found that the studies conducted on AEG in the public sector have used different types of respondent groups, such as politicians, members of parliament, government regulators, members of the public accounts committee, secretaries of the departments, and delegates

representing the international financial agencies such as the World Bank and the Asian Development Bank. Thus, it is obvious that studies of the public sector have yet to be carried out using a range of respondents, regardless of the direct beneficiaries of auditing in the public sector appear to be broader than those of auditing in the private sector.

### ***Contexts of the Studies Conducted on AEG***

Table 3 summarizes the author/s (with the year of publication), the countries where the AEG studies have been performed, the research approach (quantitative or qualitative), the statistical instruments that have been used to analyze the AEG, and the dimensions employed to assess AEG in the same table.

The third objective of this study is to assess and contrast the different contexts of the studies on AEG have been conducted. Table 3 demonstrates very clearly that numerous empirical research on the AEG have been carried out relating the private sector settings in a variety of developed as well as developing countries around the globe. However, most of the private sector research have been clustered in some developed countries such as the United States (Baron et al., 1977; Porter & Gowthorpe, 2004), in Australia (Low et al., 1988), in New Zealand (Porter, 1993; Porter & Gowthorpe, 2004), and in the UK (Humphrey et al., 1993). Power (2000) argued that “these hypothesized causes require further empirical support and that more research is needed, particularly to demonstrate that the audit explosion is not simply a UK phenomenon” (Power, 2000, p. 111). Furthermore, Oluyombo and Okunola (2018)

emphasize the importance of studying the expectation gap in developing countries since it is much more relevant today than ever. However, Choudhury and Innes in 1998 revealed that “almost all the research into the audit expectations gap has been conducted in developed countries” (Chowdhury & Innes, 1998, p. 247). Table 3 shows that, with the exception of Budding and Wassenaar (2021) in the Netherlands, the vast majority of public sector AEG studies (more than 90% of selected studies) have been conducted in developing countries, as opposed to the vast majority of private sector AEG studies in developed countries. It is also worth noting that some public sector research projects were undertaken in emerging countries such as Indonesia, Malaysia, South Africa, and Romania. In contrast, a substantial amount of research has been performed in Nigeria, as shown in Table 3. Furthermore, Deepal and Jayamaha (2021) revealed that the empirical studies on AEG relating to the public sector are minimal, whereas there is a dearth of such studies in Sri Lanka.

### ***Research Approaches and Statistical Techniques Applied in AEG Studies***

To achieve the fourth objective, the authors contrasted the research approaches and the statistical techniques applied to test the existence of AEG. As can be shown in Table 3, the quantitative research approach has been employed in the majority of studies about the AEG regardless of the sector being investigated. In addition, the existing body of research provides evidence for many studies in which qualitative and mixed methods have been employed. This is true regardless of whether the AEG studies were conducted in the public or

private sector. It is argued that “qualitative data can put flesh on the bones of quantitative results, bringing the results to life through in-depth case elaboration” (Patton, 1990, p. 132). In terms of the many kinds of tests, non-parametric tests have been applied in most of the studies conducted in both private and public sectors. Table 2 illustrates quite clearly that the majority of the studies on AEG used more than two separate respondent groups for their research, and those respondent groups are fundamentally distinct from one another in terms of their nature and context. Consequently, the assumption of “Normality” cannot be made from such diverse populations, which appears to be the primary motivation behind the use of non-parametric tests in research connected to AEG. Porter (1990) highly accepted this reason stating as, “While recognizing that parametric tests are generally more powerful than their non-parametric counterparts, no justifiable assumptions could be made about the distribution of the populations represented by the survey results” (Porter, 1990, p. 165). Meanwhile, The Mann-Whitney U test was discovered to be an extensively used technique in many studies, accounting for 60% of private sector studies and 47% of public sector studies, respectively. When it comes to the parametric tests, Table 3 clearly shows that public sector studies have mainly employed independent sample t-test while the private sector has applied a broader range of statistical tools such as independent Sample t-test (Hassink et al., 2009; Lin & Chen, 2004; Sidani, 2007), Multiple linear regression and Correlation analysis (Aminu et al., 2022; Kamau, 2013; Okafor & Otalor, 2013) and Partial Least-Squares

Structural Equation Model (PLS-SEM) (García-Hernández et al., 2021; Xu & Akther, 2019) in addition to the independent sample t-test.

### *Dimensions Developed to Quantify the AEG*

As a means of progressing toward the fifth objective of this investigation, an effort was made to evaluate the AEG dimensions compared to each other. The last column of Table 3 illustrates the “dimensions”, which indicate the aspects of AEG that scholars have extensively investigated since 1977. Quick (2020) highlights that the concept of AEG is a very complicated phenomenon, and existing research reveals that many academics have utilized different aspects to explain and characterize AEG. As a foundational research study on AEG, Porter (1993) describes the “audit expectation performance gap within the framework of the “auditor’s duties” dimension. Afterwards, she separated AEG into its two main components as, “reasonableness gap” and “performance gap”, which were then broken down into “deficient standard gap” and “deficient performance gap”. Extant literature suggests a variety of dimensions to measure the AEG related to the private sector. However, Deepal and Jayamaha (2022) reveal the most prominently employed dimensions in assessing AEG as duties and responsibilities of the auditor, the auditor’s independence, factors connected to the audit profession, the audit report’s format and substance, as well as the message it conveys.

When the dimensions used to assess the AEG in both sectors are contrasted, Table 03 shows that the dimensions utilized in private sector research have covered a more

extensive scope than those employed in public sector studies. Extant studies reveal that the public sector has not touched the attributes such as going concern reporting, Key Audit Matters (KAMs), providing non-audit services and third-party obligations of auditors, technical knowledge on audit and assurance, and credibility and the significance of audited financial reports in decision making. It was further found that studies had yet to be conducted to investigate the AEG based on the roles and duties stated by Porter (1993), at least not by making adjustments to that of public sector auditors. However, the private sector still needs to address issues such as governance, risks and compliances, performance audits, and other special audit engagements that are inherent in the public sector viewpoint.

### **Conclusion, Implications and Future Research**

The AEG has a history that stretches back for a long time and has become a big concern in the private sector. Nevertheless, compared to the studies that have been carried out on the AEG in the private sector, the public sector has only conducted a few investigations so far. The general public is becoming increasingly aware of the relevance of auditing, and at the same time, their expectations and interest in auditing are also developing at a higher pace, which ultimately contributes to widening the gap between the two groups.

The present study commenced with the purpose of analyzing and comparing the various definitions of AEG that can be found in the previous research. Researchers observed that their definitions of the AEG varied slightly depending on the dimensions

they used to assess it. However, it is essential to emphasize that the bulk of interpretations of AEG have frequently been drawn from Porter's (1993) definition. It is emphasized that the existing body of research needs to redefine the AEG through the lens of the public sector. The two definitions of AEG proposed by researchers in the public sector displayed in Table 3 have not considered the sector. Hence it is concluded that the sector is not a significant consideration in defining the AEG. Finally, after reviewing the existing literature, the authors developed a fresh and straightforward definition for the AEG in the public sector as "the difference of perceptions between what society as a whole expects auditors to perform and what public sector auditors are perceived to accomplish by complying with the related legislations and auditing promulgations when performing an audit in practice".

In achieving the second objective, it was sought to compare the various range of respondent groups employed to examine the AEG. Comptroller Auditor Generals attached to the Supreme Audit Institutions (SAI) have usually held a dominant position on the "auditor" side in public sector studies. However, auditors, audit firms and professional accountants have been considered the "auditors" in the private sector. Further, it was concluded that the target respondent groups used to represent the "society" side in earlier research examining the AEG were extremely varied in both sectors. Under the third objective, we examined the contextual differences of conducting AEG studies and concluded that the public sector studies had been concentrated in developing and emerging countries as opposed to the vast majority of private

sector AEG studies dominated in developed countries. As far as the methodological differences are concerned, it is concluded that a substantial difference cannot be seen in the studies between both sectors. Further, the quantitative method under the positivistic approach has become the most famous approach in both sectors. Furthermore, the non-parametric tests have been dominantly employed to test the existence of AEG irrespective of the sector, specially due to the fundamental differences of the groups of respondents in terms of nature and context. Finally, the dimensions developed to measure the AEG construct was examined and it is concluded that the AEG is a multi-dimensional concept.

Finally, it is concluded that private and public sector AEG studies have certain commonalities and variations in the dimensions utilized to measure the AEG. We also draw the conclusion that the dimensions used in private sector research have spanned a significantly broader range of scope than those used in public sector studies.

It is essential to emphasize that this comparative review of the literature study has a few limitations. The most significant limitation of this study was the availability of just a small number of empirical studies on AEG-related concerns that were carried out addressing the public sector. As another limitation, the authors did not search for unpublished doctoral dissertations, working papers, or textbooks in this comparative study. However, we only looked at studies in which the titles or abstracts contained terms relevant to AEG; articles written in languages other than English were disregarded due to linguistic barriers.

According to the current body of literature, there are potential implications for further studies. Strandberg and Simpson (2020) suggest that a literature review is one of the most important methods available for acquiring access to information that might enhance social work practice. Authors attempted to summarize and contrast the definitions and interpretations provided for AEG, the different contexts in which the AEG studies were conducted, the dimensions used to measure the concept, various target groups of respondents used in AEG studies as well as the methodologies used to measure the AEG from both private and public sector perspectives. In light of this, we have a strong belief that the findings of this study might potentially help the development of a more comprehensive theoretical framework for AEG-related research in the years to come. As a result, this comparative literature review may be viewed as a vital method for acquiring a body of information that can be employed in a variety of ways by diverse stakeholders in society. Finally, this synthesis could be used to assist in the discovery of misunderstandings regarding AEG and how they vary between the views of the private sector and the public sector.

This comparison study opens up a wealth of doors for further research in the future. The amount of AEG research conducted by the public sector is noticeably less than that conducted by the private sector. Therefore, there should be a general rise in the number of studies conducted in the private sector, particularly in developed countries. Furthermore, it is evident that auditing in the public sector encompasses more

than just financial auditing. Accordingly, the AEG that is pertinent to “performance audit”, “Value-for-Money (VfM) audit”, and “compliance audit” have received insufficient attention up to this point, and they constitute a potential path for future studies. As a consequence of this comparative research, it was concluded that studies employing a mixed technique need to be more represented in both the public and private sectors. In light of this, prospective researchers should conduct more studies using a mixed-methods technique.

Some countries are incorporating, from time to time, the international auditing standards, guidelines, directives, and promulgations published by the International Organization for Supreme Audit Institutions (INTOSAI) in conducting public sector auditing in practice. Since there is a dearth of studies addressing the impact of those criteria and regulations for diminishing the

severity of AEG, future research might concentrate on such pathways. Furthermore, Computer-assisted auditing techniques, often known as CAATs, are one of the most widely used digital approaches. Information technology is essential to the current accounting and auditing professions. AEG on these digital developments in each of these sectors is relatively uncommon. Thus, prospective researchers should focus on the association of AEG with these perspectives.

### **Author Contributions**

The first author designed the study, collected and analyzed data, interpreted the results, drew the conclusions. Further, all versions of drafts of the manuscript were written by the first Author.

The second author commented and refined the research article. Further he provided insights and constructive suggestions to improve the overall manuscript.

## Tables and Figures

**Table 1**

*Definitions for Audit Expectation Gap*

Year	Author	Definition for Audit Expectation Gap
1974	Liggio	“The difference between the levels of expected performance as envisioned by the independent accountant and by the user of financial statements” (p. 27).
1988	Guy and Sullivan	“The difference between what the public and financial statement users believe accountants, auditors are responsible for, and what the accountants and auditors themselves believe they are responsible” (p.36).
1993	Jennings et al.	“The differences between what the public expects from the auditing profession and what the auditing profession can actually provide”
1993	Porter	“The gap between society’s expectations of auditors and auditors’ performance, as perceived by society” (p.50).
1993	Monroe and Woodliff	“It exists when there are differences between in beliefs between auditors and the public about the duties and responsibilities assumed by auditors and the messages conveyed by audit reports” (p.62).
2009	Salehi et al.	“A shortfall in audit effectiveness. Expectation gap occurs when there are differences between what the public expects from the auditor and what the auditor actually provides” (p.167).
2011	Ebimobowei and keroetu	“Audit expectation gap is the difference between the levels of expected performance as envisioned by the users of financial statements and by the independent accountant” (p.445).
2013	Kamau	“The difference between what the public as well as financial statement users believe auditors are responsible for and what auditors actually believe their responsibilities are” (p.489).
2014	Ruhnke and Schmidt	“A divergence between the public’s expectations of auditors’ statutory role and responsibilities under the current regime and auditors’ performance as perceived by the public” (p.595).
2016	Salehi	“It is commonly used to describe the situation whereby a difference in expectation exists between a group with a certain expertise and a group, which relies upon that expertise. The public perception of an auditor’s responsibility differs from that of the profession and this difference is referred to as the expectation gap” (p.26).
2017	AICPA	“Difference between what stakeholders and users of financial statements consider to be the responsibilities of auditors and what auditors actually do”.
2018	Azagaku and Aku	“The deference between what the public expects from an audit function and what the audit profession accepts the objective of auditing to be” (p.1).
2018	Oluyombo and Okunola	“The combination of skill gap, knowledge gap, reasonable expectation gap, regulation gap, and the actual performance gap” (p.208).
2020	Nguyen and Nguyen	“The difference between auditors and users of audit report about the auditor’s performance” (p.52).
2020	Coram and Wang	“The difference between what users expect from the auditor and the financial statement audit and the statutory requirement for an audit” (p.2).
2020	Fossung et al.	“ It is the difference between what the profession thinks an audit is and does and what stakeholders think” (ahead-of-print)
2021	ACCA	“The difference between what the general public thinks auditors do and what the general public would like auditors to do”
2021	Conteh and Hamidah	“The ‘audit expectation gap’ is a mismatch/difference in perceptions between what auditors do and what third parties believe auditors should do or should not do in performing audit practice” (p.138).

2022 Deepal and Jayamaha “The difference between what the society as a whole expects auditors to do and what auditors actually do when performing an audit in practice” (p.314)

(Source: Constructed by authors based on literature)

**Table 2**  
*Types of Respondents in the samples of selected studies*

Auth or/s*	Types of respondents in the sample**																		
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
01		x							x			x		x					
02		x	x	x			x		x	x	x	x		x			x		x
03	x				x	x													
04		x		x						x		x							
05		x							x	x	x								
06		x					x						x	x	x				
07	x				x	x													
08		x		x					x	x		x							
09	x					x	x					x							x
10		x									x	x		x	x	x			
11		x												x			x	x	x
12		x							x					x					
13		x										x							
14		x					x	x						x				x	
15								x											
16			x																
17	x					x							x						
18		x							x	x	x								
19		x																	
20							x	x											
21		x					x		x		x	x		x					
22		x							x		x			x			x	x	x
23	x		x			x							x				x		
24													x						
25	x					x	x						x			x	x		x
26		x									x								
27	x					x							x						
28		x									x			x					x
29				x							x			x					x
30		x						x									x		
31		x															x		
32	x													x					
33		x									x			x					
34		x									x	x				x			
35																			x
36	x					x								x		x			
37		x		x				x											
38		x							x	x	x	x							
39		x																	x
40																			x
41								x											x
42						x													
43		x		x					x	x	x	x							
44			x						x										
45		x																	x
46												x			x				x
Pvt									1		1								
Total	0	27	2	6	0	0	5	5	1	7	6	9	1	12	3	2	7	5	5
%	0	84	6	19	0	0	6	16	4	22	0	28	3	38	9	6	2	6	16

Pub																			
Total	10	0	2	0	2	9	2	1	0	0	0	1	6	0	0	2	4	0	2
%	67	0	13	0	3	0	3	7	0	0	0	7	0	0	0	3	7	0	13

Source: Adopted from the literature

**\*Author/s in chronological Order:** 01. Baron et al. (1977); 02. Porter (1993); 03. Chowdhury and Innes (1998); 04. Best et al. (2001); 05. Fadzly et al. (2004); 06. Lin and Chen (2004); 07. Chowdhury et al. (2005); 08. Dixon and Woodhead (2006); 09. Daud (2007); 10. Haniffa and Hudaib (2007); 11. Sidani (2007); 12. Hassink (2009); 13. Salehi et al. (2009); 14. Bui and Porter (2010); 15. Dana (2011); 16. Ebimobwei and keroetu (2011); 17. Pongsapan (2012); 18. Pourheydari and Abousaiedi (2011); 19. Kamau (2013); 21. Okafor and Otor (2013); 22. Ruhnke and schmidt (2014); 23. Coetzee (2016); 24. Emmanuel (2016); 25. Krambia-Kapardis (2016); 26. Salehi (2016); 27. Arung (2017); 28. Behzadian and Nia (2017); 29. Azagaku and Aku (2018); 30. Fulop et al. (2019); 31. Kunz and De Jager (2019); 32. Okoro et al. (2019); 33. Xu and Akther (2019); 34. Akther and Xu (2020); 35. Dauda (2020); 36. Ellul and Scicluna (2020); 37. Nguyen and Nguyen (2020); 38. Olojede (2020); 39. Astolfi (2021); 40. Budding and Wassenaar (2021); 41. Coram and Wang (2021); 42. Conteh and Hamidah (2021); 43. Dang and Nguyen (2021); 44. Dewi et al. (2021); 45. García-Hernández et al. (2021); 46. Aminu et al. (2022).

**\*\* Types of respondents in the sample:** A. Government Auditors, B. Private Sector Auditors (Audit Firms), C. Internal Auditors, D. General Public, E. International Funding Agencies, F. University Academics, G. Graduates and Undergraduates, H. Bankers, I. Stockbrokers, J. Investors, K. Shareholders, L. Investment/ Financial Analysts, M. Government Officials, N. Corporate Management, O. Creditors, P. Government regulating Bodies, Q. Accountants, R. Employees, S. Others

**Table 3**  
*Summary of Survey Research on the AEG*

Author (year) <i>Country</i>	<i>Approach</i> Instruments used	Dimensions used to measure AEG
Baron et al. (1977) <i>USA</i>	<i>Quantitative</i> Kolmogorov-Smirnov Test & Sign test	Auditor's responsibilities for detecting and disclosing corporate irregularities and illegal acts
Porter (1993) New Zealand	<i>Quantitative</i> Wilcoxon signed-ranks & Mann-Whitney U test	Existing duties, Non-existing duties, Duties reasonably expected of auditors
Monroe & Woodliff (1993) <i>Australia</i>	<i>Quantitative</i> Kruskal-Wallis Test & One way ANOVA, Mann-Whitney U test	Auditors' responsibilities and duties
Chowdhury & Innes (1998) <i>Bangladesh</i>	<i>Qualitative</i> Analysis (Content analysis)	Auditor accountability, Auditor independence, Auditor competence, Performance audit, Truth and fairness of the reported information
Best et al. (2001) <i>Singapore</i>	<i>Quantitative</i> Mann Whitney-U test	Responsibilities of auditors, Reliability of audit and Audited Financial Statements (A.F.S), Usefulness of A.F.S.
Fadzly et al. (2004) <i>Malaysia</i>	<i>Quantitative</i> Mann-Whitney U-test, Factor Analysis (1996)	Responsibilities of auditors, Reliability of F.S, Usefulness of A.F.S.
Lin & Chen (2004) <i>China</i>	<i>Quantitative</i> Independent Sample <i>t</i> -test	Objectives of audit, Auditor's responsibility to discover and disclose frauds, Auditor's independence, Auditor's third-party obligations and influence of government funding on audit services' credibility.
Chowdhury et al. (2005) <i>Bangladesh</i>	<i>Quantitative</i> Mann-Whitney U-test	Auditor General's reporting, Accountability, Auditor independence, Competency of auditor, Audit materiality, Audit evidence, True and fair view, Performance auditing

Dixon & Woodhead (2006) <i>Egypt</i>	<b>Quantitative</b> Mann Whitney-U test	Responsibilities of Auditor, Reliability of A.F.S, Decision usefulness of A.F.S
Daud (2007) <i>Malaysia</i>	<b>Qualitative</b> Grounded Theory (constant comparative method	Responsibilities of Auditor, Scope of Audit, Independency of auditor, Audit Reporting, Ethics of Auditor, Audit Standards
Haniffa & Hudaib (2007) <i>Saudi Arabia</i>	<b>Quantitative + Qualitative</b> Mann–Whitney U-test + Content Analysis	Performance of audit responsibilities, Responsibilities of auditor in detection and disclosure of frauds, Possibility of providing ancillary services
Sidani (2007) <i>Lebanon</i>	<b>Quantitative</b> Independent Sample t-test	Auditor's role in fraud detection, Perspectives of the auditing profession for F.S responsibility and sampling
Hassink (2009) <i>Netherlands</i>	<b>Quantitative</b> Independent Sample t-tests	Auditor's responsibilities in corporate fraud
Salehi et al. (2009) <i>Iran</i>	<b>Quantitative</b> Mann-Whitney U test	Level of auditor independence
Bui Porter (2010) <i>New Zealand</i>	<b>Quantitative</b> Structural data displays	Competencies of graduates, Role of education(Accounting), Staudents's expectation on Accounting
Dana (2011) <i>Romania</i>	<b>Quantitative</b> Descriptive Statistics	Responsibilities of Auditors, Usefulness of Audited Report, Independency of Auditor
Ebimobowei keroetu (2011) <i>Nigeria</i>	<b>Quantitative</b> Descriptive statistics, Spearman rank order correlation coefficient, Mann-Whitney U test.	Responsibilities of Internal auditors in public sector in Nigeria
Pourheydari Abousaiedi (2011) <i>Iran</i>	<b>Quantitative</b> Mann-Whitney U-tests	Auditor's responsibilities in detecting frauds, Effectiveness of internal controls, Preparing F.S.
Pongsapan (2012) <i>Indonesia</i>	<b>Quantitative</b> Chi Square, Mann-Whitney U test and Independent Sample T-Test	Functions of auditors, auditors' performance (with or without accounting education)
Kamau (2013) <i>Kenya</i>	<b>Quantitative</b> Multiple linear regression and Correlation analysis	Auditor efforts, Auditor's skills, Audit methodologies, Auditor Independence, Society's Knowledge about the role of auditor, Narrower Audit Scope
Okafor & Otolor (2013) <i>Nigeria</i>	<b>Quantitative</b> Analysis of Variance, Multiple Regression Analysis	Role of the auditing profession
Ruhnke schmidt (2014b) <i>Germany</i>	<b>Quantitative</b> Wilcoxon signed-rank test	Independent financial audits, Responsibilities of auditor, Performance of auditors.
Füredi-Fülöp (2015) <i>Hungary</i>	<b>Quantitative</b> Z-test	Duties and responsibilities of auditor
Coetzee (2016) <i>South Africa</i>	<b>Quantitative</b> Kruskal-Wallis tests	Risk management structures, coordination level with internal auditing, Internal audit functions
Emmanuel (2016) <i>Nigeria</i>	<b>Quantitative</b> Chi-Square test	Fraud detection
Krambia-Kapardis (2016) <i>Cyprus</i>	<b>Quantitative</b> Paired sample t-test, Quadrant analysis – government	Types of information included in the report, Quality of the information included in the report
Salehi (2016) <i>Iran</i>	<b>Quantitative</b> Mann-U Whitney test	Responsibilities of Auditors, Financial control, Detecting misstatements, Auditors' professional discipline.
Arung (2017) <i>Indonesia</i>	<b>Quantitative</b> Independent Samples T Test	Accountability, Materiality, Audit opinion, Integrity, Objectivity, Audit evidence

Behzadian and Nia (2017) <i>Iran</i>	<i>Quantitative</i> Student t test	Audit services quality
Azagaku and Aku (2018) <i>Nigeria</i>	<i>Quantitative</i> Descriptive and Kolmogorov – Smirnov test	Duties and responsibilities of auditors , Quality and usefulness of the auditors' report
Fulop et al. (2019) Hungary	<i>Quantitative</i> Analysis of Variance	Audit education on auditors' responsibilities, Degree of assurance provided by the auditor, Board's responsibilities
Kunz and De Jager (2019) S. Africa	<i>Quantitative</i> One sample t-test	Technical knowledge on audit and assurance
Okoro et al. (2019) Bangladesh	<i>Quantitative</i> Log-Linear Regression Model	Disposition of auditors, Skills and the performance of auditors
Xu and Akther (2019) Bangladesh	<i>Quantitative</i> Partial Least-Squares Structural Equation Model (PLS-SEM).	Independence of auditor, Level of communication, Responsibility for fraud detection, Meaning and usefulness of audit report, Going concern reporting assessment
Akther and Xu (2020) <i>Bangladesh</i>	<i>Quantitative</i> Mann–Whitney U-test and structural equation model (SEM) in Smart-PLS	Auditor's responsibility for detecting frauds, Audit report's meaning & effectiveness, Provision of non- audit services, Responsibility of auditor, Unfulfilled expectations for additional assurance services.
Dauda (2020) <i>Nigeria</i>	<i>Quantitative</i> Simple descriptive statistics and Pearson Product Moment Correlation Coefficient	Forensic accounting, investigation services and auditors' duty to produce reliable accounting data
Ellul and Scicluna (2020) <i>Malta</i>	<i>Quantitative + Qualitative</i> Chi-square test, Mann-Whitney U test, independent t-test	Responsibilities of Auditor, Audit reports, Detection of frauds, Materiality, Audit standards, Audit independence, Audit judgement.
Nguyen and Nguyen (2020) <i>Vietnam</i>	<i>Quantitative</i> Mann-Whitney U test and Wilcoxon signed-ranks test	Auditors responsibilities in (i) Detection of Frauds and errors, Asset protection and financial scandals and, (ii) Role of auditing and auditors in determining investment choices and investor confidence
Olojede (2020) <i>Nigeria</i>	<i>Quantitative</i> Mann–Whitney U test and Kolmogorov–Smirnov Z test	Reliability and Usefulness of Financial statements
Astolfi (2021) <i>France and Luxembourg</i>	<i>Quantitative</i> Chi-Square test	International Financial Reporting Standards (IFRS)
Budding & Wassenaar (2021) <i>Netherlands</i>	<i>Quantitative</i> Mann-Whitney U test	Performance management, Strategic management, Finance operations and reporting, Governance risk and compliance
Coram and Wang (2021) <i>U.S.A.</i>	<i>Quantitative</i> Multivariate analysis of variance	Disclosure of Key Audit Matters and Accounting Standard Precision
Conteh and Hamidah (2021) <i>Gambia</i>	<i>Qualitative</i> Thematic Analysis	Audit scope, Auditor independence, Fraud Detection and reporting exercise, Auditor ethics, Audit reporting and audit report format under public sector performance audit
Dang and Nguyen (2021) <i>Vietnam</i>	<i>Quantitative</i> Chi-Square test	Responsibilities of auditors
Dewi et al. (2021) <i>Indonesia</i>	<i>Qualitative</i> Symbolic interaction	Detection of frauds in banks

García-Hernández et al. (2021) <i>Spain</i>	<b>Quantitative</b> Structural equation modelling methodology (PLS-SEM),	Auditor Independence, Auditor prohibitions, Auditor safeguarding
Aminu et al. (2022) <i>Nigeria</i>	<b>Quantitative</b> descriptive statistics and multiple-regression analysis	audit opinion, Independency, Economic dependency, Mkt competition, non-audit services, Regulatory Framework, CG System, Audit committees, Professional Ethics, receiving gifts by Mgt, Prospects of reappointment

Source: Adopted from the Literature

Note: Public sector Studies have been coloured in grey

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## Determinants of Self-Efficacy on Undergraduate Academic Achievement

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### Abstract

This research focuses on the main theme of the determinants of self-efficacy on undergraduate academic achievement, particularly considering the Trincomalee Campus, Eastern University, Sri Lanka. Self-efficacy refers to people who believe in their own capabilities and abilities to accomplish a given task. When it comes to undergraduates in the university system, they are valuable stakeholders. Nowadays, the student-centered learning approach is practiced by universities, it is to be responsible for their own pedagogical progress. Their self-efficacy helps them to manifest themselves and achieve their academic performance. Therefore, self-efficacy plays a vital role in their academic achievement. Identify the objectives of this research, to discover the relationship between self-efficacy and academic achievement, to what extent does self-efficacy influence on academic achievement and to recognize the attitudes that play a role in mediating the relationship between self-efficacy and academic achievement. A particularly representative sample was selected from undergraduate management students at the Trincomalee Campus. The selected sample size is 234. Conceptual variables cover performance accomplishment, vicarious experience, verbal persuasion, physiological & emotional state, attitudes, and academic achievement. The researcher use the Sobel test for the data analysis. Based on the results, the main influencing factors are verbal persuasion and performance accomplishment. Academic achievement is not significantly related to physiological & emotional state and vicarious experience.

**Keywords:** *Self-efficacy, Attitudes, Academic achievement*

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## Introduction

Education is a major contribution to the achievement of sustainable development. It provides undergraduate students the opportunity to enhance their skills, attitudes, competencies, and knowledge, and also creates an energetic workforce to achieve organizational success. Given their skill level, poor knowledge of English is a serious difficulty for students to do their best in academic achievement in university education (De Silva, 1977). When they enter university, they hope for a bright future, social status, and economic stability (De silva, 1977; Ranathunga, 2007). Nowadays, student-centered learning (SCL) is practiced by universities, in particular by replacing lectures with active learning, cooperative group situation, and integration of self-paced learning programs. The ultimate goal of this approach is for students to be responsible for their own educational progress (Nanney, 2004).

Self-efficacy examines the strength of each individual. This belief supports the way people believe, think, and feel (Ormrod, 2006). In the educational system, students attempt to achieve two goals in the academic context; develop competence and appear competent. It indicates learning and performance goals (Elliot et al., 1988; Ames et al., 1988; Dweck et al., 1988; Harackiewicz et al., 2002; Nicholls, 1984). Compared to those who don't, students believe they can solve academic problems using cognitive and metacognitive procedures. This can impact both task selection and persistence. Future performance can be strongly predicted by self-efficacy during the first year of university.

Students with low self-efficacy are

more likely to ignore, postpone or quickly abandon their homework. Additionally, the process of cognitive engagement, which increases self-efficacy beliefs for classroom success, is facilitated by self-efficacy (Pintrich et al., 1990; Pintrich et al., 1991; Bandura, 1997; Schunk et al., 2000; Chemers et al., 2001).

Further, graduation expects graduates to have knowledge, skills, attitudes, and mindsets. As per the discussion above, self-efficacy is an important factor for students. They believe they can do the job in the right way. Therefore, the researcher intends to examine the “Determinants of Self-Efficacy on Undergraduate Academic Achievement”.

The following objectives to examine the determinants of self-efficacy on undergraduate academic achievement is as follows, to what extent does self-efficacy influence on academic achievement, to find out the relationship between self-efficacy and academic achievement, and to recognize the attitudes that play a role in mediating the relationship between self-efficacy and academic achievement.

This research study is significant. The achievement of student performance determines the quality of education. One widespread idea about how students are educated is that they recall and repeated the knowledge needed for their exams. Self-efficacy needs to change a psychological pattern in order to get the desired outcomes. Additionally, take into consideration that self-efficacy is crucial for reaching learning objectives during the learning process. Students with high levels of self-efficacy are more confident than students with low levels of self-

efficacy that they can complete the challenging academic endeavor. Academic performance is facilitated by self-efficacy (Aggarwal, 2014; Ningsih et al., 2020).

### ***Literature Review***

Self-efficacy means that people believe in themselves and have the skills and abilities to perform a given task successfully. It's part of social cognitive theory. In this sense, self-efficacy has four sources: performance accomplishment, vicarious experience, verbal persuasion, and physiological & emotional state. People believe their past experiences support the current scenario, it was indicated by performance accomplishment, vicarious experience indicates that people gain confidence in observing others, which makes them look like role models. The verbal persuasion mentioned improves self-confidence through the encouragement of feedback. The last factor is the physiological & emotional state, it found that the emotional state influences self-efficacy.

### ***Self-efficacy***

People may differ from each other because of their feeling of persuasive self-efficacy (Forgas, 1979; Wish et al., 1977). Further, the author explains that people develop their capabilities as well as the ability to organize and execute the course of action required to achieve a specific goal through personal experience and comparisons with others (Bandura, 1997). The results were given by Robbins (2003), who specified that each individual believes they have the skills to perform the task. In addition, difficult situations are handled by people with high self-efficacy, with the support of more effort (Stajkovic et al., 1998),

which is the reason why these people show high self-efficacy performance (Bandura, 1997). On the other hand, low self-efficacy feel fear of managing difficult tasks and its characteristics are tension, depression, and helplessness (Bandura, 1977).

### ***Students' Self-Efficacy***

Authentic student evidence that supports their capability to successfully complete the task is a powerful source of creating a sense of efficacy (Palmer, 2006). Performance accomplishment explains how we create a sense of self-efficacy through our own performance. A successful situation creates a strong sense of efficacy and failure diminishes it (Bandura, 1997). In the vicarious experience, students can obtain information by observing others, especially those who offer suitable possibilities for comparison (Schunk, 1987, 1989). Consider verbal persuasion, it helps students persuade themselves of self-efficacy through communication and evaluative feedback (Bong et al., 2003). Physiological states express mood and emotional states. The feeling and symptoms (stress reaction, tension, excitement, and anxiety) can be explained as signals of failure. In addition, a positive mood strengthens self-efficacy (Pajares, 1997).

Self-efficacy has a positive link with student learning. It consists of motivation and learning (Pajares, 1996, 2006; Schunk, 1995,2003). Much research shows that self-efficacy affects the performance and learning behavior of students in aspects such as the tasks they choose, their effort, perseverance, and performance (Schunk, 1995, 2003). Self-efficacy has direct and indirect effects of student self-efficacy on

achievement (Bouffard-Bouchard 1990; Carmichael et al., 2005; Lane et al., 2004; Pajares, 1996, 2003; Relich et al., 1986; Schunk, 2003). Self-efficacy makes a difference in the way people feel, think, and act (Bandura, 1995). Students with high self-efficacy use their higher tendencies and strength to perform academic tasks and abilities (Bong, 2001). Students with low self-efficacy have low skills and are unable to improve (Wingate, 2010). Moreover, self-efficacy helps people achieve their goals and dreams, which are the results of human behavior. Self-effective students put more effort into perceiving academic materials, thinking more deeply, and planning performance tasks (Linnenbrink et al., 2003).

#### *Academic Achievement*

Knowledge, skills, concepts, and understanding of the idea are used to explain academic performance as a label (Tuckman, 1975). Some research has mentioned that undergraduate success on examination measures (Grade Point Average (GPA)). Moreover, factors influencing academic performance are previous schooling, parental education, family income, self-motivation, hard work, discipline (Hard et al., 2006), hours of study, skills, absenteeism, personalized learning environment, professional learning communities, meaningful and engaging curriculum, and support from teachers and administrators (Klem et al., 2004). Further, student success relies on greater attention, interest, perseverance, and, reciprocally, even more support from the teacher (Klem et al., 2004).

#### *Attitudes*

Attitudes explained the particular

entity with the degree of favor or disfavor. Another author defined it as protean and based on the values, feelings, and beliefs of individuals. Moreover, it is a perception developed by the reaction to the environment (Thompson, 1993; Philips, 2003). It is classified into three types: cognitive, affective, and behavioral (Eagly et al., 2003; Krosnick et al., 1995; Katz et al., 1959; Rosenbergy et al., 1960). Cognitive describes what people believe the object to be, affective consists of emotions, and behavioral explains what people intend to do with the object. Student attitudes are linked to self-belief, subject and have a positive effect on the school environment and students' performance. There was a relationship between self-efficacy and attitudes (Bindak, 2004; Canturk et al., 2007; Pajares et al., 1994; Stramel, 2010; Usher, 2009).

#### *Relationship between self-efficacy and academic achievement*

Self-efficacy is one of the predictors of academic performance success (Fast et al., 2010; Multon et al., 1991). In terms of academic performance, it explains how students manage their studies and face or accomplish different tasks given by the teacher (Banquil et al., 2009). Academic motivation depends on self-efficacy, which is linked to student's motivation to learn (Schunk, 1991; Matthews, 2010). It is one of the predictors of intellectual performance and it influences us through cognition and indirectly affects perseverance. And also, self-efficacy is positively correlated with their achievement. People with low self-efficacy face social isolation and even limited academic opportunities (Pajares, 2002). Previous research (38 research studies from 1977 to 1988) has shown

that self-efficacy has a positive relationship with academic achievement (Multon Brown et al., 1991). And also, twenty-five percent of academic success depends on self-efficacy (Pajares, 2006). A few studies have mentioned that their research results have shown that there is no significant relationship between self-efficacy and academic achievement (Himanshu et al., 2017; Rapoo et al., 2001; Liu et al., 2006; Atoum et al., 2015).

#### *Relationship between self-efficacy and students' attitudes*

Self-efficacy has a significant influence on the choice of learning activities of individuals (Bandura, 1977). It affects student perception (Bates et al., 2007). Attitudes play a major role in student self-efficacy (Wu et al., 2006). The finding of research results mentions that attitudes have a positive relationship with student self-efficacy (Tenbet et al., 2013).

#### *Relationship between attitudes and academic achievement*

Research results have revealed that Western countries show a relationship between positive attitudes and academic achievement (Iben, 1991; Ma et al., 1997; Tocci et al., 1991). In the context of Asia, consider that student attitudes were not always present with high achievement scores (Leung, 2002; Stevenson et al., 1993). Positive attitudes have long-term beneficial effects (Wilson, 2008).

Look at the section of the research article, the first section is the introduction part, which has the background, objectives, the significance of the study, and previous research work, the remaining part consists of four sections. The research methodology falls into the category of

section two, the results and discussion part in sections three and four. The last section contains the conclusion.

### **Methods**

In this research, the method integrates the conceptual framework, sample selection, data collection, and hypothesis development.

#### ***Conceptual framework***

Based on the background of the study and literature review, the researcher has formulated the figure-1, conceptual framework. Conceptual variables are given below.

#### *Self-efficacy*

Self-efficacy expressed is the personal conviction, one can complete a task with the support of their abilities and skills (Ivancerich et al., 2011). It has four sources of components; performance accomplishment, vicarious experience, verbal persuasion, and physiological & emotional state. Performance accomplishment means that past experience builds confidence and helps people achieve success and reduce repeated failure (Bandura, 1997). Vicarious experience has indicated that people compare themselves to others on the basis of similarities (age, capabilities, and personal character), which promotes increasing self-efficacy (Bandura, 1977, 1997). Verbal persuasion has described that encouragement and discouragement determine their ability to perform (Redmond, 2010). Influence of physiological & emotional state on psychological characteristics, emotional feeling affects people's judgment of their self-efficacy (Bandura, 1977).

#### *Attitudes*

It represents that particular entity with some degree of favor or disfavor (Eagly et al., 1993). It has three components; affective, behavioral, and cognitive.

#### *Academic Achievement*

It defined the result of a person's performance to achieve specific goals. Academic performance plays the role in students and is a key element in education (Rono, 2013). Influencing factors are parents' social-economic status, hours of study (Ali et al., 2013), academic background, encouragement (Farooq et al., 2011), communication skills, learning facilities, and proper guidance from parents and teachers (Singh et al., 2016).

#### *Sample Selection*

The researcher took the sample from undergraduate management students at Trincomalee Campus, Eastern University, Sri Lanka. Among the total population (585) of management students in 2021, the selected sample is 234 based on Krejcie & Morgan (1970) and the method of sampling is systematic random sampling.

#### *Data Sources*

This is quantitative research; data are collected through a standard questionnaire. Data sources are journal articles (indexed and refereed), research publications (abstract, extended abstract, conference proceedings), internet access, etc.

#### *Time horizons*

Cross-sectional studies are carried out at a given time on a particular phenomenon. It often employs the survey strategy (Easterby Smith et al., 2008; Robson, 2002)

#### *Hypothesis development*

In accordance with the literature review, the following hypothesis has been formulated

H<sub>1</sub>: There is a significant relationship between the self-efficacy and academic achievement

H<sub>2</sub>: There is a significant relationship between the self-efficacy and attitudes

H<sub>3</sub>: Attitudes play the mediating role between the self-efficacy and academic achievement

#### **Results**

In the analysis, introduce the reliability test, correlation analysis, KMO & Bartlett's Test, regression analysis, and Sobel test.

#### *Reliability analysis*

Based on George & Mallery, 2003; Cronbach Alpha value of 0.891 (Table-1), this was in acceptable manner.

#### *Correlation analysis*

According to the correlation table-2 described that performance accomplishment, vicarious experience, and verbal persuasion indicated positive relationships except for physiological & emotional state with academic achievement.

#### *Bartlett's Test*

The table-3 directs that the selected sample is adequate and that the significant level is less than 0.05.

#### *Regression Analysis*

In the regression analysis, according to the results (table-4) of the study, the four variables (performance accomplishment, vicarious experience, verbal persuasion, and physiological & emotional state) contribute to the academic achievement of undergraduate

students. It explained that all four variables' combined contribution is 56.5%. Hypothesis one is accepted. There is a relationship between self-efficacy and academic achievement (Jahanian et al., 2013). These results are supported by Yazici et al., 2011. Previous research with college students in Singapore and Taiwan found that sources of self-efficacy influence their performance (Loo et al., 2013; Lin, 2016). The finding was supported by Marra et al., 2006. Higher self-efficacy of people shows better academic performance (Robbins et al., 2004). In addition, academic self-efficacy and personal self-confidence had a considerable influence on both achievement and expected accomplishment (Chemers et al., 2001). Self-efficacy influences a student's choice of effort, persistence, tasks, and achievement (Schunk, 1989). In particular, academic achievement is the discovery of intellectual capacity and motivation as well (Vecchio et al., 2007). This achievement is determined by study hours, skills, and absenteeism (Witt-Rose, 2003). Efficacy also plays a role in student happiness (Pordanjani et al., 2014).

### ***Coefficient***

The coefficient table-5 explained the relative contribution of each variable with academic achievement. It is described that performance accomplishment and verbal persuasion have a significant relationship with academic achievement. Further, vicarious experience and physiological & emotional state were not significantly associated with academic achievement. The experience is seen as internalized. In the past years, success has increased self-efficacy and reduced repeated failure, although

it relies on the capabilities of each individual (Bandura, 1986). Bandura (1997) found that self-efficacy beliefs improve academic performance; behavior, motivation, and process (Bandura, 1997). Author Lin (2016) expressed that a student's performance is determined by mastery experience, verbal persuasion, and vicarious experience. Mastery experience has the strongest correlation with academic performance (Loo et al., 2013), these results are supported by the author Jan, 2015. Self-efficacy has a positive association with mastery experience and verbal persuasion and has a negative association with physiological & emotional state and vicarious experience in academic performance (Fong et al., 2014).

Providing effective feedback is more complex in all situations (Price et al., 2010; Sadler, 2010). Verbal persuasion connects with teachers, who provide verbal feedback, encouragement, and evaluation, especially in the educational field. When the feedback information is realistic, only students can accept others' comments. It depends on students' understanding of feedback and their good communication skills (Higgins Hartley et al., 2001). The message must be credible, realistic, sincere, etc. (Bandura, 1986). Otherwise, students are frustrated, dissatisfied, and uncertain about their future (Price et al., 2010). Students can get feedback from lecturers, peers, senior students, and others. It can provide them directly, indirectly, or both.

### ***Regression analysis between self-efficacy and attitudes***

There is a significant relationship between self-efficacy and attitudes, it

was explained in table-6. In line with hypothesis two is accepted. The table explains that the contribution of self-efficacy to attitudes is expressed as 39.2%. This result was supported by Wu et al., 2006.

### **Sobel test**

The figure-2 explains the Sobel test, it can describe how attitudes mediate between self-efficacy and academic achievement.

In Sobel's test, the statistic value is 10.42453 (p-value 0.000). The value is compared to a standard normal distribution to test for significance. If the Z-score is greater than 1.96, can conclude that the effect is larger than would be expected by chance and quality of the effect is significant. Hypothesis three proves that there is a strong link between self-efficacy, attitudes, and academic achievement. This result was supported by Li, 2012.

### **Discussion**

According to the analysis discussion, most students fall into the income category of less than Rs 40,000. It shows that their cost of living is low and that their parents' dream of seeing their children become graduates. This intention generates those students who must develop their self-efficacy to achieve their goals in the academic field. Most of the students responded that their goal was to enter university to earn a higher degree. It showed that their self-efficacy was generated before they enter the university.

Testing for objective one, to what extent does self-efficacy influence on academic achievement. It described that all four variables (performance accomplishment, vicarious experience, verbal persuasion, and physiological & emotional state)

contribute to academic achievement by 56.5%. The second objective examines the relationship between self-efficacy and academic achievement. Performance accomplishment and verbal persuasion have a significant relationship, while vicarious experience and physiological & emotional state have no significant relationship with academic achievement. The third objective has shown that attitudes play a mediating role between self-efficacy and academic achievement, it was proved by Sobel test.

Look into a student's personal self-efficacy, academic performance, and motivational factors determine a teacher's efficacy (Anderson et al., 1988; Midgley et al., 1989; Ashton et al., 1986; Ross, 1992). Moreover, the determinants of self-efficacy not only soles rely on undergraduates, it also depends on the self-efficacy of the teacher. Performance accomplishment and verbal persuasion are inevitable factors in academic achievement.

### **Conclusion**

Each student believes that their own abilities contribute to their academic achievement. It is a path to an achievable goal for each student. The level of individual performance of students determines their high and low levels of self-efficacy (Barkley, 2006).

Academic success depends on the teacher and student factors. Students' learning styles and achievements, as well as their motivation, are linked to their academic success (Busato et al., 2000).

In conclusion of the research study, self-efficacy positively affects student achievement and self-confidence, and it also has an impact on their entire

development (Sari, 2017). According to several studies (Gungor, 2020; Addison et al., 2018; Tiyuri et al., 2018), there is a significant relationship between self-efficacy and academic achievement, with a particularly direct relationship with students' mastery of subject matter.

Academic self-efficacy has a favorable and considerable impact on students' academic achievement, according to research by Alyami et al. (2017). Other research has demonstrated that academic self-efficacy significantly influences students' learning, motivation, and academic achievement (Ferla et al., 2009; Sadi et al., 2013; Villavicencio et al., 2013; Doménech-Betoret et al., 2017).

Few suggestions for improving the self-efficacy and academic achievement of undergraduate students. Lecturers create different modes of techniques to improve student self-efficacy, especially those with low self-efficacy. Continuously conduct the program of career guidance, counseling, recreational activities, etc. It warms the minds of

the students. The feedback system creates a bridge between academics and students. It is an effective way to communicate. Characteristics of high self-efficacy of teachers are closely monitored to the low level of self-efficacy of students. For example, lecturers support students in their self-reflective, persistence, goal selection, high goal selection, self-concept, motivation triggered even by failure, victorious over external challenges, challenges, etc (Yost, 2002). These factors are directly linked to their performance. In addition, teachers provide opportunities in different ways: participating in collaborative activities, receiving feedback, focusing on content, redesigning success, and actively learning (Ross et al., 2007).

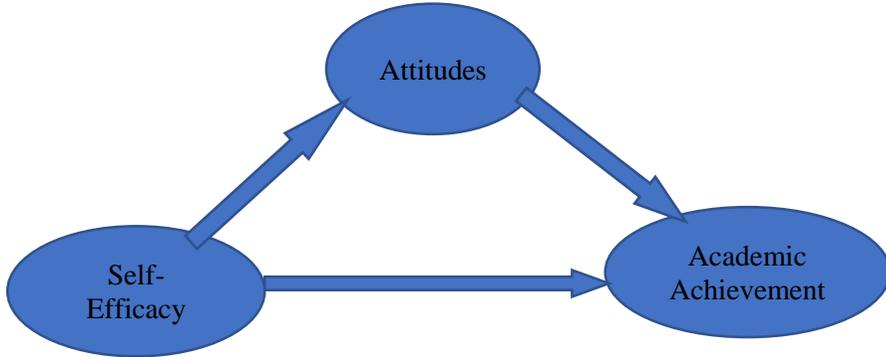
### **Author Contributions**

This work was carried out in collaboration between the two authors.

Author Saravanabawan guided and supervised the entire study. Author Priyadharsan designed and worked on manuscripts.

**Figures and Tables**

**Figure 1**  
*Conceptual Framework*



Source: Develop for research purpose

**Table 1**  
*Reliability test*

Reliability Statistics	
Cronbach's Alpha	N of Items
.891	25

Source-Survey data

**Table 2**  
*Correlation analysis*

		Correlations				
		PA	VE	VP	PS	AA
PA	Pearson Correlation	1	.691**	.708**	-.469**	.704**
	Sig. (2-tailed)		.000	.000	.000	.000
	N	234	234	234	234	234
VE	Pearson Correlation	.691**	1	.807**	-.397**	.617**
	Sig. (2-tailed)	.000		.000	.000	.000
	N	234	234	234	234	234
VP	Pearson Correlation	.708**	.807**	1	-.457**	.679**
	Sig. (2-tailed)	.000	.000		.000	.000
	N	234	234	234	234	234
PS	Pearson Correlation	-.469**	-.397**	-.457**	1	-.424**
	Sig. (2-tailed)	.000	.000	.000		.000
	N	234	234	234	234	234

AA	Pearson Correlation	.704**	.617**	.679**	-.424**	1
	Sig. (2-tailed)	.000	.000	.000	.000	
	N	234	234	234	234	234
**. Correlation is significant at the 0.01 level (2-tailed).						

Note: PA-Performance Accomplishment, VE-Vicarious Experience, VP-Verbal Persuasion, PS-Physiological & emotional State, AA-Academic Achievement  
 Source: Survey data

**Table 3**  
*KMO and Bartlett’s Test*

KMO and Bartlett’s Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.932
Bartlett’s Test of Sphericity	Approx. Chi-Square	4470.363
	Df	300
	Sig.	.000

Source: Survey data

**Table 4**  
*Regression analysis between self-efficacy and academic achievement*

ANOVA <sup>a</sup>						
Regression Model		Sum of Squares	Df	Mean Square	F	Sig.
R = 0.752 R Square = 0.565 Adjusted R Square =0.557	Regression	94.090	4	23.522	74.316	.000 <sup>b</sup>
	Residual	72.483	229	.317		
	Total	166.573	233			
a. Dependent Variable: Academic Achievement						
b. Predictors: (Constant): Performance Accomplishment, Vicarious Experience, Verbal Persuasion, Physiological & Emotional State						

Source: Survey data

**Table 5**  
*Coefficient*

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	.740	.324		2.286	.023
	Performance Accomplishment	.493	.078	.416	6.295	.000
	Vicarious Experience	.055	.083	.051	.658	.511
	Verbal Persuasion	.370	.095	.313	3.905	.000
	Physiological & Emotional State	-.064	.049	-.066	-1.317	.189
a. Dependent Variable: Academic Achievement						

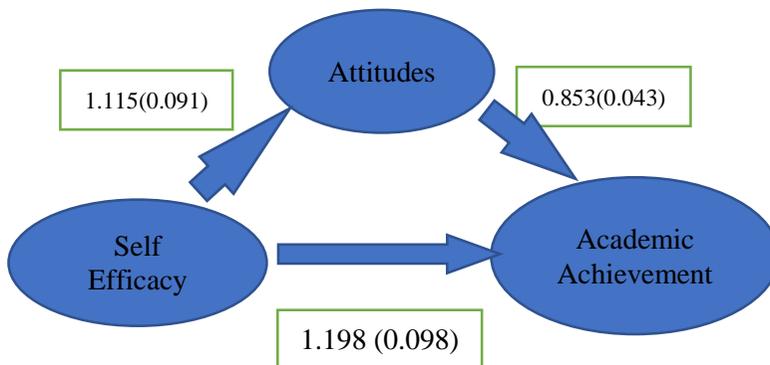
Source: Survey data

**Table 6**  
*Regression analysis between self-efficacy and attitudes*

ANOVA <sup>a</sup>						
Regression Model		Sum of Squares	df	Mean Square	F	Sig.
R = 0.626 R Square = 0.392 Adjusted R Square = 0.390	Regression	56.312	1	56.312	149.731	.000 <sup>b</sup>
	Residual	87.252	232	.376		
	Total	143.565	233			
a. Dependent Variable: Attitudes						
b. Predictors: (Constant), Self-efficacy						

Source: Survey data

**Figure 2**  
*Sobel test*



Source: Survey data

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**Evaluation of Consumer Attitude towards Nigeria-Made Products: Evidence from Anambra State in Nigeria**

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**Abstract**

This study is an empirical evaluation of consumers' attitude towards made in Nigeria goods in Awka, the Eastern region of Nigeria. Survey research design was used for this investigation. To collect data for the study, a structured questionnaire was used in line with the research design. All consumers of goods in Awka metropolis market made-up the study population. The study covered 5 zones in Awka, which include Amenyi, Umuogbu, Umubele, Umuenechi, and Amikwo. 250 sample size was chosen comprising 50 respondents from each zones using the convenience sampling technique. Two hundred and fifty (250) copies of the questionnaire were administered, out of which 228 copies of the questionnaire were retrieved and adjudged usable for the study, indicating 91.2% response rate ( $228/250 \times 100 = 91.2\%$ ). Data collected were analysed using descriptive statistic, while the hypotheses were tested using chi-square ( $\chi^2$ ). Data collected were analysed using simple percentage, while the hypotheses were tested using chi-square ( $\chi^2$ ) statistics. The result obtained show that an improvement in the quality of made-in-Nigeria goods will create positive consumer attitude; the high price of made-in Nigeria goods affects consumers' patronage. The study recommended that businesses must look for high-quality machines and materials, and that training and staff development must be a top priority if they want to guarantee the overall quality of products created locally among others.

**Keywords:** *Quality of goods, consumers' preference, made-in Nigeria, Patronage, foreign made.*

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## **Introduction**

Over the years, every well-meaning Nigerian has always been deeply concerned about how most Nigerians feel about goods made locally especially when consumers use pejorative words to describe locally made goods in Nigeria. To avoid this trend that de-markets a product, local producers have even been forced to use foreign brand names and logos for their locally produced goods in order to attract, retain and grow customers. The Nigerian market is already proliferated with a lot of foreign goods some of which are sub-standard with ugly customer experience as a result of the unpleasant scenario that makes the growth of the infant industry to be difficult. In recent times, importers have even gone so far as to define rules which producers must follow to maintain their business just to maximize profits at the expense of the consumers and the government on its part, has banned some of the items on the essential list and imposed tariffs on others to enable infant industry to grow and produce local products at cheaper rates for the betterment of the consumers but it seems that rhetoric that negates sales is indelible in the mind of the consumers due to double standard in the market place.

In response to the aforementioned issue, the researcher is interested in learning how Awka consumers in Anambra State feel about products created in Nigeria. They want to know whether these people have favorable or unfavorable opinions toward these products and what factors are behind those attitudes. Therefore, it is very important to conduct a study to determine how consumers in the Nigerian city of Awka in Anambra State feel about products made locally. The results of this survey

will be extremely significant to local producers in the first place by giving crucial data on consumer behavior and attitude. On the other side, the study will assist the government in developing policies to support regional producers and protect consumers. Additionally, it will assist the consumers in re-evaluating their preferences in relation to the satisfaction derived from it. As a result, the hypotheses have been developed based on the issue and the study's goals.

## ***Review of Literature and Hypothesis Development***

### *Theoretical Background*

Engel-Kollat et al. (1978) created a thorough theoretical model of consumer behavior. According to their idea, an individual is seen as a system that has an output (behavior) that reacts to inputs. According to the model, a person's mental processes are influenced by their psychological make-up, personality, attitudes, and the information they have stored from their learning experiences. A person processes physical and social (environmental) inputs, and this processing may lead to an unmet need. In this instance, a need is recognized, and the decision-making process begins. This procedure entails looking for and evaluating alternatives, followed by buying and evaluating it afterward. It depicts a continuous sequence of procedures where products are searched out, assessed in light of consumer goals, and impacted by past purchases. They talked about how general inclinations like personality traits interact with past experience and stored information. Values and attitudes are formed as a result of this contact. Internal variables, such as a sense of hunger, or external factors, such as commercial messaging or point-of-sale

(P.O.S) displays, can also cause arousal. They emphasized that a person may not always be able to make sense of all the stimuli to which he is exposed. Information that is pertinent to his present goal and consistent with his preexisting knowledge and expectations will be retained by him. Even when information is let into the system, it may still be reorganized and distorted to fit with preconceived notions. Additionally, a theoretical foundation for consumer behavior was presented by Nicosia (2006). The focus shift away from the actual act of purchasing and toward the choice processes that both before and follow this act is a disorienting aspect of Nicosia's strategy. He made the point that making a purchase is just one step in an intricate continuing decision-making process. Nicosia portrays the consumer as purposeful and striving to achieve specific objectives through some ideal solutions. He emphasized the notion that consumer preferences evolve from generality (extremely broad goals) via the search and assessment of various items, and ultimately result in the selection of one specific brand. He underlined the significance of the feedback concept. The feedback idea influences whether or not consumers will make repeat purchases.

Engel-Kollat and Howard-Sheth (1973) stressed the value of feedback, similar to Nicosia. This refers to the impact of the act of purchasing and the usage experience on a consumer's propensity to use a certain product. Their theory on consumer behavior has two key assumptions: (a) that purchasing is a methodical, not random, exercise in problem solving; and (b). They also discovered the following four groups of

characteristics that affect consumer behavior:

- i. Stimuli inputs include elements from the social environment and marketing programs.
- ii. A number of factors that have an impact on the buyer's internal state. The social class, cultural norms, time constraints, and financial situation are examples of these "exogenous" elements.
- iii. Endogenous variables are internal variables that collectively display the buyer's states. They comprise (Motive, attitude, experience and perception).
- iv. The buyer behavior is based on how the first three sets of factors interact, and there are four response output variables.

The theory states that most consumer activity is repeated. It was observed that by keeping track of relevant information and building a pattern for decision-making, consumers reduce their jobs while making frequent purchases. The idea uses decision mediators to define the rules consumers use to match their objectives and alternatives for meeting these motives. These rules are based on experience or outside information (from marketing, reference groups, etc.). Customers' attitudes, or inclination as it was described by Howard Sheth, evolve as a result of various forces. Prices, availability, and income all have the potential to be purchase barriers. A fresh product purchaser has no middlemen. He actively searches his surroundings for information and tries to recall prior encounters with similar things. If the product is satisfactory, repeat purchases will occur. As a result, the customer attempts to establish a routine to minimize the complexity of purchasing, known as the psychology of

simplification (Nicosia, 2006). Other times, the act of consuming the product grows monotonous, and the process of finding the product starts over. This is referred to as the complexity psychology. The theory goes on to explain how a particular stimulus may cause various reactions in customers based on their level of activation. The idea of predisposition was used to illustrate how two consumers can require the same product, but for two very different reasons, or they might need the same product, but choose to purchase it under two different brand names.

Three possibilities were discussed by William Stanton under the heading of the learning experience component that affects consumer behavior. Cognitive theories, the Gestalt and field theories, the stimulus responds (S.R.) theory, and Hall (1966) The stimulus response (S.R.) theory, developed by Pavivo, Skinner, and Hall, asserts that learning can take place in both humans and animals

- i. Response to some stimuli.
- ii. Re-enforced by need fulfillment for a good reaction or punished for a bad one. Behavior patterns are created when the same appropriate response to a stimuli is repeatedly used.

In his "Behaviourism approach," Waston (2002) confirmed the S.R model by recommending that the same stimulus be repeated to improve the response pattern. He defined learning as behavioral changes brought about by prior behavior in similar circumstances. Today's advertisements use Watson's behavioral approach and the S.R. theory; they are repeated to encourage a particular buying reaction. The S.R theory is disregarded by cognitive theorists as being overly mechanical. They believe that learning is influenced

by a variety of different elements, including attitudes and beliefs, prior experiences, and a proper grasp of how to accomplish a task. The S.R. theorists, who believed that behavior is the product of simply the degree of reinforcement arising from a reaction to particular stimuli, did not acknowledge these aspects, according to the cognitive theorists. The proponents of cognitive theory hold that even when there are no historical parallels in the person's experience, extraordinary ability can be used to understand a current difficulty situation. The Gestalt and field theories are Stanton's third topic of learning. According to Gestalt psychologists, learning and behavior should be seen as an integrated process. They care more about the total than the individual components.

According to the theory of cognitive dissonance, when two pertinent cognitions (thoughts) conflict, some activities are made to lessen the condition of dissonance. For instance, if a person holds the cognition that "all individuals are created equal," but also holds the cognition that "one race is superior to other races," the two cognitions are at odds with one another. The contradictory meanings of the cognitions are likely to create "dissonance" or a state of psychological tension that the person would desire to get rid of if they are each significant to their overall value system. The "urge towards consistency" that results from the need for consonance can take many different forms. The individual may come to a different conclusion about one of the difficulties, decide that one of the issues is significantly more important than the other, explain how the two cognitions are compatible, or come up with other compensatory strategies.

This is in contrast to the S.R model's single-element approach. According to Lewins' field theory, which he developed in 1981, a person's psychological "field" as it is at any given moment is the single factor influencing their conduct. The entirety of the information that were known about a person and his environment at the time of the activity was how he defined a person's field or life area. These theories can be quite helpful in understanding how attitudes can change as a result of education.

### *Conceptual Framework*

Successful marketing of organizational goods and services in Nigeria requires a comprehension of consumers and their requirements and wants. It is a somewhat myopic view of consumer behavior to consider the marketing of goods and services to consumers as being exclusively a result of economic activity (Osugwu & Gbadamosi, 1996). Marketers of goods frequently seem to focus most of their analyses on their items while ignoring the psychological and sociological factors that influence consumer behavior. Some of the most important non-economic factors influencing consumer purchasing behavior include the way purchases are made, the way group and individual behavior interact, the complicated interrelationships between attitudes and behavior, the mixed motivations that frequently conflict when making purchases, the challenges of authority and status in both organizational and family purchasing decisions, and the impact of advertising (Robert, 2013). This suggests that human behavior has a significant influence on the direction of policy and daily operations of various Nigerian enterprises.

According to Osugwu and Gbadamosi (1996), the so-called non-rational elements' should receive some consideration in the marketing of various goods and services. Customers and clients may have different perspectives on goods and services than producers, and as a result, they might not always be able to express their demands, aspirations, or anxieties. Therefore, research on consumer behavior should look at both overt and observable elements as well as less obvious (covert) ones impacting customer purchasing behavior (Robert, 2013). Nigerian businesses that understand these elements and how they affect how consumers behave toward their goods and services will go a long way toward reaching their objectives by gratifying customers' needs and desires in a way that benefits both parties.

### *Attitude and Consumers Decision*

An attitude is a mental inclination toward something, someone, or something happening (Udeagha 2015). Marketers typically consider a person's sentiments toward a product, service, company, or individual to be his appraisal. One's mindset determines whether they accept or reject these items. A person's long-term favorable or unfavorable cognitive assessment, emotional responses, and action patterns toward some items or ideas are referred to as their attitude. People have an attitude about everything, including politics, clubs, clothes, music, and food. A person's attitude determines whether they will like or dislike something. A person's attitude influences how they perceive a good or service. According to Allport (2015), an attitude is a mental state of readiness that has been structured through experience and that directs or

influences how people react to all the things and circumstances that are related to it. According to this definition, attitude is a group of actions taken in a specific way. Beliefs affect attitudes, and vice versa.

The consumer's system of beliefs, associations, pictures, and memories with regard to the brand can be considered as attitude. This perspective, which is aimed toward advertising, draws a connection between memories or experiences and like or disliking of a brand. According to Oladele and Arogundade (2011), an attitude refers to a person's ongoing positive or negative cognitive assessments, emotional responses, and action patterns toward a certain item or idea. Ugorji (2014) emphasized that attitude can "externalize" some internal issues. When internal tensions and anger go unaddressed, a man may become angry with the outside group. A person's perception of any arousal that conflicts with their attitudes is strongly influenced by attitude and beliefs, which are very potent influences. It has the power to alter perceptions as well as the level of message retention. A person's attitudes determine their mental state, which influences whether they like or dislike something, or whether they move toward or away from it. People frequently use attitude in almost everything, including politics, clubs, religion, fashion, and music. According to Kartz (1960), attitude serves four key purposes for a consumer:

- a. The adjustment function: By adhering to the majority attitude, attitude helps to maximize reward and reduce punishment.
- b. The attitude's ego-defensive function permits the customer to admit an unflattering core fact about himself.

- c. Value expression: Consumers enjoy attitudes because they convey the values they cherished.
- d. Knowledge function: It carries out the knowledge function in accordance with the consumer's desire to organize and comprehend his world.

According to Triandis (1971), who wrote "Attitude and Attitude Change," people have attitudes toward items because they aid in the organization, simplification, and comprehension of their surroundings. By avoiding negative aspects of themselves, it allows them to maintain their self-esteem; attitudes encourage people to act in a way that is acceptable in society. Uford and Etim (2018) claim that attitudes are reasonably enduring dispositions or inclinations that involve an individual's emotions, intentions, beliefs, judgments, and actions in response to himself, other people and groups, things, and events. The emotion may be either positive or negative, happy or sad, pleasant or painful, but it usually involves an emotional component and is aimed at a particular person or object (s).

#### *Product Quality and consumer purchase Decision*

The consumer is consequently concerned with features of the goods like durability, safety, and accessibility because the concept of quality is limited to the technical attributes of the items and its value in use. Consumers view the majority of products created in Nigeria as being dangerous, technically outdated, and lacking in care and attention to detail, according to Aire's 2003 research. The survival of the local producer and subsequently the acceptance of the products both domestically and internationally should depend heavily on the quality

issue. Product design and quality, the degree to which the product is delivered to the customer in accordance with design specifications (product manufacture quality), and the product's ability to function as required, where required, and for the time required are all factors that affect a product's quality. A product's quality is determined by how well it meets the needs of its customers (Product Reliability).

There is neither a single degree of quality nor an absolute level of excellence. No product is completely faultless, and all products, regardless of price, are subject to risk. An attempt should be made to ascertain the caliber and dependability of comparable or replacement products that are already on the market before introducing a new product. The company's goal might then be to raise the new product's quality and pricing.

#### *Consumer Decision Processes*

The need arousal or identification of an unmet demand that causes internal tension is the first step in the purchasing process. The need might have been dormant until it was awoken by an external stimulation, such as an advertisement, the usage of a contest, or the sight of a product, or it might have been biologically stimulated (for example, hunger or sex). It is a result of dissatisfaction with the usage of the current products. Products and brand alternatives must be found after the need has been determined. The following factors affect the search for alternatives:

1. What the time and monetary costs are?
2. How much information the consumer already has from past experience and other sources?
3. The amount of perceived risk if a wrong choice is made.

Once all viable options have been located, the consumer must assess them in order to decide what to buy. They also draw on the opinions and ideas of their relatives and other groups of reference. The consumer will choose whether or not to purchase after searching and evaluating. When choosing to purchase something, a consumer must consider a number of factors, including brands, price, quality, design, color, and so forth. The consumer will feel some level of happiness or discontent after purchasing and using the product, with the exception of routine purchases. For marketers, this post-purchase emotion is crucial since it affects both repeat purchases and word-of-mouth advertising. Festinger (2007) coined the term "cognitive dissonance" to describe this feeling of worry following purchases. According to his theory, humans seek internal congruity, concordance, or harmony among their cognition (knowledge, attitudes, beliefs, and values). Any discord in this cognition is referred to as dissonance. Festinger (2007) added that the "amount of post-choice dissonance is an increasing function of the overall importance of the decision and of the relative appeal of the unchosen option."

#### *Cultural and Social Group Influences*

The culture of the specific locality of the individual or attitudes have a significant impact on behavior. The cultural context of the location has a significant impact on how we think, and social groupings also play a significant role (Uford & Etim, 2018). Culture is a way of life or a set of customs for carrying out specific tasks. It includes the thoughts, emotions, actions, and knowledge that are kept in men's memories, books, and artifacts for use in the future. One facet of human

existence is culture. Culture controls or governs all aspect of our life from the minute we are born until the moment we pass away. It is that portion of learned behavior that people acquire as a result of belonging to certain groups and that portion of learnt behavior that is shared with others. We are under constant conscious pressure to adopt specific behaviors that other guys have established for us (Festinger 2007).

The definition of culture according to Ezeokafor (1994) is "the configuration of learnt conduct and effects of behavior whose component pieces are shared and transmitted by the members of a certain society." Stanton described culture as a collection of symbols and artifacts made by men and passed down from one generation to the next in order to determine and control how people behave in a particular civilization. Any society has its own unique culture, which is defined as one's social inheritance. It is a certain way of living that a group of people adopts in order to live and adapt to their surroundings. Our cultural surrounds and the many people with whom we maintain that culture the culture in which the consumer lives considerably influence our attitudes, the way we think, and the things we believe.

Stanton (1981) identified five stages that consumers go through in order to purchase a product in his buyer behavior model (fig.1); these are (a) Recognition of an unmet need, (b) Identification of alternatives, (c) Evaluating the alternatives, (d) Purchase decision, and (e) Post Purchase Behavior. An individual's attitude is influenced by the social class to which he belongs. More so than just income, a person's purchasing decisions are greatly influenced by the class to which they belong or aspire. As a result,

customers occasionally make economically unreasonable purchases since they typically choose items that will boost their self-esteem, reputation, and self-worth. While self-interest is argued to be the driving force behind consumer attitudes and behavior in economics, social psychologists place greater emphasis on social impact. For instance, Thorstein Veblen (1959) describes man as primarily a social animal conforming to the general forms and norms of his large culture and to the more specific standards of the sub-cultures and face-to-face groupings to which he is bound. This is in his work titled *The Theory of Leisure Class*. According to Sorokin (1959), "IN social and cultural mobility," social stratification is the division of a given population into supposedly hierarchical classes. Social class is a collective term for a subculture of about equal individuals who are ranked according to their social standing. With man, social class has always existed. The outcome of social stratification is this. Udeagha (1995) asserts that social classes are characterized by the following traits:

- i. People are rated in society according to their social class, with higher social class members being ranked higher than lower class members. Consequently, social class has a hierarchical structure.
- ii. Social class is not a result of just one variable, but rather of many, including wealth, occupation, education, and so on. It is multifaceted and not solely dependent on income, as is frequently believed. Although the majority of Nigeria's top motor parks' chairmen make more than government officials, they are nowhere near them in terms of social standing.

- iii. A person can shift from a lower class to a higher one and vice versa, making it possible for them to leave a particular social class (as a result of vicissitude of life). The greatest significance for the marketer, according to Udeagha (1995), is that each social class is assumed to constitute a homogeneous market, meaning that members of each class are similar in terms of their needs, wants, preferences, and other characteristics that influence their purchasing decisions.

According to Kotler (1984), a reference group is any group that has an impact on a person's attitudes, beliefs, and values. Groups, according to Udeagha (2015), are made up of two or more people acting or cooperating for a common goal. In his essay "Reflections on reference groups," Milar (2008) holds that each reference group should be identified as the one that a person most frequently utilizes to inform his judgment, beliefs, and behavior.

Mead (1934) created the "generalized order" that society affects how its members behave in his book "Mind, Self, and Society." This desire to fit in has a big impact on consumer purchasing behavior, sometimes leading to emotional rather than sensible decisions. Family is without a doubt the face-to-face group that has the greatest and longest-lasting impact on an individual's attitude, opinion, and values of all those with whom they interact. The family is where a person develops mental attitudes toward personal ambition, self-worth, and love in addition to religious and political beliefs. Even in cases when the buyer is no longer in contact with his family, the influence of the family on the buyer's subconscious behavior will be

significant. The stage of a family's life cycle at the time of purchase will have a significant impact. For example, a young couple with two children in the full stage will have different needs and requirements than a couple in their mid-fifties with children who are no longer living at home in the empty nest stage.

#### *Marketing Model of Buyer Behaviour*

Dissonance in the area of consumer behavior might happen after a choice to buy something has been made (post purchase cognitive dissonance). The purchaser questions whether the decision made is "right." Does the chosen product provide as much satisfaction as the substitute buy that was skipped? If this happens, the marketer's obvious job is to try to lessen the buyer's dissonance by providing post-purchase information and services that emphasize how wise the purchase was. For instance, an industrial salesperson might be of great assistance in lessening dissonance by getting in touch with the customer soon after the sale, emphasizing the quality of the chosen product, and providing service (Nicosia, 2006). Buyers of consumer durables, such as cars and televisions, are routinely reassured of the reliability of their decision through post-purchase letters. These methods have been demonstrated to be successful in reducing post-purchase anxiety and may increase the likelihood of repeat purchases. The significance of post-purchase pleasure and repeat business suggest that marketing managers should take this aspect of consumer behavior into consideration, despite the fact that the idea of cognitive dissonance is vigorously contested by certain academics. See figure 2.

A straightforward model of the steps a person takes when making a purchasing decision has been created by marketers

recognizing that social factors such as culture, socioeconomic status, family, and reference groups influence how individuals make decisions (2013). The consumer decision-making process starts (on the part of the potential buyer) with awareness of the good or service being offered, continues with the same kind of attitude formation toward the goods, ends with a decision regarding the goods (to buy or not buy), and includes a post-decisional evaluation (see fig above). For instance, a customer learns about "isolate," a medicine introduced by Nigerian pharmacists to cleanse the liver and kidneys. The person can decide they need the medicine after learning about it and seeing it (attitude formation). The consumer decides to buy the medicine after being convinced that it will work (Bivens, 2013). Once the medicine has been used and the buyer's expectations have been met, the buyer will continue to build thoughts about it (post decisional evaluation). This procedure is undertaken by potential buyers at varying rates of speed, with the option to stop at any point. The range of potential buyers could be dispersed throughout all stages. However, according to Udel (1976), the primary objective of the marketing program should be to create product awareness in this market for any given point in the decision-making process.

Conversely, consumers who are already aware of a product don't require further information about its presence. It is necessary to include information that highlights the reasons the product (or service) is suitable for the buyer as well as where the product may be purchased. Here, the overarching objective of the marketing program is to take potential customers from awareness to a positive attitude and ultimately to a positive purchase choice. Post-purchase actions

may be taken to affect post-decisional assessment and encourage repeat purchases.

#### *Made in Nigeria Goods and Consumers' Perception/Attitude*

The majority of a consumer's attitude is determined by how they see a product generally, and the characteristics of the products that typically have an impact on people's purchasing decisions are: superiority of the goods (Ogunnaike, 2010). This is possibly what has the strongest effect on how people in all countries throughout the world view products. High-quality products always inspire buyers to purchase them, driving up demand for the product. Second, as variety is the flavor of life, the more varied the commodities, the greater the demand and favorable perception of the good by consumers. Uford (2017) asserts that a thorough understanding of a product's quality will always persuade customers to purchase it. People will always be drawn to the things produced by affinities, therefore high-quality manufactured goods are constantly in high demand worldwide. The cost of the item is another crucial consideration, and it depends on the status of the buyers (Ogunnaike, 2010). The rich always choose expensive things because they have good taste and are class conscious, while cheap goods would draw the attention of the poor and lower class elements of society. Finally, the availability of items and previous experiences with specific goods have a big impact on how customers feel about them.

Persuasions in Nigeria typically take the form of the herd mentality. The craze for imported goods in Nigeria is an example of the bandwagon effect (Vincent-Osaghae and Ugiagbe, 2018). Nigerians frequently frequent the selling locations and stores of used and

imported goods because it is a widely held belief that reasonably used goods, no matter how old, are of higher quality and durability than the locally produced goods in Nigeria. The theory of attribution best explains why Nigerians prefer imported goods over locally produced ones because they attribute their attitudes and behaviors to the characteristics and other details of imported goods based on their personal interactions with both imported and locally produced goods. As a result, they can infer from handling the products that imported goods are higher quality than the locally made goods.

According to Basil (2010), a favorable opinion toward a product and the conduct of using purchasing power are related. In an effort to forecast future purchasing behavior, the theory of reasoned action, which links a product attitude to the likelihood of purchase and the frequency of prior purchases, was developed (Petty, 2001; Petty and Fabrigar, 2008).

#### *Confidence or Trust for Made in Nigeria Products*

The majority of made in Nigeria products are hard to find, which lowers their reliability rating in the eyes of the consumer. In his study, Aire (2003) commented on this topic and said that one component that should trouble producers is the issue of confidence or trust in product providing. He discovered that buyers have extremely little faith in verbal product descriptions provided by local manufacturers (Ugorji, 2014). These sentiments toward Nigerian-made products can be harshly contested by pointing to things like the relative youth of the local manufacturers on the market and the "colonial mentality of brainwashing the Nigerian consumers."

Consumers in underdeveloped nations typically display these sentiments toward locally produced goods. Gaedeke (2013) looked into whether the adoption of well-known American brand names affected American consumers' perceptions of the quality of products from developing nations. Additionally, he attempted to compile customer opinions regarding the caliber of goods produced in various developing nations, using 300 American students as respondents. The outcome showed that American products fared much better than those from emerging nations (Latin, American and South East Asia countries). Ratings in the survey were only based on the products' quality. Nevertheless, there are signs that consumers in this country prefer things created in industrialized nations more. Similarly. In his cross-national study, Watson (2002) compared Japanese and American perceptions toward goods created elsewhere. It was discovered that Japanese people considered owning American goods to be quite prestigious. They viewed imported goods as being pricey, "common, and superfluous," in contrast. As a result, they did not take much delight in owning their homemade goods. They were pleased to purchase goods created in the United States and other European nations. In Nigeria, the younger generation of the lower social classes has a distinct preference for European items, whereas American products generally appeal to the middle class (Oladele & Arogundade, 2011). American products were rated highest by American businessmen, followed by German products, in contrast to Nigeria. They believed that English items were less aesthetically pleasing than German ones, which catered to an older audience and projected an image of

elegance, wealth, and prestige. Olayinka and Aminu (2006) argued that the familiarity and accessibility of the nation's product naturally influence the phrase "produced in." It may be inferred from these three attitude studies that customers, particularly those in developing nations, tend to have a positive attitude toward products created elsewhere. The Nigerian context confirms this. However, in order to gain the trust of consumers, local manufacturers must offer goods of high caliber and at affordable costs. They will succeed in the export market as a result of this.

The marketing mix components and interpersonal impacts in terms of their internal, symbolic, and social interpretations make up the majority of the stimulus inputs coming from the buyer's surroundings (Uford, 2017). The buyer's interior thoughts and processes, such as their perception and learning processes, are represented by hypothetical constructions. Exogenous variables are outside factors that can have an impact on behavior (Prasad, 2012). Culture and socioeconomic class are two examples. Responses outputs, which range from "awareness" of the product to an actual "choice" to buy the thing, indicate the manifest stage of decision making. These response output variables are connected to the ultimate objectives of the marketing manager. Specifically, the marketing manager tries to use the marketing mix to take a potential customer from induced awareness to comprehension of a brand, toward a favorable attitude toward that brand, to intention to purchase, and finally to actual purchase of the goods (Udel 1976).

## Methods

Descriptive research design was used

for this investigation. The research approach is deductive using survey. This paper utilized quantitative research techniques in carrying out the study. All of the consumers of made-in Nigeria goods in the metropolis of Awka make up the study's population. Anambra state population is 8.3 Million, while Awka the capital city has an estimated population of over 3.2 million as of 2022. The population can be deemed to be too large, which presents significant challenges for the research. To reduce the population to a manageable size, convenience sampling technique was applied to select sample 250 for the study. A structured questionnaire was used to collect data for the study in accordance with the research design. However, the researcher divides the study area into 5 zones: Amenyi, Umuogbu, Umubele, Umuenechi, and Amikwo effective management of the study. From each of the zones, 50 respondents were chosen using the convenience sampling method. Of these, five were given to dealers, while the remaining forty-five were given to consumers.

The method the researcher used to collect data for the study involved a field survey that included interviews and questionnaires. The researcher and a research assistant assisted in administering the questionnaire to the respondents. After they were completed, the target audience returned the surveys within the allotted one-week time frame. In order to obtain specific nuanced information, the researcher also conducted very low-key interviews with the sellers. Additionally, the researcher went to the main markets in the study zones and saw a variety of imported and locally produced commodities there. This was done to make these goods' comparisons more useful. As a result, based on the

issue and the study's goals, the following hypotheses were developed:

- H0<sub>1</sub>: Quality of goods has significant impact on consumers' preference of made-in-Nigeria goods to foreign made goods in Awka Market.
- H0<sub>2</sub>: Price of goods has significant impact on consumers' patronage of made-in-Nigeria goods to foreign made goods in Awka Market
- H0<sub>3</sub>: Sales promotion has significant impact on patronage of made-in-Nigeria goods.

The methods used to handle and analyze the data gathered for the study mainly consisted of descriptive and inferential techniques. Descriptive statistics were used to analyse the research questions, while Chi-square ( $\chi^2$ ) statistical analysis was used to analyse the proposed hypotheses (SPSS v. 20.0).

The questionnaire return rate as presented in table 2 shows that out of a total of 225 questionnaires administered to consumers, only 210 copies of questionnaire representing 93.3% of the total were returned and on the other hand, out of the 25 copies of the questionnaire administered to the dealers in the five zones only 18 copies were returned representing 72% of the total. The implication of the above analysis is that data presented and analyzed in the study were based on the total of 228 copies of questionnaires returned by both the consumers and dealers of made in Nigeria goods in Awka, Anambra State.

## Results

### *Hypothesis Testing and the Results*

In effort to arrive at the accurate and

reliable findings from the data analyzed, Chi-squared ( $\chi^2$ ) test was carried out used to determine if there is any statistical relationship between the variables in each of the hypothesis and this has been conducted at 5% significant level.

### *Effect of poor quality of made-in-Nigeria goods on the attitude of the consumers.*

The alternative form of hypothesis I claimed that quality of goods has significant impact on consumers' preference of made-in-Nigeria goods to foreign made goods in Awka Market. The Chi-squared ( $\chi^2$ ) statistical test was used to examine the claim. The analysis of the findings are displayed in table 4. The test indicated that  $\chi^2$  calculated value is 104.142 and the  $\chi^2$  tabulated equal to 9.0135. The Chi-square ( $\chi^2$ ) test showed that the calculated value when compared with the  $\chi^2$  tabulated value at 5% (5 percent) level of significance is greater. The p-value (Sig.) (0.001) is less than 0.05 level of significance. The hypothesis could be accepted if the  $p > 0.05$ . The result asserts that quality of goods has significant impact on consumers' preference of made-in-Nigeria goods to foreign made goods in Awka Market.

### *Effect of the high prices of made-in-Nigeria goods on consumers attitudes*

In the null form, the hypothesis II stated that the high prices of made-in-Nigeria goods significantly affect consumers' attitudes towards them. The hypothesis was tested with the use of Chi-squared ( $\chi^2$ ) statistical test. The result of the analysis is presented in table 6. The test indicated that  $\chi^2$  calculated value is 113.142 and the  $\chi^2$  tabulated equal to 9.0135. The Chi-square ( $\chi^2$ ) test showed that the calculated value when

compared with the  $\chi^2$  tabulated value at five percent (5 percent) level of significance is greater. The p-value (Sig.) (0.001) is less than 0.05 level of significance. The hypothesis is accepted. This implies that price of goods has significant impact on consumers' patronage of made-in-Nigeria goods to foreign made goods in Awka Market.

*Impact of sales promotion has significant on patronage of made-in-Nigeria goods.*

In the null form, the hypothesis III stated that sales promotion has significant impact on patronage of made-in-Nigeria goods. The third hypothesis was also tested with the use of Chi-squared ( $\chi^2$ ) statistical test. The result of the analysis is presented in table 8. The test indicated that  $\chi^2$  calculated value is 95.713 and the  $\chi^2$  tabulated equal to 9.0135. The Chi-square ( $\chi^2$ ) test showed that the calculated value when compared with the  $\chi^2$  tabulated value at 5% (5 percent) level of significance is greater ( $P > 0.05$ ). The p-value (Sig.) (0.000) is less than 0.05 level of significance. Therefore, alternative is accepted. The result indicates that sales promotion has significant impact on patronage of made-in-Nigeria goods.

## Discussion

The Chi-square ( $\chi^2$ ) test in table 4 showed that the calculated value when compared with the  $\chi^2$  tabulated value at 5% (5 percent) level of significance is greater. Therefore, the hypothesis ( $H_1$ ) is accepted, while the null is rejected. This implies that the poor quality of made-in-Nigeria goods has significant effect on the attitude of the consumers. It means that the tendency of the consumers choosing a foreign made

product instead of locally made goods is very high. In other words, improvement on the quality of made-in-Nigeria goods will create positive consumers attitude and good perception towards the locally made products. This will increase the company's turnover, customers trust and loyalty.

In hypothesis ( $H_2$ ), the Chi-square ( $\chi^2$ ) test in table 6 shows that the calculated value when compared with the  $\chi^2$  tabulated value at 0.05% (5 percent) level of significance is greater. Therefore, the hypothesis ( $H_2$ ) is accepted, while its null is rejected. The implication is that high prices of made in Nigeria goods positively and significantly affects consumers attitude towards the made in Nigeria goods. This is even worse when the quality of the locally made goods is perceived to be of low standard when compared with their foreign counterparts. This test does not deviate from the economics principle that the higher the price the lower the quantity demanded and vice versa.

The third hypothesis ( $H_3$ ) reveals that the Chi-square ( $\chi^2$ ) test in table 8 shows that the calculated value when compared with the  $\chi^2$  tabulated value at five percent (5 percent) level of significance is greater. Therefore, the hypothesis is accepted. The result confirms that sales promotion has significant impact on patronage of made-in-Nigeria goods. It is seen from the results that consumers are always skeptical whether locally made goods will be readily available when needed. Even when they are available, what will be the quality and prices of these goods. This scepticism cannot be unconnected to their negative predisposition and attitude towards locally made goods in Nigeria. Therefore, Products availability will go a long way to create

customer loyalty, repeat purchase and increase in turnover.

### **Conclusion**

The purpose of this study was to ascertain whether consumers had a favorable or unfavorable opinion toward products made in Nigeria. Thus, it was discovered that consumers believe locally produced goods to be of worse quality than those produced abroad after carefully reviewing relevant books, journals, reports, and data gathered during the field survey. Dealers and customers alike asserted that imported goods were of higher quality than those produced locally. Customers bemoaned the subpar packaging and workmanship of locally produced goods. Customers and retailers of made in Nigeria products expressed unhappiness with the pricing, which contributed to consumers' unfavorable perceptions of locally produced goods. While the dealers asserted that some of these locally created products' pricing are fair, consumers complained that the prices of locally made goods were extremely high given their perceived inferior quality. When making this assertion, the dealers took into account the rising currency rates and the cost of raw goods. Regarding the issue of accessibility, it was discovered that the majority of locally produced goods were not always or easily accessible to consumers. This issue is caused by a number of factors. First, many consumers claim that manufacturers produce below capacity due to a lack of raw materials. Second, manufacturers claim that they have restricted production due to low patronage. Third, lack of awareness is caused by inadequate promotion of locally made goods in Nigeria.

The following recommendations have

been developed in response to study findings on the causes of customers' negative attitudes toward locally produced items; it should be emphasized, however, that the development of high-quality manufacturing extends beyond the collection of advanced machinery. Businesses must look for high-quality machines and materials, and training and staff development must be a top priority if they want to guarantee the overall quality of products created locally. The management of local organizations should build a general philosophy of excellence and make sure that this is preached and understood at all levels within the organization. Additionally, strong labor relations should be pursued to ensure the effectiveness of manpower. In order to guarantee that indigenous businesses adhere to government standards, the standard organization of Nigeria (son) has a responsibility to play. In order to meet domestic consumption, we cannot afford to entirely rely on imports, thus buying products created in Nigeria is quite essential.

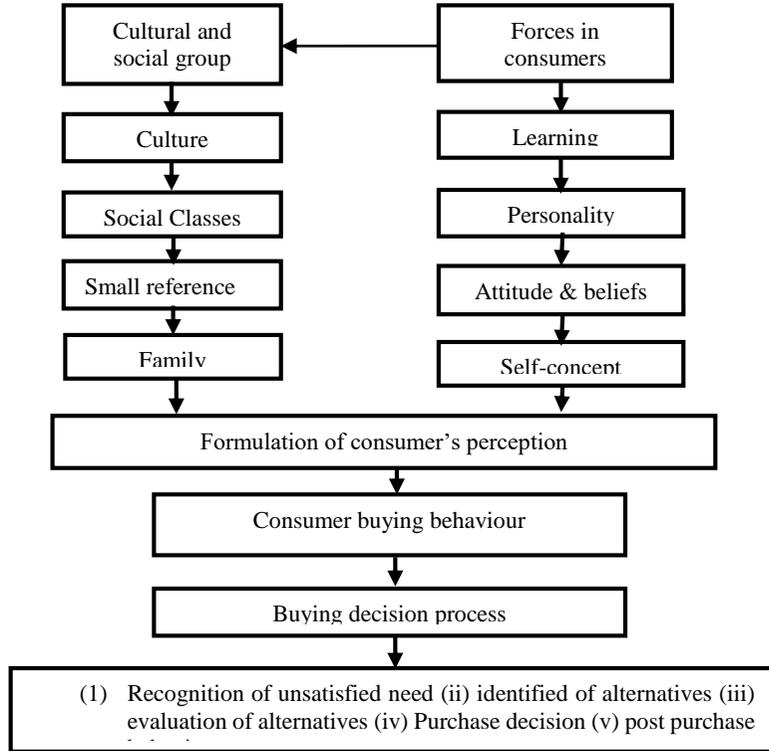
### **Author Contributions**

Individual author's contributions were cascaded as follows: conceptualization, Samuel Ilodigwe and Albert Iheanacho; methodology, Samuel Ilodigwe.; software, Albert Iheanacho; validation, Samuel Ilodigwe, Albert Iheanacho and Chinwuba Moguluwa; formal analysis, Albert Iheanacho; investigation, Samuel Ilodigwe; resources, Samuel Ilodigwe; data curation, Albert Iheanacho; writing-original draft preparation, Samuel Ilodigwe; writing-review and editing, Chinwuba Moguluwa; visualization, Samuel Ilodigwe; supervision, Chinwuba Moguluwa; project administration, Chinwuba Moguluwa.

**Figures and Tables**

**Figure 1**

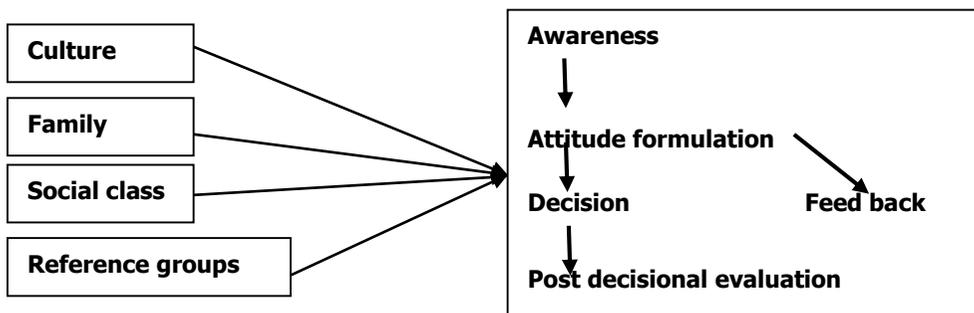
*Social-cultural and psychological forces which influence consumers behavior.*



Source: Kotler P. (1984) Marketing Management: Analysis Planning and Control U.S.A: Prentice Hall International Books Coy.

**Figure 2**

*Marketing Model of Buyer Behaviour*



Source: Udel (1976) Marketing in an age change: An introduction. John Wiley and Sons Inc. New York.

**Table 1***Questionnaire Distribution*

<b>Zones</b>	<b>No. of Consumers</b>	<b>No. of Dealers</b>
Amenyi	45	05
Amikwo	45	05
Umuogbu	45	05
Umunbele	45	05
Umuenechi	45	05
<b>Total = (225+25= 250)</b>	<b>225</b>	<b>25</b>

Source-Field Survey, 2023

**Table 2***Questionnaires Return Rate*

<b>Category of respondents</b>	<b>Number distributed</b>	<b>Number returned</b>	<b>% of Number Returned</b>	<b>Number not returned</b>	<b>% of Number not returned</b>
Consumers	225	210	93.3%	15	67%
Dealers	25	18	72%	07	28%
Total	250	228		22	

Source: Field Survey, 2020

**Table 3***NPar Tests, Chi-Square Test, Frequencies*

Effect of poor quality of made-in-Nigeria goods on the attitude of the consumers			
	<b>Observed N</b>	<b>Expected N</b>	<b>Residual</b>
Strongly agree	104	45.6	61.6
Agree	71	45.6	24.6
Undecided	18	45.6	-28.4
Disagree	26	45.5	-20.4
Strongly Disagree	9	45.6	-37.4
Total	<b>228</b>		

**Table 4***Test Statistics*

Effect of poor quality of made-in-Nigeria goods on the attitude of the consumers.	
Chi-Square	104.342
df	3
Asymp. Sig.	.001

- a. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 45.6

**Table 5***NPar Tests, Chi-Square Test, Frequencies*

Effect of the high prices of made-in-Nigeria goods on consumers attitudes			
	<b>Observed N</b>	<b>Expected N</b>	<b>Residual</b>
Strongly agree	90	45.6	80.0
Agree	71	45.6	14.0
Undecided	18	45.6	-32.0
Disagree	31	45.6	-30.0
Strongly Disagree	18	45.6	-32.0
Total	228		

**Table 6***Test Statistics*

Effect of the high prices of made-in-Nigeria goods on consumers attitudes.	
Chi-Square	113.142
df	3
Asymp. Sig.	.001

- a. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 45.6.

**Table 7***NPar Tests, Chi-Square Test, Frequencies*

Effect of low availability of made in Nigeria goods on the attitude of the consumers.			
	<b>Observed N</b>	<b>Expected N</b>	<b>Residual</b>
Strongly agree	108	45.6	62.4
Agree	71	45.6	25.4
Undecided	9	45.6	-36.6
Disagree	34	45.6	-11.6
Strongly Disagree	6	45.6	-39.6
Total	228		

**Table 8**  
*Test Statistics*

Effect of low availability of made in Nigeria goods on the attitude of the consumers.	
Chi-Square	95.713
df	3
Asymp. Sig.	.000

a. 0 cells (.0%) have expected frequencies less than 5. The minimum expected cell frequency is 42.0.

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**The Effect of Open Innovation on Firm Performance: Research Gaps**

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**Abstract**

Open innovation can be considered as the critical branch of innovation management. It is an emerging field of research that is important for achieving sustainable competitive advantages through enhancing firm performance. This study aims to identify the research gaps in the effect of open innovation and firm performance based on the systematic literature review process. Depending on the systematic approach current study expects to find out research gaps and it targets to develop a conceptual framework to minimize the identified research gaps in the effect of open innovation and firm performance for future empirical investigations. An extensive literature review was implemented to achieve the research objectives through the adaptation of the desk research strategy. The systematic literature review process explored the effect of open innovation and firm performance was not entirely positive. Further, it discovered the three research gaps between open innovation and firm performance mainly. A conceptual framework was developed to minimize the identified research gaps by identifying a new variable to the established relationship. The literature survey and logical arguments provide a solid foundation to build up the conceptual framework. It was proposed to be tested empirically in the research context of listed companies in Sri Lanka by future researchers.

**Keywords:** *Firm Performance, Open innovation, Research gaps*

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## Introduction

Open innovation (OI) is a new language to speak on innovation through collaborative efforts. It helps to break-up organizational boundaries while sharing innovative ideas between organizations. The concept of OI was founded by Henry Chesbrough in 2003 as an alternative method to the traditional closed innovation system (Lu, Yu, Zhang, & Xu, 2021). After originating this concept practitioners try to apply this idea to their innovation system to enhance their firm performance (FP) through developing their firm innovation performance (Rajapathirana & Hui, 2018). Over the past decade, researchers have shown much interest in OI and they do believe that at least another decade of research is expected on OI theory and practice (Ramirez-Portilla, Cagno, & Brown, 2017). As a result of that, numerous researchers tend to identify the effect of OI and FP based on the different contexts (Hinteregger, Durst, Temel, & Yesilay, 2019; Liao, Fu, & Liu, 2020; Wang & Xu, 2018). However, previous researchers have provided inconclusive arguments on the effect of OI on FP. This incomplete literature and ongoing debate on the effect of OI and FP shows that there may be some facts that are not revealed by the existing literature (Dilrukshi, Wickramasinghe, & Edirisinghe, 2022). As well, some researchers criticize the OI theory by emphasizing its limitations (Bogers, 2011; Dekkers, Koukou, Mitchell, & Sinclair, 2019; Enkel, Gassmann, & Chesbrough, 2009; Trott & Hartmann, 2009). Moreover, when OI theory applies to practical situations shortcomings can be occurred due to contextual matters (Bigliardi, Ferraro, Filippelli, & Galati, 2020). Thus, potential researchers need to identify the drawbacks of the OI theory and

should develop alternatives to minimize the gaps in the OI theory.

While researchers stated the importance of OI to enhance FP, there are still many gaps that have to be filled in the field of OI (Liao et al., 2020). Hence, it is essential to carry out theoretical and empirical studies for enhancing the body of knowledge on OI. By the year 2015, there had been some developments in OI research in developed countries, however, it is not satisfactory in developing countries like Sri Lanka. Especially, Bogers, Chesbrough and Moedas (2018) declared that there may be a tremendous growth in OI since 2015 with the combination of sustainable development goals (2015-2030) and OI. Owing to the critical usage of OI practices and considering on increasing trend of researching OI practices it was intended to write this research paper with the aims to review the literature and to identify the research gaps in the extant literature on the effect of OI and FP based on the systematic literature review process. As well, this study expects to motivate future researchers to carry out research by filling the gaps to expand the current body of knowledge about the OI and FP. Accordingly, this paper attempts to:

1. Examine the different types of relations among the variables of open innovation and firm performance based on the empirical findings in the previous literature.
2. Explore the research gaps on the effect of open innovation and firm performance through extant literature.
3. Develop a new framework using research gaps that can be investigated by future researchers.

Hence, this study provides a significant contribution to the OI literature in three ways. First, it allows to identify the different types of relationships between OI and FP in the previous literature. Second, this paper helps to identify the research gaps through the extant research findings. Third, it supports to develop a model by uncovering research gaps that can be raised for potential researchers. The remainder of this study is as follows: the next section draws on the literature on the keywords and the methodology of the study is included then. Following that, results were analyzed and findings were discussed later. In the last section, the conclusions of this study are given.

### **Literature review**

This section briefly discusses the information on OI, FP and types of research gaps based on the identified keywords.

#### ***Open innovation***

End of the twentieth century the traditional closed innovation system gradually decreased due to the mobility of skilled workers, global trends, competition, shorten product life cycles, lack of research and development (R&D) resources and changes in advanced technology (Aliasghar, Rose, & Chetty, 2019; Lu et al., 2021; Pilav-Velic & Jahic, 2021). Hence, firms started to search knowledge from the organizational boundaries. This new approach is called as the OI and firms applied OI as the alternative method to the traditional closed innovation system. OI is one of the most important business strategies that can be applied to achieve competitive advantages in a dynamic competitive business landscape (Lorenz, Benninghaus, Friedli, & Netland, 2020). OI helps to speed up the

innovation process, fulfill customers' needs faster, and reduce the cost, risk, time and effort of the innovation process (Ferrerias-Mendez, Fernandez-Mesa, & Alegre, 2016; Flor, Cooper, & Oltra, 2017; Xie, Wang, & Zeng, 2018). In this background, various scholars have defined the concept of OI based on various disciplines in different contexts throughout the extant literature (Cheng & Shiu, 2020; Lu et al., 2021; Wang & Jiang, 2020). As the father of OI, Chesbrough (2003) defined the concept of OI as "innovative ideas can come from both inside and outside the organization and can go to the market from inside or outside" at the initial stage. However, in generally, OI can be defined as the free exchange of knowledge through organizational boundaries.

The concept of OI has been divided into inbound and outbound innovation by Chesbrough in 2006 considering the knowledge inflows and outflows (Chesbrough & Crowther, 2006; Wang & Xu, 2018). After that Laursen and Salter in 2006 categorized the inbound innovation as OI breadth (number of sources used for OI) and OI depth (intensity of collaboration with each source) (Hinteregger et al., 2019). In the same year, Gassmann and Enkel divided OI as inside-out (outbound), outside-in (inbound), and coupled innovation (Pilav-Velic & Jahic, 2021) by adding a new dimension as coupled innovation.

Though OI is a popular research area in innovation management, some researchers found drawbacks of the OI theory (Bogers, 2011; Dekkers et al., 2019; Enkel et al., 2009; Trott & Hartmann, 2009). One of the major limitations of the OI theory is, though external knowledge enhances firm FP, it is not an easy automatic process (Xie

et al., 2018). Because it needs a specific mechanism. On the other hand, especially, firms invest in OI to create value for the organization it is no longer sustainable due to competition and imitation (Aliasghar et al., 2019). As a result of that, firms cannot gain long-term returns on firms' R&D capability. As well, knowledge sharing has the risk of losing intellectual property (Enkel et al., 2009). Further, it is difficult to select the most suitable partners and it is difficult to select which external knowledge is useful to the firm success since external knowledge combines with uncertainty (Bogers, 2011). External knowledge should match with firms' absorptive capacity and internal R&D (Greco, Grimaldi, & Cricelli, 2016). Moreover, over-searching creates time and management problems for organizations (Greco et al., 2016). However, researchers are trying to minimize the limitations and enrich the advantages of the OI model by developing different concepts.

### ***Firm performance***

The success of the organization depends on the firm's ability to enhance FP (Bigliardi et al., 2020). FP can be defined as the type of measurement which can be used to measure the goal attainment of the firms (Ferrerias-Mendez, Newell, Fernandez-Mesa, & Alegre, 2015). Performance measurement is essential for firms to investigate how organizational structure, strategies and planning contribute to firms' success (Ferrerias-Mendez et al., 2015). Peter Drucker stated that non-innovative firms can be considered as death firms. It implies that innovation is the major part that influences to decide the degree of firm performance. Hence, firms always try to enhance their FP by utilizing different business strategies.

Increasing R&D investment and collaborating with outside partners, and searching for resources from external partners is essential to enhance FP (Hinteregger et al., 2019). Especially, access to external knowledge can be recognized as a critical source of the FP (Greco et al., 2016). Hence, OI can be considered as the most suitable strategy to enhance FP. Indeed, collaborative innovation allows enterprises to gain a competitive advantage and it provides long-term motivation to improve firm performance in the competitive market (Hou, Hong, & Zhu, 2019). On the other hand, it implies the efficiency and effectiveness of the OI adopted by the organizations (Ferrerias-Mendez et al., 2015).

Various researchers have used different dimensions to measure the FP as firms' success, firm growth, R&D performance, economic performance, financial performance, social performance and product or new product development performance because there is no consensus in the definition of FP in OI literature (Moretti & Biancardi, 2020). This evidence shows that firm performance has generated much interest in recent studies since FP is a major part of firm success. Hence, most of the authors measured firm performance based on radical or incremental innovative products (Greco et al., 2016). However, Moretti and Biancardi (2020) demonstrated that though innovation-related indicators provide the success of innovation it does not show the overall performance of the firm. As well, continuous measures or percentage measures do not directly address the firm overall performance. In line with these arguments, Moretti and Biancardi (2020) used economic performance, financial performance and human capital performance to analyze the FP.

Further, Nazeer, Khawaja, Qazi, Syed and Shamim (2021) stated that many researchers have used financial and non-financial indicators to measure FP. However, Nazeer et al., (2021) have used perceived operational performance to measure the FP based on three dimensions as employees' perception of organizational capability to create new products, capability to enhance operational efficiency and capability to improve productivity levels. Moreover, Greco et al., (2016) utilized industrial firm performance and economic-financial firm performance to measure the FP. Nevertheless, Jeong, Chung and Roh (2019) emphasized that product and process innovations are mostly employed by the literature to measure the FP.

### ***Research gaps***

Research gaps in the eye of the beholder. One of the most challenging tasks of the research is to build the research on the development of the research gap. However, very few studies have been developed to identify the research gaps systematically. Accordingly, Robinson, Saldanha and McKoy (2011) developed a framework to describe the research gaps and it consists of five types of research gaps as population, intervention, comparison, outcomes and setting. After that, Muller-Bloch and Kranz (2014) developed a model based on the Robinson, et al., (2011) framework and Jacob's (2011) theory on research problems (Muller-Bloch & Kranz, 2014). As a result of that, they have identified six research gaps as contradictory evidence gap, knowledge void gap, action-knowledge conflict gap, methodological gap, evaluation void gap and theory application void gap. Later, combining the Müller-Bloch and Kranz (2014) and Robinson et al.,

(2011) models, D. Anthony Miles in 2017 conceptualized a new model and it consists of seven research gaps as evidence gap, knowledge gap, practical-knowledge conflict gap, methodological gap, empirical gap, theoretical gap and population gap (Miles, 2017).

### ***Evidence gap***

An evidence gap explains the contradictions in the research findings of the previous studies (Muller-Bloch & Kranz, 2014).

### ***Knowledge gap***

The knowledge gap can occur in two ways. First, knowledge does not exist in the real arena of theories. Second, the expected research findings may not exist (Muller-Bloch & Kranz, 2014).

### ***Practical-knowledge gap***

The practical knowledge gap arises due to the deviation between the actual behaviors of professionals or practices and the outcome of research findings (Muller-Bloch & Kranz, 2014).

### ***Methodological gap***

A methodological gap explains the conflicts in the methodology in the previous studies and the research methods may influence the research results (Muller-Bloch & Kranz, 2014).

### ***Empirical gap***

An empirical gap describes the conflicts in the research findings or propositions in the prior research (Muller-Bloch & Kranz, 2014).

### ***Theoretical gap***

The theoretical gap explains the gaps in the existing theory with the prior research (Muller-Bloch & Kranz, 2014).

### ***Population gap***

A population gap is a common gap that describes a population that is not adequately represented by prior research (Robinson et al., 2011).

## Methods

A literature review is a scientific process (Greco, Grimaldi, & Cricelli, 2015). Hence, this study applied PRISMA (Preferred Reporting Items for Systematic Review and Meta-Analysis) technique to select the articles for review. Identification, screening, eligibility, and inclusion are the four steps of the PRISMA and followed these steps to review the articles for identifying the research gaps.

In the identification stage, databases, search terms and search criteria were decided. Accordingly, Ebsco host, Elsevier, Emerald Insight, and Sage databases were selected for searching the articles. Then, “open innovation” and “firm performance” identified as the search terms and search criteria were developed by combining the main terms with AND operative and similar words combined with OR operative. At the initial stage, the search string was constructed as [“open innovation” AND “firm performance”]. Then, included synonyms of OI as “distributed innovation” and “openness” using OR operative to identify the relevant articles.

In the screening stage, paid attention to the inclusion and exclusion criteria. Accordingly, “empirical studies”, “peer-reviewed journals”, “English”, “open innovation and firm performance” and “2015-2021” were considered as the inclusion criteria and “review”, “qualitative”, “books”, “book chapters”, “book parts”, “expert briefing”, “magazines”, “conference papers”, “non-English”, “non-

relevance to the scope of the current study” and “articles published before 2015” were considered as the exclusion criteria.

In the eligibility stage, the articles were analyzed based on the full text of each article. In this stage, considered methodological reporting since this study focused on empirical studies. Hence, paid much attention to the population, sample, methodology, methods, design and context.

In the final stage, the authors included 30 articles for the review and analyzed each article evaluating the research findings and key areas for future research from existing studies to identify the research gaps. Apart from that, researchers searched central bank reports, the Global Innovation Index and statistics from the Department of Census and Statistics to identify the gaps which match the Sri Lankan context.

## Results

In this section, researchers were expected to present the findings of the literature review under three areas. First, it shows the different relations based on the OI-FP relationship with evidence. Second, it explains the research gaps highlighting the practice gap, theoretical gap and empirical gap. Third, this study presents a model to fulfill the research gaps by opening the black box of the effect of OI on FP.

### *Relationship between open innovation and firm performance*

According to the literature review, Aliasghar et al., (2019), Jeong et al., (2019), Lazzarotti, Bengtsson, Manzini, Pellegrin and Rippa (2017), Lorenz et al., (2020), Lu et al., (2021) revealed a positive relationship between inbound innovation and FP. As well, some

studies found that inbound and outbound innovation has a positive relationship with FP ( Burcharth, Knudsen, & Søndergaard, 2017; Hou et al., 2019; Wang & Xu, 2018; Zhou, Yao, & Chen, 2018). Further, many studies recorded positive results with FP considering OI as an aggregate concept (Expósito, Serrano, & Liñán, 2019; Natalicchio, Petruzzelli, Cardinali, & Savino, 2018; Noh, 2015; Ramirez-Portilla et al., 2017; Roldan Bravo, Montes, & Moreno, 2017; Xie et al., 2018). Moreover, some scholars investigated that inbound and coupled innovation have a positive influence on FP (Hinteregger et al., 2019) and some explored that inbound, outbound and coupled innovation has a positive effect on FP (Oltra, Flor, & Alfaro, 2018).

In terms of negative results, some researchers pointed out that OI has a negative effect on FP (Caputo, Lamberti, Cammarano, & Michelino, 2016; Wang & Jiang, 2020). As well, Flor et al., (2017) and Ferreras-Mendez et al., (2015) identified negative effects between inbound innovation and FP.

Nevertheless, some studies found that inverted U-shape relationship between OI and FP. Accordingly, Bayona-Saez, Cruz-Cazares, Garcia-Marco and Gercia (2017), Zhang, Yang, Qiu, Bao and Li (2018) reported that OI has a U-shape relationship with FP and Kobarg, Stumpf-Wollersheim and Welpe (2018) indicated a similar relationship between inbound innovation and FP.

Regarding the mixed results, Liao et al., (2020) pointed out that inbound innovation has a significant effect on FP. However, outbound innovation has not a significant effect on FP. Cheng and Shiu (2020) also proved a significant and positive influence on inbound innovation and FP but it is not

significantly and positively influenced to outbound and FP. As well, Zhou, Wang, Yao and Huang (2019) noted a positive relationship between inbound innovation and FP while a U-shape relationship between outbound innovation and FP. Further, Shi and Zhang (2018) indicated that OI breadth negatively influences radical innovation and OI depth positively influences radical innovation. Not only that, Bahemia, Squire and Cousins (2017) examined that OI breadth and partner newness has a positive result on product innovativeness and negative results on OI depth and product innovativeness. Nevertheless, Cheng and Shiu (2015) found that inbound innovation increases radical innovation and outbound innovation increases incremental innovation.

### ***Research gaps on the effect of open innovation and firm performance***

This study expects to describe research gaps on the effect of open innovation and firm performance based on the following aspects.

#### *Theoretical gap*

OI theory explains that FP can be enhanced through sharing knowledge between external partners (Chesbrough, 2003). However, firms cannot use knowledge as it is to enhance FP. Indeed, knowledge is essential to enhance firm FP. But it is not enough (Xie et al., 2018). As well, the knowledge-transferring process is not an easy automatic process. It needs a specific mechanism. However, OI theory is not explaining how external knowledge is converted into enhanced FP (Xie et al., 2018). Further, OI theory does not show the specific capabilities which are essential to develop FP (Liu, 2021; Xie et al., 2018). Due to these limitations in the OI theory, some

scholars have used other theories to explain the differences in the OI-IP relationship such as absorptive capacity (Aliasghar et al., 2019; Jeong et al., 2019; Xie et al., 2018), dynamic capability (Cheng & Shiu, 2015; Cheng, Yang, & Sheu, 2016; Liu, 2021) and learning theory (Cheng & Shiu, 2015) are the main theories used by the previous researchers. However, these theories fall short of explaining the IP differences from OI implementation. These arguments emphasize that OI theory does not provide exact solutions for these issues. This evidence shows that there is an issue that is not addressed by the existing theories. As a result of that, there is a theoretical gap that needs to be fulfilled.

#### *Empirical gap*

In the previous literature, scholars paid attention to the antecedents of OI or the consequences of OI (Xie et al., 2018). However, the effect of OI on FP is less studied. These limited studies show that the OI-FP relationship is not universally positive (Weerasinghe, Jayawardane, & Yapa, 2021; Yapa, Senathiraja, & Kauranen, 2018). Because some researchers have found that OI has a positive effect on FP (Expósito et al., 2019; Natalicchio et al., 2018; Oltra et al., 2018) and some revealed that OI has a negative effect on firm FP (Caputo et al., 2016; Flor et al., 2017; Wang & Jiang, 2020). As well, some scholars discovered a U- shape relationship between OI and FP (Bayona-Saez et al., 2017; Kobarg et al., 2018; Zhang et al., 2018). These incomplete literature and inconclusive arguments show that there is an issue that has not been covered by the existing literature.

On the other hand, many studies have investigated the direct effect between OI and FP while few researchers paid attention to the indirect effect (Cheng &

Shiu, 2015; Liu, 2021; Zhou et al., 2018). Accordingly, some researchers discovered absorptive capacity (Aliasghar et al., 2019; Jeong et al., 2019; Xie et al., 2018), learning capability (Cheng & Shiu, 2015) and knowledge integration capability (Liu, 2021) influence the OI-FP relationship. However, these studies were unable to provide a concrete answer for the inconsistent results. In terms of OI, extant literature is highly focused on inbound innovation, but outbound and coupled innovations are less studied (Cheng & Shiu, 2015; Hinteregger et al., 2019; Mazzola, Bruccoleri, & Perrone, 2012). In terms of FP, many researchers paid their attention to product innovation but process, marketing and organizational innovations are poorly investigated (Hinteregger et al., 2019).

Apart from that, many OI studies are concerned on the high-tech manufacturing firms in developed countries and very less attention is paid to the other industries in developing countries (Bigliardi et al., 2020).

When it comes to the Sri Lankan context, few researchers investigated organizational innovation in Sri Lanka (Shanmuganathan, 2018; Washima, 2019; Wijesinghe, Hansson, & Ekenberg, 2021). However, very limited attention has been paid to investigate the OI. Among them, some examined on handicraft sector (Jayawardhana & Surangi, 2010) and some investigated on software industries (Yapa et al., 2018). This evidence shows that there are some issues that are not addressed by the existing literature.

#### *Practice gap*

Sri Lanka was introduced as the pearl of the Indian Ocean due to its richness.

However, it is still in the developing stage though it is passing seventy-five years after independence. The economic performance of the country can be measured through the gross domestic product. In 2011 there was an 8.4% growth rate and in 2012 it increased to 9.1%. But later the annual growth decreased to 3.4%, 5, 5%, 4.5%, 3.6%, 3.3%, and 2.3% for 2013, 2014, 2015, 2016, 2017, 2018 and 2019 respectively (Central Bank of Sri Lanka, 2020). These statistics clearly show that there is a declining trend in the GDP growth rate in Sri Lanka. One of the major reasons for this declining trend is the lower level of allocation for R&D. Economic performance of the country always combines with R&D allocation. However, Sri Lanka spends very less amount on R&D expenditure. In 1975 it allocated 0.4% as a share of total GDP on R&D. But after that, it is showing a diminishing trend in the spending on R&D as 0.3%, 0.2%, 0.18% for 1979, 1983 and 1996 respectively (Department of Census and Statistics, 2019). In line with this evidence, Wijesinghe et al., (2021) highlighted that total investment for R&D from GDP is 0.11% as of the most recent statistic in 2017.

As a result of that, the Global Entrepreneurship Index indicates a declining trend constantly. It was recorded as 31.1, 25.5, 20.93, 21.88 and 19.10 for 2015, 2016, 2017, 2018 and 2019 respectively (Acs, Szerb, Lafuente, & Markus, 2019). Not only have that, but Sri Lankan export income also gradually decreased due to the poor focused on innovation and technology. Evidence shows that about 98 percent of Sri Lanka's exports have been based on simple technology (Wijewardena, 2015). Although some Asian countries moved to the innovation economy from a knowledge economy to reach

sustainable prosperity through complex production systems, however, Sri Lanka is still at a poor level (Wijewardena, 2015). Apart from that, economists believe that the innovative behaviour of employees may increase after the civil war. But this prediction is not realized yet.

Especially, Global Innovation Index shows the capacity for success in innovation each year. The Global Innovation Index consists of two sub-indexes as innovation input sub-index and the innovation output sub-index. It provides detailed information on innovation success depending on 129 countries around the world and it considered Sri Lanka as a lower middle-income country (Cornell University, INSEAD, & WIPO, 2019).

Table 1 indicated that Sri Lanka is not at a satisfactory level in terms of innovation. It implies that though Sri Lanka practiced OI it was not able to achieve innovation success. It indicates that the data presented by the Global Innovation Index does not support the claim. This evidence shows that Sri Lanka is facing a serious troubling condition in terms of innovation.

### ***Proposed conceptual framework***

The relationship between OI and FP is very complicated. Hence, the choice of new variables plays a significant role when developing a new model. Based on the knowledge given by the existing researchers the following conceptual model was developed (Figure: 1).

This new model consists of the independent variable, dependent variable and mediating variable. OI is the independent variable and FP is the dependent variable. Knowledge creation is the newly proposed mediating variable for the established relationship between OI and FP.

Because prior studies suggest the necessity of examining the different aspects of knowledge management between OI and FP (Wang & Jiang, 2020; Wang & Xu, 2018; Zhou et al., 2018). As well, they have declared that knowledge management may reduce the inconclusive arguments on the OI-FP relationship. However, knowledge management is a broader concept and it consists of many other dimensions. Hence, this study selected knowledge creation since knowledge creation is the starting point of knowledge management and a prominent variable in the knowledge management process (Nonaka & Takeuchi, 1995). Further, some literature review papers also revealed that knowledge creation is not tested yet as the mediating variable between OI and FP (Dilrukshi et al., 2022). Hence, this study assumes that knowledge creation has a more explanatory power to describe the OI-FP relationship. Apart from that, knowledge creation allows to convert external knowledge into FP providing a smooth internal transforming mechanism. As well, knowledge creation helps firms to gain more benefits through collaboration to enhance firm FP. Especially, internal workers are not willing to accept external knowledge from other organizations (Natalicchio et al., 2018). They try to make trouble inside the organization to prevent the knowledge-sharing process. However, knowledge creation allows to build motivation among employees to accept new knowledge from external parties. Thereby firms can prevent the “not invented here” syndrome through knowledge creation. As well, some scholars argue that beyond a certain point, the positive effects of OI can be converted to negative effects due to the high maintenance cost, coordination

cost and managing cost of external knowledge (Greco et al., 2016; Kobarg et al., 2018; Zhou et al., 2019). However, if firms can gain maximum benefits from knowledge creation firms can reduce the negative effect of knowledge exchange. Further, fully depending on the OI model or closed model is no longer sustainable (Aliasghar et al., 2019). Because Chesbrough (2003) developed the OI model against the closed model. In a dynamic business environment, a pure black model or a pure white model is not suitable to achieve sustainable competitive advantages (Trott & Hartmann, 2009). However, knowledge creation contributes to develop a grey model while balancing a closed model and an open model. Hence, this study believes that knowledge creation is the best solution to avoid the issues in the existing theories, literature and practices. The proposed model is based on quantitative research using deductive reasoning. Accordingly, the following hypotheses were formulated.

H1: Open innovation has a positive and significant effect on firm performance.

H2: Open innovation has a positive and significant effect on knowledge creation.

H2a: Inbound innovation has a positive and significant effect on knowledge creation.

H2b: Outbound innovation has a positive and significant effect on knowledge creation.

H2c: Coupled innovation has a positive and significant effect on knowledge creation.

H3: Knowledge creation has a positive and significant effect on firm performance.

H4: Knowledge creation mediates the relationship between open innovation and firm performance.

Future researchers could be tested this model empirically based on the different contexts. When it comes to the Sri Lankan context, it is facing many obstacles in terms of innovation with limited resources, technology, infrastructure and capabilities (Yapa et al., 2018). Hence, it is essential to open up their boundaries to collaborate with others to enhance its FP. Sri Lanka spent a very low amount on R&D (Washima, 2019). It is a simple product-producing country based on simple technology (Shanmuganathan, 2018). Especially, Sri Lanka is facing the worst economic crisis since 2019 for the first time in history (Nazeeruddin & Baig, 2022). There is no crisis without an opportunity and crisis is the mother of innovation (George, George, & Baskar, 2022). Further, many researchers declared that OI is the best solution for enterprises to face economic downturns (Artic, 2013; Liu, Shi, & Yang, 2022). Hence, OI is the best solution to enhance the FP in Sri Lanka.

In the Sri Lankan context, this model is more suitable for the listed companies. Because OI is not a costless task. It engages with a maintenance cost, management cost and coordination cost to manage external knowledge. It implies that firms need strong financial background and sound management skills to implement OI apart from R&D cost. However, listed companies can implement OI practices comparatively to the small and medium-scale organizations in Sri Lanka due to their financial and management capabilities.

Further, the Sri Lankan stock market has earned a reputation in several aspects. Especially, Bloomberg

Newsire named the Sri Lankan stock and exchange as one of the best-performing stock markets in Asia and the fourth-best performer in the world in 2007. As well, India today also ranked Sri Lankan stock market as one of the hottest stock markets in the world in 2006.

Moreover, empirical OI studies have tested different industries and different business sectors within the Sri Lankan context. However, how OI practices influence the FP of listed companies in Sri Lanka is not yet tested. Hence, it is timely to investigate the effect of OI on FP based on the listed companies in Sri Lanka by potential researchers. Accordingly, the framework is proposed to test empirically in Sri Lankan context based on the listed companies.

## Discussion

A literature review identified that the OI-FP relationship is not always positive and there may be other factors that influence to this relationship be stronger than the existing relationship. As well, inconclusive arguments and ongoing debate on the OI-FP relationship discovered many research gaps. The current study revealed three research gaps as theoretical gap, empirical gap and practice gap mainly. Further, this study developed a new conceptual framework incorporating knowledge creation as the mediating variable between OI and FP to minimize the identified research gaps. Accordingly, future researchers need to consider the following to minimize conceptual confusion.

- (1) It is needed to find empirical evidence on the OI-FP relationship, based on the listed companies in Sri Lanka.

- (2) It is important to further investigate how external knowledge is converted to FP, and under what conditions, based on the listed companies in Sri Lanka.
- (3) It is essential to examine how external factors and internal factors influence the OI-FP relationship, based on the listed companies in Sri Lanka.
- (4) It is supposed to find the mediating role of knowledge creation between OI and FP based on the listed companies in Sri Lanka.
- (5) It is necessary to measure the OI based on the whole dimensions of OI and FP based on the context of listed companies in Sri Lanka.

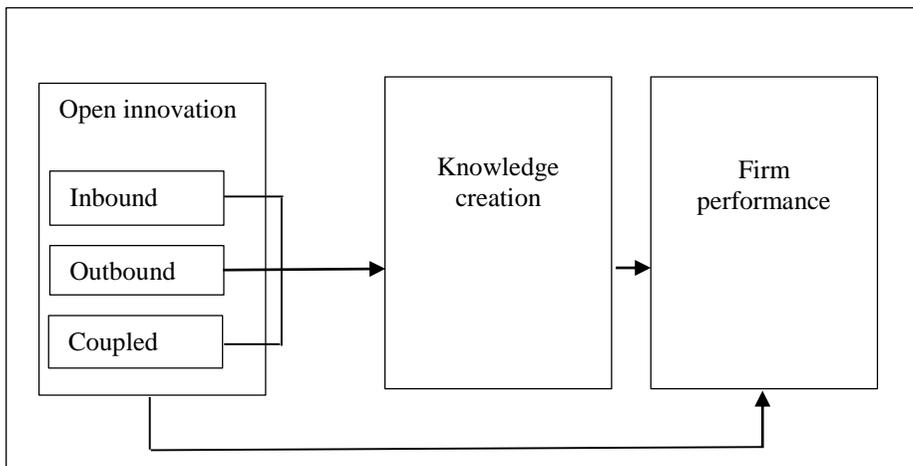
R&D issues and gaining sustainable competitive advantages in the competitive landscape (Bigliardi et al., 2020; Dilrukshi et al., 2022; Moretti & Biancardi, 2020). It attempted to identify the different types of relationship between OI and FP based on the different contexts, to present the main research gaps in the relationship between OI and FP and propose a new conceptual model to minimize the identified research gaps. The established objectives were achieved through a desk research strategy and it was possible to understand that OI-FP is not universally positive at times. Three research gaps were identified mainly as theoretical gap, empirical gap and practice gap. The proposed conceptual framework can be carried out by future researchers to fill the identified research gaps

### Conclusion

OI is the best solution for preventing

### Figures and Tables

**Figure 1**  
*Research framework*



**Table 1**  
*Positions of Sri Lanka in the Global Innovation Index*

Year	2021	2020	2019	2018	2017	2016	2015
GII rank	95	101	89	88	90	91	85
Innovation input sub-index	103	107	94	95	94	98	104
Innovation output sub-index	85	83	77	80	77	78	79

Note: Global Innovation Index Report published by GII, 2021

**Table 2**  
*Different types of relations between open innovation and firm performance*

Author/s	Type of OI (Independent)	Type of FP (Dependent)	Findings
Lu et al., 2021	OI breadth OI depth	Innovation performance	OI breadth and depth positively relate to innovation performance
Wang & Jiang, 2020	Openness	Innovation performance	Openness has a negative effect on innovation performance
Lorenz, Benninghaus, Friedli, & Netland, 2020	OI breadth OI depth	Operational performance	OI breadth and depth positively relate to operational performance
Liao, Fu, & Liu, 2020	Inbound Outbound	FP	Inbound and outbound innovation positively relate to FP
Cheng & Shiu, 2020	OI	Eco-innovation performance	OI has a positive effect on eco-innovation performance
Hou, Hong, & Zhu, 2019	Exploration innovation Exploitation innovation	FP	Exploration and exploitation innovation has a positive impact on FP
Exposito, Serrano, & Linan, 2019	OI practices	Innovation outcomes	OI has a significant effect on innovation outcomes
Zhou, Wang, Yao, & Huang, 2019	Inbound Outbound	Innovation performance	Inbound innovation positively relates to innovation performance and outbound innovation has an inverted U- shaped relationship with innovation performance
Hinteregger, Durst, Temel, & Yesilay, 2019	Inbound Coupled	FP	Inbound and coupled innovation positively influence FP
Jeong et al., 2019	Inbound	Innovation performance	Inbound innovation has a positive effect on innovation performance
Aliasghar et al., 2019	Inbound	Innovation performance	Inbound innovation has a significant positive impact on innovation performance
Wang & Xu, 2018	Inbound Outbound	Radical innovation	Inbound and outbound innovation have a significant positive impact on radical innovation
Oltra et al., 2018	Inbound Outbound Coupled	FP	Inbound, outbound and coupled innovation have a positive impact on FP

Zhou, Yao, & Chen, 2018	Inbound Outbound	Innovation performance	Inbound and outbound innovation positively relate to innovation performance
Shi & Zhang, 2018	OI breadth OI depth	Radical innovation capability	OI breadth decreases the radical innovation capability and OI depth increases the radical innovation capability
Natalicchio, Petruzzelli, Cardinali, & Savino, 2018	OI strategy	Innovation performance	OI positively influences the innovation performance
Zhang, Yang, Qiu, Bao, & Li, 2018	OI	Financial performance	Inverted U-shaped relationship between OI and FP
Kobarg et al., 2018	OI breadth OI depth	Innovation performance (Radical, incremental)	Inverted U- shaped relationship between search breadth on radical innovation and search depth on incremental innovation
Burcharth, Knudsen, & Sondergaard, 2017	Inbound Outbound	Innovation performance	Both inbound and outbound innovation has a positive effect on innovation performance
Portila, Cagno, & Brown, 2017	OI practices OI models	FP	OI practices and OI models have a positive effect on FP
Lazzarotti, Bengtsson, Manzini, Pellegrin, & Rippa, 2017	OI breadth OI depth	Innovation performance	OI breadth and depth positively relate to innovation performance
Bahemia, Squire, & Cousins, 2017	OI breadth OI depth Partner newness	Product competitive advantage	OI breadth and partner newness positively influence product competitive advantage and OI depth has a negative effect on product competitive advantage.
Roldan Bravo, Montes, & Moreno, 2017	Orientation of OI	FP	Orientation of OI positively influences FP
Bayona-Saez, Cruz-Cazares, Garcia-Marco, & Garcia, 2017	OI strategy	Innovation performance	Inverted U- shaped relationship between OI and FP
Flor et al., 2017	OI breadth OI depth	Radical innovation	Positively impacts external search on radical innovation
Caputo et al., 2016	Inbound Outbound	Innovation performance Financial performance	OI is not beneficial for innovation performance and financial performance
Cheng & Shiu, 2015	Inbound Outbound	Innovation performance (Radical, Incremental)	Inbound innovation increases radical innovation and hinders incremental innovation, while outbound innovation improves incremental innovation and hinders the radical innovation
Noh, 2015	OI	Financial performance	OI positively impacts the long-term financial performance
Mendez, Newell, Mesa, & Alegre, 2015	OI breadth OI depth	Innovation performance FP	OI breadth and depth positively impact innovation performance and OI breadth and depth negatively affect FP

Note: Dilrukshi, Wickramasinghe, & Edirisinghe, 2022

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**Factors Affecting Foreign Direct Investments: Evidence from Sri Lanka**

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**Abstract**

This research highlights the critical significance of Foreign Direct Investments (FDIs) for Sri Lanka's economic development by examining the key factors influencing FDI inflows. The study employs the Autoregressive Distributed Lag (ARDL) model and the Chow test, utilizing annual data spanning from 1972 to 2018. Three baskets of independent variables are considered: macroeconomic factors (GDP growth rate, inflation, trade openness, and external debt), infrastructure (communication as a proxy), and qualitative indicators (political rights index). The analysis reveals that external debt negatively impacts short-term FDIs, while trade openness has a positive effect. In contrast, GDP growth rate and inflation prove insignificant in both short and long terms. Infrastructure, represented by communication, demonstrates a long-term positive influence on FDIs, while the political rights index exhibits a negative impact in the short run, displaying the highest level of significance at 1 percent. Furthermore, the Chow test confirms a significant impact on FDI inflows resulting from the civil war in Sri Lanka (1983–2009). These findings suggest that Sri Lanka can enhance FDI levels by prioritizing trade openness, improving communication infrastructure, and addressing political rights issues. These factors play a crucial role in creating a favorable investment climate and promoting sustainable economic growth. Additionally, the study underscores the importance of political stability and security in attracting foreign investors, as evidenced by the influence of the civil war on FDI inflows.

**Keywords:** *FDI inflows, ARDL and Macroeconomic variables*

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## Introduction

The factors affecting Foreign Direct Investment (FDIs), which are simply the determinants affecting FDIs have been discussed and tested across a plethora of worldwide literature. According to the International Monetary Fund FDIs are defined as: “category of international investment that reflects the objective of a resident in one economy (the direct investor) obtaining a lasting interest in an enterprise resident in another economy (the direct investment enterprise).” Therefore, FDIs are simply an investment with regards to a business venture made by a firm or an individual from one country (foreign) in another country (FDI host country). The internal investment capability of the country is constricted due to the almost negligible level of low domestic savings (Bosworth and Collins, 1999; Jayasekara, 2014). This acts as a large obstacle to investment growth of the nation. Therefore, the country relies on FDIs to bridge the deficiency between domestic savings and investment to achieve the expected prosperity in the nation. Further, it was expected for the country to increase domestic investment post the civil war (1983-2009). However, all efforts were in vain due to the savings and investment gap in the nation. (Jayasekara, 2014).

Therefore, FDI inflows are of paramount importance to Sri Lanka. Further, it is also the nation’s largest source of external finance. FDIs have superseded aid, remittances, and foreign portfolio investment. FDIs also have added benefits in contrast to other sources of external financing. For instance, foreign portfolio investments (FPIs) (which are investments in financial assets of a

foreign country, such as stocks or bonds available on an exchange) do not have direct spill over benefits, which is a benefit that can be exclusively observed in FDIs. As FDIs are inherently a business venture, unlike a short-term FPI, it generates benefits such as human and financial capital development, and improvements to the physical and technological infrastructure of the country (Jayasekara, 2014).

Further, FDIs are needed for the arena of financing external debt. The unsustainable external debt pile in Sri Lanka can no longer be financed, without making a dent in the economic structure of the country. The gross external debt of the country was a staggering \$51.72 billion (79.1% of GDP) as of 2018 (World Bank, n.d.). Since the growth of FDIs are low, Sri Lanka finances the existing debt, with more external borrowings. Moreover, on the converse studies show that since the external debt of the country is high it deters FDI flows (Alguacil, Cuadros, & Orts, 2011). Hence, creating a vicious cycle, where the high external debt discourages FDIs and the low FDI flow creates a higher external debt.

However, even though there have been favourable policies made by successive governments to induce FDI inflow into the country, Sri Lanka has performed below par to its post war expectations. Though the country has experienced growth in infrastructure and macro-economic conditions Sri Lanka has still failed to attract a significant amount of FDI inflows in contrast to its South Asian neighbours. Sri Lanka’s current position, with regards to inward FDI inflow on the world stage is thereby unsatisfactory.

Thus, taking into account its strategic

location, natural resource advantages, and access to major markets, Sri Lanka's performance is considered substandard. The nation's contribution to the GDP via FDIs are hovering at less than 2% of GDP, in contrast to its peer developing countries such as Malaysia (3 – 4 percent of GDP) and Vietnam (5 – 6 percent of GDP). Hence, countries such as Vietnam and Malaysia rely less on going to capital markets and raising debt to balance its budgets. Sri Lanka's poor performance in attracting FDIs in contrast to its peers can be discerned from figure 1.

Therefore, though some developing countries have been successful in attracting FDIs, Sri Lanka has lagged behind. Hence, to understand the ways in which a country can attract FDIs, it needs to comprehend the factors that are of significance in attracting FDIs into the country. Identifying such factors is an arduous task, however the fruits of the task will facilitate the country to attract FDIs. There is a wide range of empirical and theoretical evidence that explores the realm of the factors affecting FDIs. However, there is a limited amount of studies within Sri Lanka that has explored this area of research.

Therefore, considering the background and significance of FDIs in Sri Lanka, the following are the primary aims of the research show: FDIs are paramount to bridge the Savings and investment gap in Sri Lanka. Thereby, increasing capital growth of the country, FDIs are considered to be the largest source of external finance in the country, in contrast to aid, remittances and FPIs, FDIs are needed to finance the large external debt pile in the country. Further, according to literature, large external debt also discourages FDIs,

Events of war and political volatility were frequent in Sri Lanka's contemporary history. Such events, therefore, disrupted and discouraged FDI inflow into the country and FDIs in Sri Lanka are performing below par in contrast to its peer developing nations.

Thus, in conclusion, to encourage FDI inflows into the country, Sri Lanka will need to make concerted and ambitious efforts to capitalize on its strengths and marginalize its weaknesses with regards to the ways in which it can attract FDI inflows. Therefore, to do this the significant factors that affect FDI inflows should be deduced.

### ***Research Objectives***

The following primary objective is in essence based upon the said research problem and research question:

- Identify the factors that affect FDIs in Sri Lanka?

This research objective can be broken down to the following sub-objectives:

- Identify the short run and long run macro-economic factors of FDI.
- Identify the short run and long run qualitative and infrastructure factors of FDI.
- Identify the nature of the relationship of each identified independent factor on FDI.
- Identify the effect of war (1983–2009) on the inflow of FDIs into the nation.

If the research achieves the said objectives it would lead to the accurate identification of the long-run and short run effect of major macro-economic and non-macro-economic factors on

FDI in Sri Lanka, while also identifying the nature of their relationship with FDIs. Further, whether the period of war had a structural impact on FDIs will be deduced from the achievement final sub-objective using the Chow test.

### ***Research Problem***

The research problem can be primarily seen in the basket of variables that will be taken into consideration in this study. External debt is a determinant that has been explored in global research with regards to FDIs but has not been considered in Sri Lankan research articles.

It is quite clear when analyzing the economic environment of the country, external debt is a large burden the nation has to bear. Further, external debt is also a good proxy for the macro-economic stability of the nation (Alguacil et al., 2011). Therefore, it could be an important determinant for foreign investors, in order to evaluate the economic environment before investing in Sri Lanka.

Moreover, another determinant which has not been explored in Sri Lankan literature is the political rights index. Therefore, this determinant will be an apt tool to explore the political climate of the nation. Though global literature present that political rights does have an impact on FDIs (Shneider, 1989; Steve Onyeiwu and Hemanta Shrestha, 2004), this study will attempt to prove its impact through a statistical analysis, in the context of Sri Lanka.

Further, the Chow test will be used in this study, to discern whether war had a quantitative impact on FDIs. This test has not been used in prior Sri Lankan studies to observe the impact of war.

### ***Empirical and Theoretical Review***

There are various FDI theories ranging from the most predominantly used theory the OLI ((Ownership, Location, Internalization)) eclectic paradigm to more ubiquitous theories such as the product life cycle theory. However, the FDI theories are more or less indirect theories as they do not have a direct causal relationship with every specific FDI determinant.

Further, when analyzing empirical determinants it can be observed that there are several factors that impact and dictate the level of foreign direct investment (FDI). Nearly every study has included economic growth and inflation rate as determinants that affect FDI inflows (Chakrabarti, 2001). Some studies even categorize the factors affecting FDI into three groups: policy framework, economic, and business facilitation factors respectively (Nations, World Investment Report, 2020).

However, studies also show that the determinants identified for FDI are subject to the country in which the factors are considered (Wijeweera and Mounter, 2008; Arben, Skender and Hysen, 2018). Hence, each country will have its own unique set of determinants that affect FDI considering the current context of its economic background.

Further, although there is a plethora of worldwide literature available with regard to this area of study, there have been only a few published articles in the context of Sri Lanka (Wijeweera & Mounter, 2008; Konara Mudiyansele Palitha Senarath Bandara, 2013; Jayasekara, 2014; Kalaichelvi Ravinthirakumaran, E. A. Selvanathan, Saroja Selvanathan and Tarlok Singh, 2015).

Therefore, through the study identifying the determinants that are unique and significant to Sri Lanka is of paramount importance, as it will allow study to accurately present an overview of factors that will truly affect FDI flow.

Through the analysis of literature, the afore mentioned research gap and a few observations can be discerned: all studies include the macro-economic variable of economic growth rate of the country as a key determinant of FDIs (Li and Liu 2005), the chow test has not been employed in Sri Lankan studies to discern the effect of war on FDIs, the macro-economic variable of external debt has not been observed in any Sri Lankan research with regards to FDIs and its factors and the qualitative variable, the political rights index has not been considered in any Sri Lankan study with regards to FDIs and its factors.

Further, political instability and despotic regimes, deter and disrupt FDI flow into the country. This is because volatile political climates increase the risk of investment and adds to the direct cost of investment. The Black July of 1983 (ethnic riots) and the onset of the civil war between the government of Sri Lanka and the Liberation Tigers of Tamil Eelam (LTTE) created a ripple effect where it made FDIs less attractive (Konara, 2013). Since the end of the War, there has been a spectrum of political crises ranging from the recent economic crisis (aragalaya) and constitutional crises. It has even been reported that The Government's Foreign Direct Investment (FDI) target of about \$3 billion for 2019 was not met as investors were greatly discouraged after the Easter Sunday attacks and the subsequent anti-Muslim violence.

Therefore, these factors portray that a stable political environment is needed to encourage FDIs into the country (Konara, 2013).

Moreover, FDI investors are motivated by cost and location advantages (Jayasekara, 2014). Hence, identifying the significant factors which give this advantage in attracting FDIs is of paramount importance.

## **Methods**

### ***Research Approach***

The key econometric techniques which will be used are the: test of stationarity, the Autoregressive Distributed Lag (ARDL) bounds test, the error correction model (ECM), appropriate diagnostic tests and the Chow test.

### ***Identification of the Sample Period***

The study has been identified over the sample period for the study 1972–2018, based on annual data frequencies. The year 1972 onwards, is an important period for the Sri Lankan economy, as a new constitution was created where Sri Lanka became a republic, where the country changed its name to 'Sri Lanka' to 'Ceylon', officially cutting ties with the British. 1972 was also known as the second independence from the British. However, following a protectionist regime, the economy was subsequently closed, thereby adversely affecting the inflow of FDIs and imports into the country.

However, when trade liberalization policies were introduced in 1977, FDI inflows increased. Nevertheless, the inflows were again stunted due to the civil war over the period 1983-2009. But over the early 1990s, privatization

became popular, which created a second wave of an increase of FDI inflows into the country.

Another significant event which occurred in the stipulated time period is the passing of the 19th amendment in 2015 which diluted the powers of the executive president. This had an effect on the political climate of the country, which would have had an impact on a key determinant of this study: the political rights index.

Further, it is likely that this event also affected key regression variable which is FDI inflows and as well on other respective determinants considered in this study. Therefore, the time frame selected is apt as there were significant changes in the economic and political environment of the country, which could have an impact on FDI inflows and its determinants which are taken into consideration in this study.

### **Sources of Data**

In this study, two specific sources were chosen as they provide access to comprehensive annual data from secondary sources.

The World Bank Open Data offers a wide range of variables and proxies, making it a valuable resource. Additionally, the Freedom House, being a U.S. government-funded non-profit organization focused on political rights and civil liberties globally, offers reliable research and advocacy in this domain.

The selected data sources, the World Bank Open Data and the Freedom House, are particularly suitable for FDI research due to their extensive coverage, credibility, and relevance in providing comprehensive information on economic variables, political rights, and civil liberties, thereby

enabling a robust analysis of the factors influencing foreign direct investments (refer table 1)

## **Results and Discussion**

### **Conceptual Framework of the model**

The following equation will demonstrate the conceptualization of the selected independent variable (FDI inflows) as a function of the dependent variables (shown below) of the study.

$$FDI=f(GDP+INF+TRD+ED+POL+INFR)$$

Where,

*FDI = Foreign direct investment inflows into Sri Lanka*

*GDP= GDP growth rate*

*INF= level of inflation in the country*

*TRD= trade openness*

*ED= level of external debt*

*POL= political rights index*

*INFR= level of infrastructure in the country*

### **Results of the ARDL approach**

The ARDL model is also suitable for this analysis as a key objective of the study is to find the long run and short run effect of the variables on FDI. This objective is facilitated through the Wald test and the error correction model. Hence, the unrestricted model of the series is as follows:

$$\begin{aligned}
& + \theta_6 \ln COM_{t-1} + \sum_{i=1}^p \beta_{1i} \Delta FDI_{t-1} \\
& + \sum_{i=1}^q \beta_{2i} \Delta GDP_{t-1} \\
& + \sum_{i=1}^q \beta_{3i} \Delta INF_{t-1} \\
& + \sum_{i=1}^q \beta_{4i} \Delta TRD_{t-1} \\
& + \sum_{i=1}^q \beta_{5i} \Delta ED_{t-1} \\
& + \sum_{i=1}^q \beta_{6i} \Delta POL_{t-1} \\
& + \sum_{i=1}^q \beta_{7i} \Delta \ln COM_{t-1} + u_t
\end{aligned}$$

### *Discussion – short-run results*

According to the identified results from the error correction model it can be deduced that there is an array of variables that are significant when determining the factors affecting FDIs in Sri Lanka in the short run.

The absolute term of trade openness is identified as statistically significant at 10% level of significance while the coefficient (0.03) implies a positive relationship with FDIs as corroborated in the theory and literature (Walsh & Yu, 2010).

Further, interestingly the first lag term of the dependent variable (FDI) is also identified as statistically significant in determining FDIs in Sri Lanka in the short run with a coefficient value of 0.34, at a 5% level of significance. This shows that the FDIs of the previous period will be an incentive for investors to invest in a FDI in the short run.

Another significant short run variable is the first lag term of political rights index at high level of significance of 1%, with a negative coefficient (-0.28). This relationship is coherent with the literature as when the political rights index is higher, it implies there is less political freedom and rights in the country.

Hence, literature and the empirical findings present a negative relationship between the political rights index and FDIs. However, the political rights index is rather novel in literature, and even the African study which discusses this variable finds an insignificant relationship (Steve Onyeiwu and Hemanta Shrestha, 2004). Therefore, the results of the political rights index of the study under consideration could be deemed important not only for Sri Lankan literature on FDIs but for global literature as well, as it shows a significant and negative relationship, hence empirically corroborating with the theoretical basis of the index's relationship with FDIs.

The absolute term of external debt, which is also a novel variable for Sri Lankan FDI determinant literature. The absolute term of external debt shows a significant relationship at a level of 5%, and shows a negative relationship (-0.13 coefficient).

This negative and significant relationship is also corroborated in literature (Steve et al, 2004; Eli, 2006). This article suggests that high external debt implies macro-economic instability in the country, hence becoming a deterrent to FDI inflows. The GDP results for the absolute term and the first lag term are statistically insignificant. However, both respective coefficient of GDP gives mixed results. The absolute GDP term

implies a positive relationship (0.02 coefficient). This relationship is supported by literature (Al Nasser, 2010; Chakrabarti, 2001). The negative coefficient of the GDP first lag is also supported by literature (Jensen, 2003).

The absolute term and first lag of the inflation determinant portrays a positive coefficient in the short run; however the respective variables are insignificant.

Further, the absolute term and lag term of the infrastructure variable proxied by communication presents an insignificant relationship in the short run. Therefore, the level of infrastructure does not affect FDI inflows into the country in the short run.

Moreover, the error correction term with a coefficient of -1.13 is highly significant at 1% significant level. This implies that any disequilibrium caused in the previous period would be corrected by 113% during the next period.

#### ***Discussion – Long-run results***

According to the long-run results it is only the communication independent variable that has a positive long run relationship with FDI, at a level of 5% significance. This corroborates with the literature (Ravinthirakumaran, 2015; Jayasekara, 2014; Lydon, 2005; Recep Kok, 2009 and Suliman & Mollick; 2009). This shows that when the number of phone lines increase, the infrastructure of the country becomes better, thereby making a more conducive environment for investors.

Further, all other independent variables, exclusive to the communication variable, are deemed

to be insignificant in the long run.

However, FDIs which is the independent variable does affect FDI inflows into the country in the long run as it shows a significance level of 1% at an unusually negative coefficient. This portrays that before an investment is made, the other FDI inflows which exist within the country are also considered by foreign investors. This unusual negative relationship in the long run could be because of competition, as when there are a large amount of FDIs in the long run in the country already, there is a likelihood of the cost of factors ( for example wages to increase), therefore discouraging investors. However, this is only an assumption made through common economic knowledge and it should be noted that this analysis is not one found in literature.

#### **Chow Break Point Test**

The Chow break point test has been employed to discern whether war has affected FDI inflow into the country during the period 1983–2009. Hence, the following hypothesis has been developed:

$H_0$ : There has been no structural break during the period of war.

$H_1$ : There has been a structural break during the period of war.

According to the results of the Chow break point test it can be observed that there has been a structural break during the period war (rejecting the null hypothesis), as the F-statistic probability has been largely significant during the periods 1983–2004 at a level of 1% significance and over 2005–2007 at a level of 5% significance. But, as the war ended, the significance of the war's effect on FDI also reduces as during 2008. This

is observed as the F-statistic is marginally significant at a level of 10% and becomes insignificant in 2009. Therefore, it can be concluded that war did have an impact on FDI and its determinants.

### **Conclusion**

According to the results of discerned in the table 2.1 it can be observed that there have been several variables that have a significant impact on FDIs.

It is interesting to note that it is the political rights index that has the highest significance level (0.00 probability) on FDIs in the short run, at a level of 1%. Further, as the coefficient is positive, it implies as the political rights index increases (which means as when political rights and freedom of the country reduces the index will increase. Which implies a poor political climate) the FDI inflow into the country will be affected negatively. This is important as no Sri Lankan study has used the political rights index to assess its effect of FDIs into the country.

Further, external debt was also considered marginally significant in the short run at a level of 10%. The negative coefficient (-0.13) also corroborated with global literature. This finding is also important as external debt and its effect on FDIs has also not been researched in Sri Lankan literature.

Moreover, trade openness and the first lag term of FDI also proved to be significant in the short run, having a positive effect on FDI inflow according to its respective coefficient.

In the long run however, the only independent variable that has significantly affected FDI inflows into the nation is the infrastructure variable

proxied by communication. As the variable also has a positive coefficient at a level of 5% significance, it shows that in when the infrastructure of the country improves, FDIs are induced in the long run.

The GDP and Inflation determinants, however, do not prove to be significant in the long run or short run. Studies such as Akinlo (2004) have deduced that the insignificance of GDP with FDI could be because the investors focus on factor price differentials rather than the economic growth of the country. This analysis is appropriate for Sri Lanka as investors are interested in the cheap wage rate of the country prior investment.

Moreover, when evaluating the effect of war on the model under consideration it was deduced through the chow test that the period of war had a significant impact on FDIs and its determinants.

### **Recommendations and Policy Implications**

It should be noted that in conclusion that all the variables considered in the study had a significant short run or long run impact on FDIs, exclusive to inflation. Further, the nature of the relationship of such variables was in line with the theoretical reasoning found in empirical research.

Accordingly, there are two macro-economic variables that have a short run significant effect, which are trade openness and external debt. Therefore, making the economy more liberal will attract FDIs into the country. This could be because it would reduce the transaction costs of investors (Walsh & Yu, 2010). Further, external debt is an umbrella variable that portrays the political environment of the country, infrastructure level and macro-

economic stability of the country. Therefore, its significance is of important for policies that strive to attract FDIs into Sri Lanka. Hence, reducing the external debt of the country, will have a positive effect on FDI inflows.

Moreover, considering the qualitative variable of the study (which is a novel determinant considering Sri Lankan literature in this area of work) the political rights index, the researchers discovered a positive significant short-run relationship. This is important for policy implications as it is both empirically and econometrically proven that a healthy political environment will attract FDIs into the

country. This analysis was also supported by the chow test as it showed that war had a significant impact on FDI inflows in Sri Lanka.

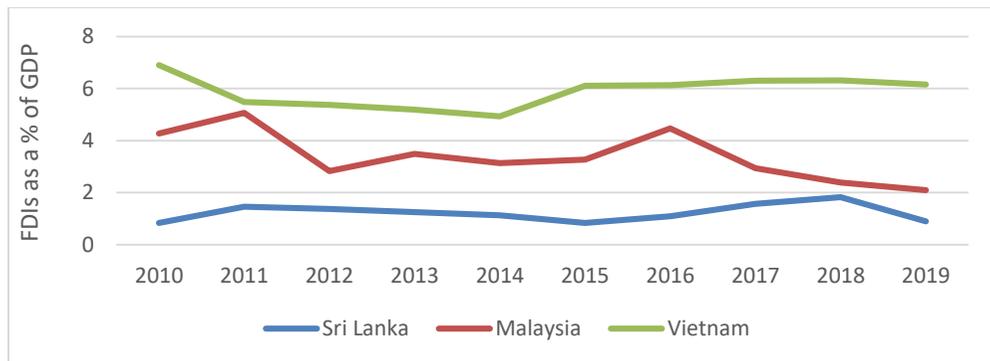
With regards to the infrastructure variable proxied by communication, it was found that there is a long run positive and significant relationship. This shows that in the long run, foreign investors are incentivized by good infrastructure facilities of the country, before investing in FDIs.

Therefore, this research can be used as a tool for FDI policy making when deciding which determinants of FDIs to maximize and which factors to reduce when attracting FDIs into Sri Lanka.

## Figures and Tables

**Figure 1**

*Sri Lanka's FDI Inflow Performance, in Relation to Peer Developing Countries*



*Note: Compiled with World Bank Data*

**Table 1**  
*Summary of proxy used and the data source of each variable*

Variable	Proxy	Sources of Data
FDI inflows	FDI net inflows as a percentage of GDP	World Bank Data
GDP growth rate	The change in GDP from one year to another	World Bank Data
Trade Openness	Trade ratio as a percentage of GDP	World Bank Data
Inflation	consumer price index	World Bank Data
External Debt	Outstanding amount due to nonresidents by residents of Sri Lanka	World Bank Data
Political Rights and Freedom	Political Rights Index	Freedom House annual reports
Infrastructure	fixed telephone lines (per 100 people)	World Bank Data

**Table 2**  
*Significant Factors Determining FDIs in Sri Lanka*

Frequency	Model	Variable	Coefficient	Probability
Annual	Short Run	Trade	0.03	0.07*
		External Debt	-0.13	0.01**
		1st lag of Political Rights Index	-0.28	0.00***
	Long Run	1st lag of FDI (dependent)	0.34	0.03**
		Infrastructure (Communication)	0.34	0.01**
		FDI (dependent)	-1.19	0.00***

*Note: \*, \*\* and \*\*\* denote the statistical significance at 1%, 5% and 10% levels respectively.*

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Konara Mudiyansele Palitha  
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**Impact of High-Performance Human Resource Practices, Self-Efficacy and Proactive Personality on Employee's Job Performance: A Conceptual Model**

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**Abstract**

This study attempts to present a model in explaining a mechanism which ensures job performance of employees. A series of activities, which were already well researched in an isolated manner in different contexts were incorporated to develop this model. The literature-based data compilation was done to develop this model. Thereby, the Job Demand Resource Model (JD-R model) has been adopted to examine the impact of employees' perceptions of High-performance Human Resource Practices (HPHRPs) and their job performance through personal resources such as self-efficacy and proactive personality. Therefore, when HPHRPs offer job resources to the employees, they can utilize the resources such as knowledge, skills and ability to build and enhance their personal resources to ensure their job performance in the work context. However, the JD-R model does not enough explain to make the resources connection process by the employees to be different, then resulting in varying their job performance levels. The main aim of this study is to address this lacuna by explaining to what extent employees have perceived that HPHRP has an impact on their job performance through self-efficacy and proactive personality. The main theoretical contribution is that it integrates HPHRPs, personal resources, and employees' job performance within the same conceptualization by expanding the boundary conditions of the JD-R model. Further, this paper would make theoretical contributions and implications for managers and academics in this field.

**Keywords:** *Employees' Perceptions, High-Performance Human Resource Practices, Job Performance, Proactive Personality, Self-efficacy*

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## Introduction

In recent decades, a sizable amount of Human Resource Management (HRM) literature has been developed that the benefits of utilizing High Performance Human Resource Practices (HPHRPs) that ensure proper usage of human capital on many levels (Arachchige & Robertson, 2015; Jiang et al., 2017; Muduli & McClean, 2020; Li, Zhang & Yan, 2022). As a result, to some extent, researchers have identified that organizations have adopted HPHRPs which have the potential to significantly increase organizational performance in a highly competitive market (Paauwe, Guest, & Wright, 2013; Silva et al., 2016; Shin & Konrad, 2016; Takeuchi, Lepak, Wang, & Takeuchi, 2007). On the other hand, HRM literature shows that HPHRPs are associated with employees' job performance on an individual/micro level (Jalali et al., 2023; Alqudah et al., 2022; Miao et al. 2020; Boon et al., 2019; Ahammad et al., 2019; Chai & Xiao, 2018; Tang et al. 2017; Jiang et al., 2013; Kehoe & Wright, 2013; Zhang & Bartol, 2010; Mangaleswaran & Srinivasan, 2009; Navaratna et al., 2008; Keld & Foss, 2003). However, the association between HPHRPs and employees' job performance has rarely been discussed and unexplored, given the contradictory results in extant empirical studies (Park et al., 2004; Hauff et al., 2022). Keeping a puzzle for further research to be clear what mechanism can be used to explain this association. As a result, researchers advise further studies to focus on HPHRPs and employees' job performance in different conceptualized domains. (Li, Zhang & Yan, 2022; Kaushik & Mukherjee, 2021; Meijerink et al., 2021; Ahammad et al., 2019),

While the HPHRPs literature has continued to expand since many

decades ago, the existing research studies have not yet been addressed adequately, with the views of middle and lower-level managers of organizations (Seth & Sharma, 2019). Although the impact of HPHRPs on both individual and organizational performance has been relatively well-tested (Raineri & Lbarra, 2021; Rehmani, Ahmad, Naseem & Syed, 2020; Senaweera, Dhammika & Dayarathna, 2020; Wang, Kim, Rafferty & Sanders, 2020; Pombo & Gomes, 2018), concerns about employees' perceptions and evaluations and reactions towards HPHRPs in the system is not yet been concerned (Sheng, 2022; Li, Zhang & Yan, 2022; Kaushik & Mukherjee, 2021; Ahammad et al., 2019). In common, senior managers identified, initiate, and evaluated the impact of HPHRPs at the organizational level. The main problem of this is, they inform the middle and bottom level employees to only adhere to those practices. They do not realize whether the employees have perceived such practices as they planned or expected levels, though employees' job performance is fully determined by the managerial actions. Therefore, employees have failed to make their performance their selves towards jobs in the work context (Sun et al., 2007; Janssens & Steyaert, 2009; Lepak & Boswell, 2012; Chang et al., 2014). Therefore, there is a need to study further the impact of HPHRPs from employees' point of view to introduce a mechanism to boost job performance.

Further, HPHRPs provide job resources to the employees and then it can be facilitated to make more creation of personal resources in order to cultivate higher levels of job performance (Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2009; Hobfoll, 2011; Doane,

Schumm, & Hobfoll, 2012). From a resource and demand perspective, Individuals/employees who have sufficient job and personal resources and demands, provided by the workplace arrangements through HPHRPs boost job performance with the fulfilment of their work-related needs such as the development of knowledge, skills and ability to make the achievement of their job performance in the workplace need to be discussed (Ding et al., 2020; Bakker, & Demerouti, 2014; Boxall & Purcell, 2016; van Woerkom et al., 2016; Demerouti, 2001; Schaufeli & Bakker, 2004). However, this Job demand resource model does not sufficiently explain the connection of the resources such as job and personal resources and also not explained why employees perform at different levels when every employee has access to the same job resources in the work context. Thus, the JD-R model underlies workplace placement (HPHRP), which provides employees with job resources and subsequently facilitates the creation of personal resources that lead to different levels of employee job performance.

In addition to the JD-R model, in the conservation of Resources (COR) Theory, “individuals invest their efforts in creating, gathering, maintaining, increasing, and protecting their resources” (Hobfoll, 2001). When People have more resources such as personal resources (Ex: example self-efficacy and proactive personality), they can have the experience to avoid resource loss and creation of more job resources (called resource caravans) such as knowledge, skills and ability job resources through the HPHRPs and then to enhance their job performance. At the same time, HPHRP can provide individuals in the workplace with sufficient job resources such as

knowledge, skills and abilities, while helping them to accumulate more job resources and enhance their personal capabilities. Thus, this study combines the JD-R model with COR theory to explain the role HPHRPs play in the resource-connecting process required to achieve employee job performance and to explore the structural relationship between HPHRPs and personal resources, with the mediating role of self-efficacy and proactive personality (Chung & Pak, 2020; Chen & Chen, 2021).

As a result, this study addresses the research issue: To what extent have employees perceived that HPHRP has an impact on their job performance through self-efficacy and positive personality interventions? Thereby the main purpose of this paper is to measure the mediating impact of personal resources (self-efficacy and positive personality) on the relationship between HPHRPs and employees' job performance. More significantly, this paper uses two major theories such as the JD-R model, and the Conservation of Resource (COR) theory to make a theoretical foundation in order to address the above purposes. Based on theories, this study argues that the HPHRPs in an organization encourage and enhance employees' job performance by fostering employees' personal resources (self-efficacy and proactive personality)

This study contributes new knowledge to be added to the existing HRM literature. It addresses the inadequacy of JD-R model with respect to the process that connects the resources (job and personal resources) through the HPHRPs to determine the employees' job performance. Therefore, the current study addresses paucity in empirical findings and theoretical explanations that address the question as to what

extent do the HPHRPs make an impact on their job performance by considering the role of personal resources (self-efficacy and proactive personality).

This paper is structured as follows: After the introduction, the next section will discuss the proposed conceptual framework's theoretical foundation and hypothesis. The final section will discuss the theoretical contribution, managerial implications and future research reflection of the proposed conceptualization for further action.

## **Methods**

The researchers were taken published works during the period of 1989 to 2023 through the database of such as EBSCO, Emerald, Science Direct, Research Gate, Taylor and Francis Online, Sage, Springer Link and Wiley Online Library for the purpose of identifying the research gaps and developing the conceptual model for the future research.

## **Results**

### **Theoretical Background and Hypotheses Development**

#### ***High Performance Human Resource Practices and Employees' Job Performance***

HRM literature has been focused to test the relationship and make their impact between HPHRPs and employees' job performance (Miao et al. 2020; Ashiru, Erdil & Oluwajana, 2021; Rasheed et al. 2017) and also found the connection between the components of HPHRPs such as compensation and training (Alqudah et al. 2022; Mostafa et al., 2013; Dhar, 2015; Jiang et al., 2015) and employees' job performance. The HPHRPs include a bundle of individual human resource practices and make an interaction between them to provide a good platform for managers and

employees to show their performance in the work context. So, the bundle of HPHRPs can be given more interaction and supported to enhance the employees' job performance than individual human resource practice (MacDuffie, 1995; Bamberger & Meshoulam, 2000; Bowen & Ostroff, 2004; Delery & Roumpi, 2017; Li, Zhang & Yan, 2022; Kaushik & Mukherjee, 2021). The positive effect of the HPHRPs on the job performance level of the employees can be better explained from the JD-R model (Bakker & Demerouti, 2017; Schaufeli & Bakker, 2004) which states that HPHRPs is a major component of workplace arrangements where it can be provided job resources such as job-related knowledge, skill and ability, autonomy and etc. to the employees to manage their job demands and duties more efficiently and then through the job resources, they can cultivate their personal resources such as proactive personality, self-efficacy and etc. to improve their job performance in the workplace. There are some contradictions that were derived from the studies on the relationship and make an impact of HPHRPs on the job performance level of employees (Mostafa, 2017; Jaiswal & Dhar, 2015). Hence, it is proposed that HPHRPs provide different kinds of job resources to the employees in the workplace which it can be supported to create their personal resources such as proactive personality and self-efficacy in order to display a high level of job performance among them. Based on the above arguments, the hypothesis can be developed as follows.

*Hypothesis 1: HPHRPs consisting of Recruitment, Training, Performance Appraisal, and Compensation are positively related to employees' Job Performance.*

***High Performance Human Resource Practices and Personal Resources (Proactive Personality and Self-efficacy)***

HPHRPs need to not only provide knowledge, skills and ability to the employees but also ensure that employees make a good feel at the workplace. Therefore, they can create and develop their self-efficacy and proactive personality through HPHRPs (Maden, 2015; Han et al., 2019). Employees who have evaluated their ability to do their tasks (called self-efficacy) at the workplace. If employees have high self-efficacy, they can able to manage their emotions, challenges and enhance the effectiveness of HPHRPs. Therefore, HPHRPs make a positive link with the employees' self-efficacy which it will be created their high confidence and enhance their self-confidence at the workplace (Bandura, 1977; Xiao & Bjorkman, 2006; Hauff et al., 2014). Employees with proactive personalities can be utilized the HPHRPs to enhance their competency and capabilities and also HPHRPs can facilitate to cultivate the proactive personality among employees in order to ensure their performance level. Therefore, HPHRPs is an important predictor to create and enhance proactive personality and self-efficacy among employees in the work context (George & Zhou, 2001; De Dreu & Weingart, 2003; Jimmieson et al., 2004; Sychala & Sonnentag, 2011). Thus, the JD-R model (Bakker & Demerouti, 2007) suggest that employees who receive a high degree of job resources from the HPHRPs in an organization are allowed to strengthen and use their personal resources such as self-efficacy and proactive personality which will control their work environment, they will be more performed at work and also increases their willingness to

dedicate their job performance in the workplace (Bakker & van Wingerden, 2021). The above arguments can be developed the following hypothesis;

*Hypothesis 2: HPHRPs consisting of Recruitment and Selection, Training and Development, Performance Appraisal, and Compensation are positively related to employees' personal resources (Proactive Personality and Self-efficacy).*

***Employees' personal resources (Proactive Personality and Self – efficacy) and job performance***

Employees with proactive personalities can able to manage the dynamic work environment and make their job performance well in the work context also they can always be ready to find out new opportunities and searching new information, improve their knowledge, skills and ability throughout HPHRPs and initiate new things related with the jobs which can be supported to improve their job performance level in the workplace (Bateman & Crant, 1993; Parker et al., 2010; Alikaj et al., 2021). Thus, researchers found that a proactive personality is always linked with the employee's job performance (Parker et al., 2010; Jiang & Gu, 2015; Kim, 2019; Vignoli & Depolo, 2019; Mubarak et al., 2021 Liao, 2022). Employees' self-efficacy is one of the personal resources which can be able to evaluate their ability in order to maintain their high level of job performance. When employees have high self-efficacy, they can develop their self-confidence to find a better solution and take the necessary actions to reach their goals during the implementation process of the organizations. From this view, self-efficacy makes a positive impact on employees' job performance (Jiang et

al., 2013; Machmud, 2018; Galos & Aldridge, 2021). According to the resources gain and loss perspective of COR theory (Hobfoll, 1989), individuals will try to accumulate, maintain and develop their resources for making their resource gain and they do not have an interest to implement the process of developing their resources, they can have the resource loss in the work environment. Therefore, employees with a proactive personality and self-efficacy have more ability and confidence to create the resource gain and set the goals themselves, suggest creative ideas, and control and utilize the work environment to reach their role in the work. Therefore, the following hypothesis can be expected;

*Hypothesis 3: Employees' personal resources (Proactive Personality and Self-efficacy) are positively related to their job performance.*

***The mediating impact of Personal Resources of (a) Self-Efficacy (b) Proactive Personality on the relationship between High Performance Human Resource Practices and job performance***

COR theory explains that when HPHRPs such as recruitment and selection, training and development, performance appraisal and compensation can give the job resource to the employees, they can have the ability to gather, save, develop and invest their resources and make resource gain to ensure the performance level of them in the work. According to Hobfoll (1989), resources are “the objects, personal characteristics, conditions, or energies that are valued by the individuals” (pp. 516). Furthermore, COR theory emphasises that employees can easily access the job resources in the work environment and then they can gather, develop and invest

and reinvest their resources knowledge, skills and abilities in order to enhance their personal resources such as self-efficacy and proactive personality at work, they can able to make better job performance at work. While employees have a high tendency of proactive personality and self-efficacy, they can always focus on self-creation, future oriented mindset, and transformation oriented skills, manage their target pressure and use their knowledge and skills to find out the creative solution for the problem, ultimately, they can achieve the job performance at work (Mubarak et al., 2021; Kim, 2019; Vignoli & Depolo, 2019; Jiang & Gu, 2015; Parker et al., 2010). Thus, workplace arrangement offers a variety of HPHRPs to the employees who are not only maximized their competency, capabilities and confidence but also make a good feel that provides a supportive workplace through a range of HPHRPs (Maden, 2015; Bandura, 2000; Liu et al. 2017; Han et al., 2019). Therefore, we extend the HPHRP research by examining the mediating role of proactive personality and self-efficacy between HPHRPs and employees' job performance. Based on the above arguments, we develop the following hypothesis:

*Hypothesis 4: Personal Resources of (a) Self-Efficacy (b) Proactive Personality of employees mediate the impact of HPHRPs and their job performance.*

## **Discussion**

### ***Theoretical Contribution and Implications***

This study will attempt to expand the boundary conditions of the JD-R model to connect the resource demand (JD-R model) and resource gain and loss perspectives (COR theory) to make the

process that connects the resources (job and personal resources) through the HPHRPs to determine the employees' job performance. Therefore, the current study addresses the paucity of empirical findings and theoretical explanations that address the question of to what extent do employees perceive the HPHRPs to ensure their job performance by making the role of personal resources (self-efficacy and proactive personality).

This study contributes to the need for expanding research on employee perception of HPHRPs and their performance outcomes by exploring the influence of perception of HPHRPs on employees' job performance (e.g., Boon et al., 2019; Kaushik & Mukherjee, 2021; Li, Zhang, & Yan, 2022).

The JD-R model can be viewed the conceptualization of perception of HPHRPs and theoretical understanding of when employees perceive HPHRPs (that is sufficient amount of resources HPHRPs deliver), they might make a target towards that. Therefore, this study makes some new contribution to the current HRM literature by using the JD-R model to explore the employees' perceptions of HPHRPs (Van Beurden et al., 2021).

This study gives us an explanation of an organization would be more facilitated to communicate well the features of HPHRPs (Process in HRM) and how job and personal resources are connected in the workplace to enhance the employees' job performance in the work context.

This study introduces variables of proactive personality and self-efficacy as mediating variables between HPHRPs and employees' job performance because HRM literature calls for future research to propose

personal resources such as proactive personality and self-efficacy to make a link between HPHRPs and employees' job performance (Jo et al. 2023; Martinson & Leon, 2018).

### ***Managerial Implications***

Workplace arrangements such as HPHRPs offer a sufficient amount of job resources to the employees in the workplace, throughout the job resources, they can develop their personal resources such as self-efficacy and proactive personality and also they can able to use their resources to make reinvest it to enhance their competencies and capabilities to reach the targets of their performance level. Therefore, this study gives a strong platform and communication well information to the managers of the organizations, before ensuring the performance level of the employees, managers can really understand their perception and reaction towards the implementation of HPHRPs. Thus, when implementing HPHRPs, managers are only thinking about how HPHRPs can be aligned with the business strategies of the organization rather than employees' perception of HPHRPs. And also, managers should think about how employees can really get more perceptions of HPHRPs based on satisfaction of work-related needs and requirements which are provided by the HPHRPs to cultivate their job performance.

### ***Reflection on Future Research***

This study investigates a model that connects the employees' perception of HPHRPs and their job performance through personal resources such as self-efficacy and proactive personality. Previous scholars argued that employees' perceptions/views of HPHRPs can be differed based on the expected HPHRPs which will be

aligned with their preferences, values, and needs and communicate information about HPHRPs (Bowen & Ostroff, 2004; Den Hartog et al., 2013). Future research would be considered to make the connection between both expected and perceived HPHRPs and employees' job performance.

Furthermore, this study evaluates the HPHRPs and job performance from only a single source such as employees. Therefore, future studies will go for multiple raters to be evaluated HPHRPs and job performance.

Additionally, only two potential mediating variables, self-efficacy and proactive personality, have been considered between HPHRPs and employees' job performance; research indicates that HPHRPs and employees' job performance are more support for the strength of employees' personal resources such as self-efficacy and proactive personality. Thus, future studies would be considered to make the connection between HPHRPs and employees' job performance with the other mediating variables such as psychological work climate, psychological capital, psychological empowerment and employees' job performance.

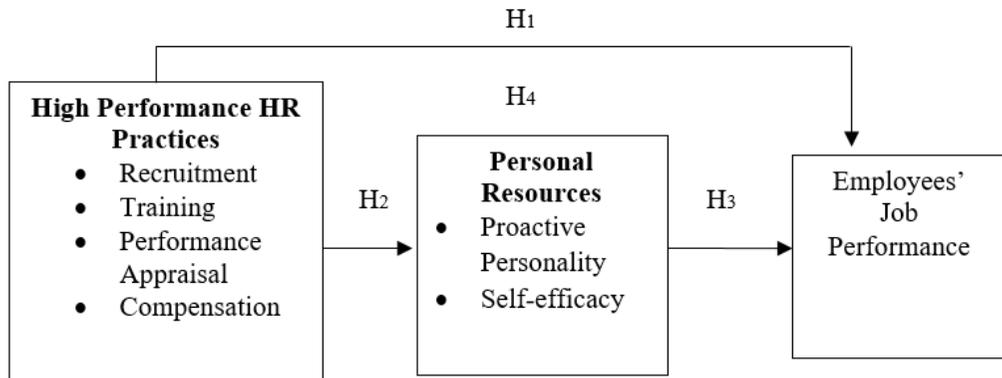
### **Conclusion**

This study mainly focused to add new knowledge to the HRM literature regarding what extent the employees perceive and react to the HPHRPs to ensure their job performance through the lens of the JD-R model by making the structural framework that examines

the effects of employees' perceptions of HPHRPs on the employees' job performance through employees' personal resources such as self-efficacy and proactive personality (Alqudah et al., 2022; Raineri & Lbarra, 2021; Senaweera, Dhammika & Dayarathna, 2020). According to the literature and practitioners' facts, employees can make a positive response such as effective job performance, when they consider the employees' perceptions of HPHRPs to be offered by organizations. Furthermore, personal resources such as self-efficacy and proactive personality play a mediating role in the middle of HPHRPs and employees' job performance. If employees increase their positive reactions such as job performance in the workplace through their perceptions of HPHRPs, they should build or enhance their Personal resources such as self-efficacy and proactive personalities to raise the job performance among them during work (Mubarak et al., 2021; Vignoli & Depolo, 2019; Han et al., 2019). Finally, this study illustrated significant theoretical implications, such as explaining the need for personal resources such as self-efficacy and proactive personality which are travelled together with the job resources such as HPHRPs to improve the job performance of employees and emphasizing managerial implications, such as they should think about the importance of employees' perceptions of HPHRPs in organizations as a remedial solution to improve employees' job performance.

**Tables and Figures**

**Figure 1**  
*Research Framework*



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**Impact of Training and Development Interruptions on Employee Growth  
Mindset: With Special Reference to Covid 19 Outbreak in Public Enterprises of  
Sri Lanka**

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**Abstract**

The emergence of new skill gaps during covid-19 with the shift in working methods and procedures has emphasized more on training and development needs in upskilling and reskilling employees accordingly. However, since Covid-19 imposed much greater responsibility to governments, budget cuts on fund allocation to training and development impacted employees, especially with a growth mindset, in accordance to Carol Dweck's incremental theory of intelligence. Accordingly, this research aims to identify the impact of such training and development interruptions on employee growth mindset. Data collection of the study is done using 5-point Likert questionnaires out of a sample consisting managerial and operational level employees of the three highest revenue generating public sector enterprises of Sri Lanka. Accordingly, the study confirms that there is a significant impact on employee growth mindsets due to training and development interruptions which was tested using the individual-level outcomes of employee growth mindset with major training and development interruptions identified by the international labor organization.

**Keywords:** *Training and Development interruptions, Growth mindset, Covid 19, Sri Lanka, Public Enterprises*

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## **Introduction**

The Covid 19 pandemic has been the most challenging crisis in today's world. Despite the obstacles it places, all people, organizations, governments, and societies as a whole are making an effort to deal with this crisis situation efficiently. Particularly, the Covid 19 outbreak has put a spotlight on governments as people and organizations rely on them for support, advice, and information and is viewed as the key hub to effectively combat the pandemic (International labour organization, 2021). However, government spending has increased significantly as a result of the pandemic, with the majority of funds going toward health initiatives and other postponed tax payments (Sri Lanka development update , 2021).

The shift in government priorities in comparison to the pre-Covid situation has significantly impacted the public sector enterprises. Especially, the funds and resources allocated to training and development, digital infrastructure development, investments in digital literacy etc. have been cut back together with the suspension of operations which leads to stagnation in skill development activities. Further, the implementation of lockdowns and curfews due to the Covid 19 pandemic has led to major disruptions in the continuation of quality training and development activities. Inconsistencies in access to distance learning modules and the abrupt shift in training modalities have the potential to widen gaps in learners' access to and satisfaction with their education (International Labour Organization and World Bank 2021, 2021).

This raises the awareness on the need of training and development by such employees to ensure skilling, reskilling,

upskilling so that they can work effectively and efficiently by adjusting to the new normal. Therefore, it is important for workplaces and Human Resources Development departments to invest in such training and development with the Covid 19 outbreak.

Accordingly, this research aims to focus on how the training and development interruptions impact on employee growth mindset affecting the pre and post Covid era which would also contribute in limiting the negative consequences within organizations during the post covid period.

## ***Problem Background***

The Covid 19 pandemic has transformed workplaces and work in the public sector (OECD, 2020). It has made it urgently necessary for employees to learn new skills, reskill, and upskill in order to adapt to the new normal as it has significantly swapped the methods and responsibilities at work (International labour organization, 2021). As a result, many top government employees and departments must adjust to these uncertain times of transition and acquire the necessary knowledge and abilities to get ready for what lies ahead (Civil Service College, 2020). However, lack of research has been conducted on how such changes in skills have affected the employees at work.

With the stagnation of training and development, employees in public enterprises face a challenge in improving their skills and being engaged at work during the pandemic with the stagnation of training and development which could ultimately lead to poor performance, higher absenteeism and even employee turnover.

The study focuses on addressing this issue focusing on employee mindset, more specifically, the adoption of development mindset, a concept presented in this study, can help HRD, which has historically incorporated psychological ideas. Despite its popularity, there haven't been any sufficient reviews of this conceptual framework for mindsets that has relevance for learning design and organizational performance.

In light of this gap, it is crucial to carry out an exhaustive evaluation of the methods Dweck's theory of a growth mindset is being experimentally studied in connection with HRD-related subjects (Han & Stieha, 2020).

Therefore, this study aims to incorporate the concept of mindset with training and development to identify how such interruptions on training and development impact on employee growth mindset in order to address the gap of existing literature.

### ***Research Objectives***

With relevance to the above research questions, the objectives of this study are identified as follows;

- a) To identify whether difficulty in delivering hands on training have a significant impact on employee task performance.
- b) To identify whether difficulty in delivering hands on training have a significant impact on workplace dissatisfaction.
- c) To identify whether limited digital literacy of users have a significant impact on task performance.
- d) To identify whether limited digital literacy of users have a significant impact on workplace dissatisfaction.
- e) To identify whether training and development interruptions due to

Covid 19 outbreak significantly impact on the employee growth mindset of public enterprises.

### ***Empirical and Theoretical Review***

#### ***Training and Development Interruptions***

A structured intervention that aims to improve determinants of individual job performance known as training (Chiaburu & Tekleab, 2005). Previous studies have demonstrated that providing employees with training and development helps to lessen their stress, anxiety or frustration due to work expectations that they are unfamiliar with and lack the necessary abilities to handle successfully (Pugh, 2021). Thus, training and development could be considered as a crucial factor in determining the employee mindsets at work.

According to the findings of a global survey of enterprises, Infrastructure issues, limited digital literacy of users, difficulty in delivering hands on training, lack of adopted training programs and resources, cost, limited digital skills of trainers have been identified as interruptions on training and development during the Covid 19 pandemic (International labour organization, 2021). Accordingly, difficulty in delivering hands on training and limited digital literacy of users have been selected as the independent variables of the study.

#### ***Employee Growth Mindset***

Implicit self-theories of intelligence concerning the malleability of human skills have an impact on employee willingness to participate in training and development opportunities because those who believe that human abilities are fixed rather than incremental are less oriented toward learning (Annelies E. M. Van Vianen, 2011). This study is

based in accordance to the incremental theory of intelligence by Carol Dweck, which elaborates that people can view intelligence as a variable that can be altered or improved upon with effort (incremental implicit theory), or as a fixed and unchangeable entity (entity theory; or entity belief) (Dweck, 2006). Therefore, employees with an incremental mindset, known as growth mindset, would certainly be willing to learn more and enhance their competencies through training and development in order to fill the unfamiliar skill gap emerged with the Covid 19 pandemic.

Accordingly, research shows that a belief that one can improve their abilities (i.e. growth mindset) can support individual-level outcomes such as employee task performance and workplace satisfaction (Han & Stieha, 2020) which has also been used in other related studies such as Keting and Heslin (Heslin, 2005). However, existing research such as Han and Stieha (2015) have demonstrated task performance improvements with growth mindset while the effect on job satisfaction remains unclear with limited research related to job “dissatisfaction” more specifically (Han & Stieha, 2020).

Accordingly, this study incorporates employee task performance and workplace dissatisfaction as dependent variables of this study.

### ***Hypothesis Development***

It is a well-known fact that training and development is an essential tool which determines employee task performance and the level of workplace satisfaction levels.

According to Teare & Boer (1996), as technology is used more frequently, jobs will need to be more diversely

based and employees will need to be trained in a variety of operational areas due to the need for multi-skilling. Therefore, a high percentage of inadequate training can be a cause of low morale because it may make employees feel unprofessional leading to employee dissatisfaction with their jobs (Mapelu & Jumah, 2013). Apart from employee dissatisfaction during the pandemic, there is a gradual challenge in the achievement of employee’s task performance which require lots of entities to conduct training programs to the employees despite the interruptions (Nawarathna , Abeykoon , & Harshani , 2021).

Organizing training and development programs do not only improve employees' skills but also their performance, motivation, and sense of job satisfaction which is the best way for organizations to provide the means for upgrading their staff in order to gain a competitive advantage (Chaudhary & Bhaskar, 2016).

However, with the Covid 19 pandemic, it is evident that the implementation of hands-on training (on the job training) is a challenge to all organizations. With the enforcement of lockdowns and social distancing, businesses and organizations increased online learning. (International labour organization, 2021). Previous studies have found that barriers of online learning were caused due to resource constraints, learner’s lack of interest, misperceptions about its nature and complexity, conflict with work schedules and activities and self-regulatory learning processes which impacts on the employee task performance.

However, research also proves that hands on training programs improve the knowledge, competencies, and capabilities of employees, which leads to

improved task performance in their tasks. Previous research has shown that practices of human resource management are positively related to an employee's training and development areas as well as their task performance (Hafeez & Akbar, 2015). In addition, provision of hands on training is considered as an important tool by organizations in employee satisfaction and retention. Organizations can take advantage of this tool, and the results will be better trained, more satisfied employees, as well as employees who are more valuable to the organization (Huang, 2019). Job training ultimately benefits both the employee and the organization through workplace satisfaction (Schmidt, 2004).

Previous studies have shown that workers who perceive their jobs as unstable without receiving on-the-job training experience more emotional exhaustion, decreased motivation, and a significant decrease in job satisfaction. Covid 19 is one of the best situations so far which has affected employees emotionally and mentally which therefore affects motivation and workplace dissatisfaction.

Accordingly, this research study has developed the two hypothesis below to examine the relationship between difficulties in delivering hands on training and its impact on task performance and workplace dissatisfaction with the Covid 19 outbreak.

H1: Difficulty in delivering hands on training have a significant impact on task performance.

H2: Difficulty in delivering hands on training have a significant impact on workplace dissatisfaction.

Due to challenges arisen with ICT

infrastructure, literacy, manual processes and procedures, Sri Lanka's efforts to stop the spread of the COVID-19 pandemic were not purely successful (Annual Report, 2020).

Given the current state of digitization, the majority of public sector job tasks are less suited to work from home arrangements and less likely to embrace online training techniques. Additionally, public services supplied to the general public should be conducted in person. In addition, Sri Lanka reported 30.8 per cent and 46.0 per cent of computer and digital literacy levels respectively, which are considered low when performing day to day jobs (Annual Report, 2020).

Therefore, it is a challenge for effective task performance which ultimately affect the growth mindset of public sector employees during the pandemic as they face difficulties adopting to online training and working environment.

In addition, the limited digital literacy of employees tends to create difficulties when dealing with the digital work environment and virtual training platforms. Ultimately, it would impact the workplace satisfaction of employees. Employees may not be purely satisfied with some aspects of training programs (Schmidt, 2007). There are several factors negatively influence motivation and job satisfaction in developing countries (Michaelowa, 2002). As a result, HRD professionals must consider how training and development programs affect those who participate in them, be aware of how employees feel about the training and development programs provided to them, and pinpoint the factors that contribute to job training satisfaction from the perspective of the employee during this pandemic

(Schmidt, 2007).

Therefore, when implementing online training, it is important for employers to identify the level of digital literacy of employees, whether they have the ability to adopt to virtual training and virtual work environments in order to understand how it impacts the growth mindset of employees through workplace dissatisfaction.

Accordingly, this research study has developed the two hypothesis below to examine the relationship between limited digital literacy of users and its impact on task performance and workplace satisfaction with the Covid 19 outbreak.

H3: Limited digital literacy of users have a significant impact on task performance.

H4: Limited digital literacy of users have a significant impact on workplace dissatisfaction.

Through testing the above hypothesis, we can develop the final hypothesis of our study in order to derive at our final conclusion as follows:

H5: Training and development interruptions significantly impact on the employee growth mindset.

### ***Significance of the Study***

It has been identified through previous literature that a skill gap has arisen with adjustments made in workplaces to deal with the Covid 19 outbreak. However, lack of research has been conducted on how such changes in skills have affected the employees at work. This also raises awareness on the need of training and development to ensure skilling, reskilling and upskilling of employees so that they can work effectively and efficiently by adjusting to the new normal. Therefore, it is important for workplaces and Human

Resources Development departments to invest in such training and development with the Covid 19 outbreak. However, in reality, especially in public sector, there have been a decline in training and development with Covid due to various interruptions according to previous literature.

This study aims to incorporate a component of incremental implicit theory which is the “growth mindset” of employees as it is related with learning which therefore can be linked to training and development. Despite its applicability to learning design and organizational performance, this conceptualization of mindsets has not been the subject of any reviews in scholarly HRD work (Han & Stieha, 2020). Such mindset theories have been highly researched on studies involving primary, secondary and tertiary education while focusing least on research based on management studies and adult learning.

This study is therefore important for the top level managers and to the government to assess and analyze how interruptions on training and development due to Covid 19 has impacted on the growth mindset of employees which would finally impact directly on the organizational performance.

### **Methods**

#### ***Research setting and type of investigation***

When focusing on the type of investigation, this study can be identified as a correlational research in a non-contrived research setting with a minimal interference of the researcher. In correlational research, a non-experimental research method, a researcher analyzes two variables, comprehends and evaluates their

statistical relationship without the influence of any additional factors. (Correlational Research: Definition with Examples, 2020). Accordingly, it is evident that this study aims to identify the relationship between variables as a correlational research study.

### ***Conceptual Framework***

As illustrated in figure 1, this study considers the individual-level outcomes of employee growth mindset which include task performance and workplace dissatisfaction as the dependent variables which has also been used in other related studies such as (Han & Stieha, 2020) and (Keating & Heslin, 2015) while difficulty in delivering hands on training and limited digital literacy of users are considered as independent variables under training and development interruptions identified by the international labor organization (International labour organization, 2021).

### ***Sampling***

The sample of this study has been identified as 351 managerial and operational level employees in accordance to the Morgan table out of a population of 4000 employees of the 3 highest revenue generating public institutions of Sri Lanka. The unit of analysis is identified as individual employees from which data was collected using a five-point Likert questionnaire following the convenience sampling technique with a response rate of 99% while rejecting 3 incomplete responses. The convenience sampling technique using questionnaires was utilized in this study in order to obtain required data in a cost-effective manner within a short time period.

### ***Demographic profile***

Majority of the respondents were

operational level (78%) male employees (65.2%) from the department of customs (38.2%) followed by excise (31.1%) and inland revenue (30.8%) falling within the age category of 25 to 35 years (48.7%) who believes that a change in skills have occurred with the pandemic which requires training and development whilst their respective organization experienced a reduction in the trainings which they believe is insufficient to manage the skill gaps.

### ***Measurements***

According to table 1, the independent variable “training and development interruptions” was measured using means of two variables which includes difficulty in delivering hands on training and limited digital literacy of users.

The variable “Difficulty in delivering hands on training” was measured using 6 items from the scale of “Disruption in the delivery of apprenticeships and other practical skills training” in accordance to the survey of international labor organization in the year of 2021 (International Labour Organization and World Bank 2021, 2021).

The variable “limited digital literacy of users” was measured using 7 items from “the digital workplace skills framework, 2018” (Marsh, 2018).

Both independent variables derived Cronbach’s alpha values of 0.868 and 0.883 which indicated a very good internal reliability respectively.

The dependent variable “employee growth mindset” was also measured using means of two variables which include task performance and workplace dissatisfaction.

The variable “Task performance” was

measured using 6 items from the “Individual Workplace Performance Questionnaire” (Ramos-Villagrasa, 2018) while the variable “workplace dissatisfaction” variable was measured using 7 items from “the job training and satisfaction survey” by Steven W. Schmidt (Schmidt, 2007) which derived Cronbach’s alpha values of 0.865 and 0.869 reflecting a good level of internal reliability of the questionnaire.

### ***Data Presentation and Analysis***

This research intends to analyze the data gathered through the above stated questionnaire using the statistical package for social sciences (SPSS) tool to test the set hypothesis and to arrive at valid and reliable conclusions. In addition, this study intends to use correlation and simple regression analysis to identify how the training and development interruptions due to Covid 19 impacted on the employee growth mindsets.

Specifically, simple regression enables to investigate the effect of a single independent variable with a single dependent variable focusing purely about a variable's relationship with the dependent variable without the interference of other variables. Therefore, simple regression analysis was utilized in data analysis.

## **Results**

### ***Normality***

The histograms, as well as the absolute values of skewness and kurtosis, determine the data's normality for samples with a sample size greater than 300. For determining considerable normality, either an absolute skewness value of 2 or an absolute kurtosis (excess) value of 4 may be utilized as reference values. (HY, 2013). According to table 2, it is visible that almost all the variables show a

skewness value less than 2 and a kurtosis value less than 4. However, the task performance variable shows a kurtosis value of 4.211 which is slightly above the accepted range but is not a create a big matter of indifference. Therefore, it can be concluded that the data set is normally distributed.

### ***Independence of Observations***

In order to ensure the independence of the observations, this study interprets the Durbin-Watson values. In absence of autocorrelation a Durbin-Watson value in between 1.5 and 2.5 is usually required (Maria Karadimitriou & Marshall, 2015). According to the statistics shown in table 3, it is evident that the data set assures the independence of observations as the Durbin Watson statistics between the independent variable “difficulty in delivering hands on training” and each dependent variable, employee task performance and workplace dissatisfaction are 1.995 and 2.004 respectively while Durbin Watson statistics between the independent variable “limited digital literacy on users” and each dependent variable, employee task performance and workplace dissatisfaction are 1.794 and 1.798 respectively. Finally, the Durbin Watson value of “training and development interruptions” and “employee growth mindsets” show a value of 1.921. Therefore, the Durbin-Watson values of the study meet the required criteria ensuring the independence of observations.

### ***Descriptive Statistics***

The responses for all variables used in the study derived mean values closer to 4 denoting that the majority of responses are aligned with “agree” status. When focusing on the independent variables, difficulty in delivering hands-on training and

limited digital literacy of users both show values of 3.8143 and 3.6893 respectively. In accumulation, the “training and development interruptions” variable shows a mean of 3.7518. When considering the dependent variables, the variable of employee task performance shows a mean value of 3.9073 while the variable workplace dissatisfaction shows a mean value of 3.7858. In accumulation, the variable “growth mindsets” shows a mean value of 3.8462.

### ***Inferential Statistics***

According to table 4, all the above set hypotheses are accepted with a strong positive relationship between difficulty in delivering hands-on training with task performance and workplace dissatisfaction respectively in addition to limited digital literacy with task performance and workplace dissatisfaction respectively with significant values  $<0.05$  and R values  $>0.5$ . Accordingly, when considering the overall means in the 5<sup>th</sup> hypothesis, the correlation between the two variables of “Training and Development Interruptions” and “Employee Growth Mindsets” indicates that when the training and development interruptions increase, it increases the level of growth mindset of employees which means such employees would be willing and seeking to be trained and to learn more and more.

### **Discussion**

When analyzing the findings of this study, it can be concluded that the independent variable “Training and development interruptions” have a significant impact on the dependent variable which is “employee growth mindsets” with a strong and positive relationship. The independent variable “training and development interruptions” was measured using two

variables which include “difficulty in delivering hands-on training” and “limited digital literacy of users” which also indicated a strong positive and significant impact on each of the dependent variables, i.e. “employee task performance” and “workplace dissatisfaction” which measured the growth mindset. Accordingly, all the set hypothesis of this study was accepted.

The reasons for the training and development interruptions (i.e. difficulty in delivering hands-on training and limited digital literacy of users) to have a significant positive relationship with employee task performance respectively can be supported by existing literature which states that people who believe that performance is adjustable rather than the result of innate talent may be more willing to employ various tactics to increase task performance (Cutumisu, Brown, Fray, & Schmölzer, 2018). This is relevant in deriving conclusions for the first and the third hypothesis of this study focusing on employee task performance.

Accordingly, our first hypothesis addresses the first research question which reflects the fact that despite the conclusions derived from previous research stating that hands-on training programs enhance employees' knowledge, skills, and capabilities, which improves task performance, with the presence of training and development interruptions on delivering hands-on training (which is more preferred by public sector employees during the Covid 19 pandemic according to the data gathered in this study), employees possessing a growth mindset will be willing to improve their task performance by using various other strategies without pure reliance on hands-on training provided by the

organization in order to successfully perform the tasks they are responsible to.

Therefore, it can be concluded that investing in training and development to upskill and reskill employees is just one aspect of managing employees with a growth mindset.

Covid 19 itself can be considered as one such challenging situation which led to interruptions in training and development through which employees possessing a growth mindset would have the ability to improve their growth mindset by facing this pandemic accordingly by performing their tasks efficiently and effectively by using the above mentioned options apart from trainings.

Therefore, even with difficulties in delivering hands on training the employees have attempted to successfully engage in task performance.

When focusing on the third hypothesis of this study addressing the third research question, the positive relationship between limited digital literacy of users and task performance can be supported by the study of Lee et al. (2012) which states that growth mindset gamers outperformed fixed mindset players because they were less distracted by their errors. Additionally, Raftar (1998) discovered a link between job performance and technostress brought on by a lack of digital literacy (Jena, 2015). This means, despite their mistakes and limitations on literacy, employees with a growth mindset do not let that weakness interfere their task performance instead they engage in more work and depict extra performance.

Most people and organizations can probably improve when the right

amount of effort is put out, but in order to deploy effort effectively, one must also be acutely aware of their own limits (Wheeler & Omair, 2016). Therefore, it can be concluded that employees with a growth mindset might have taken measures to improve their digital literacy in order to perform their tasks online and to engage in online trainings or the employees might have improved in engaging in more physical work tasks and strategies to improve their task performances than relying on online trainings due to their limited digital literacy.

This is proven by the highest mean for the statement “adapting to changes in work technologies and practices does take a lot of effort”, which was reflected under task performance from the data gathered from the questionnaire which also makes it clear that the employees with growth mindsets have made an effort to improve their digital literacy by adopting to such changes.

These conclusions of the first and the third hypothesis are supported by the data analysis which concludes that the more training and development interruptions occur with Covid 19, the more the employees engage in performing their tasks well by taking extra responsibility and effort in order to learn and develop their skills using various other methods rather than relying on training and development provided by the organization because employees possessing a growth mindset is highly focused on completing the task despite any limitation they face.

According to several studies conducted, incremental theorists are more likely than entity theorists to personally adopt learning goals, develop high self-efficacy, and perform well on complex decision-making tasks within an organizational context (Heslin, 2005).

Therefore, this conclusion can be supported by such literature.

In this study, it was proven by the highest means depicted in the descriptive statistics table for the statement “I did more than what was expected from me due to Covid 19 outbreak without training/with limited training” and “despite the pandemic, I worked at keeping my job knowledge up to date” which indicates that the employees with a growth mindset have used various other strategies and finally ensured their performance of tasks at the job successfully.

On the other hand, the second and fourth hypothesis addressing the second and fourth research questions respectively focusing on significant positive relationship between difficulty in delivering hands on training and limited digital literacy of users on workplace dissatisfaction can be supported by existing literature which states that employees who work for organizations where learning and growth is highly valued have a lot more faith in their business and feel much more satisfied with their jobs (Bansal, 2021).

An effective way to train employees with a growth mindset is identified as on-the-job learning and the empirical literature has found that job satisfaction has a positive relationship with factors such as on-the-job training (Yannis & Lange, 2007). Therefore, with the difficulties in delivering hands-on training during the Covid-19 pandemic in public enterprises of Sri Lanka, it is evident that employees possessing a growth mindset tend to have an increased level of workplace dissatisfaction. Therefore, this conclusion supports the second hypothesis and second research question of the study.

When considering the positive relationship between limited digital literacy of users and workplace dissatisfaction in accordance with the fourth hypothesis, the existing literature states that limited digital literacy of users creates “technostress” which leads to employee dissatisfaction.

According to the gathered data, it was identified that majority of respondents stated that their organizations have used video conferencing tools and online learning programs as a solution for training and development interruptions with the Covid 19 pandemic despite the limited digital literacy level of its employees in the public sector as proven by previous literature. Therefore, this can be a reason for employees in these organizations to be dissatisfied due to their limited digital literacy. According to previous literature, Technostress, according to Davis-Millis, is the pressure to adopt new technology, particularly when the training and technological standards are inadequate (Jena, 2015).

With the findings of this study, it is evident that due to the limited digital literacy of users, it might have been challenging to engage in such virtual trainings and online working procedures successfully which has led to workplace dissatisfaction. Since employees possessing a growth mindset seeks to learn, they would be highly satisfied if the company provided relevant trainings and development activities accordingly despite the fact that they would learn even without training. It was proven by the descriptive statistics table which showed the highest mean for the statement “Overall I’m highly dissatisfied with the amount of training and development received at the job” which means the majority of the respondents have agreed to this

statement.

Therefore, it can be concluded that even though the employees face training and development interruptions, it increases their level of growth mindset as they tend to seek and learn more to perform their tasks despite their dissatisfaction towards the workplace. It is proven by 89.4% of responses of employees believing that training is necessary to improve their skills which reflects the number of employees with a growth mindset in public sector enterprises who are dissatisfied due to limitations in trainings but manages performs their tasks accordingly during the pandemic.

This conclusion is in line with findings from existing literature which revealed that if dissatisfied employees understood that their effort was appreciated they would actively respond by demonstrating higher innovation and performance. Therefore, the final hypothesis of this study is also supported by the above conclusion which implies that the increase in training and development interruptions have a positive and significant impact on employee growth mindset.

Therefore, the final hypothesis of this study is also supported by the above conclusion which implies that the increase in training and development interruptions have a positive and significant impact on employee growth mindset.

### **Conclusion**

This study is one of the first studies to analyze the impact of training and development interruptions on employee growth mindset by utilizing a modified set of questions from related studies in order to fit into this research problem.

Accordingly, it was proven that training and development play a significant role in affecting the growth mindset of

employees with regard to employee task performance and workplace dissatisfaction.

In conclusion, it was proved that difficulty in delivering hands on training and limited digital literacy of users have a significant positive impact on task performance and workplace dissatisfaction which means despite the training and development interruptions, employees possessing a growth mindset tend to have improved task performance level through other methods of learning but will however be dissatisfied about their workplace.

Accordingly, the following recommendations can be presented through this study:

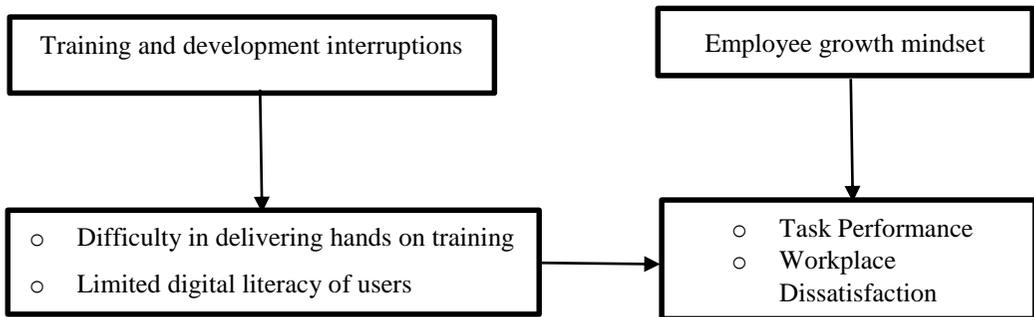
1. Since growth mindsets seem to be more adaptable than fixed mindsets, companies could potentially benefit from embracing them instead of fixed mindsets. In order to promote growth mindsets within an organization, the organizations effort in training and development could be important.
2. According to the outcomes, it is evident that employees possessing a growth mindset will attempt to ensure task performance even without proper training and development. However, in order to ensure their satisfaction levels, provision of training and development plays a major role.
3. A key principle in HRM is the idea that practical training programs positively impact workers' knowledge, talents, and performance, leading to greater job satisfaction and success. According to the data gathered through the questionnaire, it can be recommended to implement hands-on training during work by adhering health guidelines under a

- safe working environment, by covering the lost training hours after the resuming of daily operations and by implementing hands on training when requested by employees to ensure task performance together with workplace satisfaction.
4. It can be recommended to public sector enterprises in Sri Lanka to focus more on the literacy levels of employees in order to avoid inefficiencies of on the job training in adjusting to global pandemics such as Covid 19 in the future.
  5. When implementing online training, it is important for employers of the public sector should identify the level of digital literacy of employees, whether they

- have the ability to adopt to virtual training and virtual work environments in order to understand how it impacts the growth mindset of employees through workplace dissatisfaction.
6. Companies could also use methods such as developing critical thinking skills of employees through coaching in order to deal with challenges effectively, encouraging experimentation of new ideas, learning through mistakes and empowering to take responsibility during pandemics such as Covid 19 to impact employee growth mindsets in a positive manner when there are interruptions in providing training.

**Figures and Tables**

**Figure 1**  
*Conceptual Framework*



*Note: Author Constructed*

**Table 1**  
*Cronbach alpha values of variables*

Reliability Statistics	No. of Items	Cronbach's Alpha
Difficulty in delivering hands on training	6	.868
Limited digital literacy of users	7	.883
Task Performance	6	.865
Workplace Dissatisfaction	7	.869

*Note: Survey Results*

**Table 2***Descriptive statistics: Normality*

Descriptive Statistics					
	N	Skewness		Kurtosis	
	Statistic	Statistic	Std. Error	Statistic	Std. Error
DHT	351	-1.723	.130	3.495	.260
LDL	351	-1.438	.130	2.434	.260
TP	351	-1.842	.130	4.211	.260
WDS	351	-1.547	.130	3.508	.260

*Note: Survey Results***Table 3***Durbin Watson statistics*

Predictors: (Constant)	Dependent Variable	Durbin Watson Statistics
DHT	TP	1.995
DHT	WDS	2.004
LDL	TP	1.794
LDL	WDS	1.798
Training interruptions	Growth mindset	1.921

*Note: Survey Results***Table 4***Findings of the study*

Hypothesis	R	R Squared	F	Sig.value	Unstandardized Coefficient (Beta)	Standardized Coefficient (Beta)
H1: Difficulty in delivering hands-on training has a significant impact on employee task performance.	.758 <sup>a</sup>	.575	471.796	.000 <sup>b</sup>	1.187	.758
H2: Difficulty in delivering hands-on training has a significant impact on workplace dissatisfaction.	.801 <sup>a</sup>	.642	626.443	.000 <sup>b</sup>	.929	0.801
H3: Limited digital literacy of users has a significant impact on employee task performance.	.708 <sup>a</sup>	.502	351.129	.000 <sup>b</sup>	1.471	.708

H4: Limited digital literacy of users has a significant impact on workplace dissatisfaction.	.758 <sup>a</sup>	.575	471.681	.000 <sup>b</sup>	1.194	.758
H5: Training and development interruptions significantly impact on the employee growth mindset.	.841 <sup>a</sup>	.707	843.490	.000 <sup>b</sup>	.925	.841

Note: Survey Results

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