IJCBR

INTERNATIONAL JOURNAL OF CONTEMPORARY BUSINESS RESEARCH

VOLUME 3 | ISSUE 1 | JULY 2024

SRI LANKA NATIONAL QUALITY AWARD SLSI Merit 2022

AACSB Business Education Alliance Member

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INTERNATIONAL JOURNAL OF CONTEMPORARY BUSINESS RESEARCH

VOLUME 03 _ ISSUE 01 _ 2024

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International Journal of Contemporary Business Research is published bi-annually by the Faculty of Business, NSBM Green University, Sri Lanka.

ISSN: ISSN 2961-5259

Published by the Faculty of Business, NSBM Green University Mahenwatta, Pitipana, Homagama.
Telephone: +94 115 44 50 00 / +94 (11) 544 5117
Web: www.nsbm.ac.lk

Printed by:

NSBM Press
NSBM Green University
University Mahenwatta, Pitipana, Homagama.

FROM THE EDITOR

As the Editor-in-Chief, it is my pleasure to welcome readers to the third volume of the International Journal of Contemporary Business Research (IJCBR), published by NSBM Green University.

The IJCBR seeks to explore, analyze, and disseminate knowledge on the intricate dynamics and evolving complexities of the modern business landscape. This issue particularly exemplifies the convergence of emerging theories and practices from various disciplines. With eight insightful articles, this volume delves into topics ranging from Supply Chain and Circular Economy to Finance and Human Resources Management.

The first study authored by M.M.M. Shaja and J.A.T.A. Jayakody examines customer satisfaction in Sri Lanka's Online Food Delivery Service (OFDS) industry, driven by the rise in internet usage for purchasing goods and services. It assesses satisfaction using the E-S-Qual dimensions: Efficiency, Fulfillment, System Availability, Responsiveness, and Tangibles. Primary data was collected from 205 respondents through an online survey and analyzed using SPSS. Results show that Fulfillment, Responsiveness, and Tangibles significantly affect customer satisfaction, with Responsiveness being the most important. Efficiency and System Availability had no significant impact. The study further highlights the need for improved service quality in the OFDS sector and recommends further research on other variables influencing customer satisfaction.

The second study, written by W.D.G.G. Abhayagunarathna, I. Adihetti and V. S. Arachchi explores the relationship between lean management practices and operational performance in Sri Lanka's apparel industry, emphasizing continuous improvement, waste elimination, leadership support, and supplier involvement. In response to the economic downturn affecting the garment sector, the research identifies the need for effective strategies to maintain competitiveness. Data taken from managerial employees across major apparel companies were analyzed, revealing that continuous improvement, leadership support, and supplier involvement significantly enhance operational performance, while waste elimination does not. The findings suggest a strategic focus on efficiency and quality to meet export goals and address global competition, offering both academic and practical insights into improving operational performance.

Third study done by M. Edirisinghe investigates how customers' perceptions of supply chain transparency affect their purchasing behavior in the apparel industry, a sector often criticized for unethical practices. It aims to fill a research gap by focusing specifically on how customers view transparency and its impact on their buying decisions, as previous studies have mainly examined transparency from a company’s perspective. Key findings of this research reveal that supply chain transparency has a strong, positive effect on customers' purchasing intentions. However, the study suggests that future research should explore other variables that might influence customer behavior, providing a broader understanding of transparency's role in ethical consumption within the apparel industry.

The study conducted by W.M.H.P. Bandara and P.R.C.N. Ariyarathne explores factors influencing consumer acceptance of refurbished smartphones in Sri Lanka, within the context of the circular economy, which emphasizes reusing and recycling resources. Given the limited local awareness of this concept, the researchers conducted eight semi-structured interviews using purposive sampling. Thematic analysis of the data revealed factors related to personal preferences, benefits, obstacles, and risks. The findings showed that while consumers generally prefer new smartphones, they are more inclined to choose refurbished devices over second-hand ones, highlighting a nuanced consumer attitude toward refurbished products.

M. Perera's research study discusses the challenges faced by contemporary organizations and international corporations in uncertain competitive environments and emphasizes the importance of sustainable human resource management (HRM) techniques in fostering motivated employees and improving organizational performance. It investigates the moderating role of line manager support in the impact of sustainable HRM practices on company performance. The study focuses on how line managers perceive sustainable HRM practices and their responsibilities regarding these practices. To ensure validity and reliability, various consistency strategies were employed, and data analysis was conducted using SPSS version 21. The findings support a stakeholder significance concept within the framework of sustainable HRM from the perspective of line managers, leading to the establishment of three hypotheses based on empirical research.

The sixth study by P.M. Wijayawardhana investigates the factors affecting corporate dividend policies in the food, beverage, and tobacco sectors listed on the Colombo Stock Exchange (CSE) in Sri Lanka. It examines data from 15 companies over ten years (2011-2020) using a quantitative approach and multiple regression analysis. Key findings show that profitability and leverage have a significant positive relationship with dividend per share, while firm size negatively impacts dividends. Further the firm risk too has a negative but insignificant effect on dividends. However, it is shown that the inclusion of tobacco companies broadens the analysis, providing valuable insights for financial managers and guiding investors in making informed decisions about dividends in these interconnected sectors.

This study conducted by D. Bamunukula, P. Vithanage and G. Rangalla examines the impact of accounting information, specifically Earnings per Share (EPS) and Net Asset Value per Share (NAVPS), on the stock market prices of registered plantation companies on the Colombo Stock Exchange in Sri Lanka. By analyzing publicly available financial statements from 2015 to 2022, the research uses regression analysis to explore the relationship between accounting metrics and market prices. Overall findings of the study conclude that both EPS and NAVPS significantly influence the market price per share of Sri Lankan plantation companies, highlighting the importance of accounting information in investment decisions.

The final research study in this volume by M.T. Pathirana and K.T. Vimukthika investigates the influence of micro-influencers on niche market trends and consumer behavior among Generation Z (Gen Z) in Sri Lanka. Through qualitative methods, it highlights important traits of micro-influencers, such as credibility and authenticity, that resonate with Gen Z consumers. The findings reveal that Gen Z tends to trust micro-influencers more than traditional celebrities, appreciating their personal engagement. These influencers effectively promote niche products by leveraging strong relationships with their followers. However, the study also addresses challenges like influencer fatigue and skepticism toward sponsored content. It concludes with recommendations for businesses to prioritize long-term, authentic partnerships with micro-influencers that align with their brand values, and suggests further research into the lasting impact of this marketing strategy.

International Journal of Contemporary Business Research
Volume 3, Issue 1_2024

Impact on Customer Satisfaction by the E-S-Qual Dimensions of Online Food Delivery Service Industry among Undergraduates

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Abstract

The increasing prevalence of internet usage for purchasing goods and services has catalyzed the emergence of the Online Food Delivery Service (OFDS) industry in Sri Lanka, transitioning consumers from traditional in-store dining to digital platforms. This study investigates customer satisfaction levels among online food purchasers, focusing on the dimensions of E-S-Qual, which include Efficiency, Fulfillment, System Availability, Responsiveness, and Tangibles. Utilizing an explanatory cross-sectional design, the study collected primary data gathered through an online questionnaire distributed to 205 respondents via Cluster Sampling. The data were analyzed using SPSS, confirming the reliability of all five E-S-Qual dimensions. Regression and hypothesis testing revealed that Fulfillment, Responsiveness, and Tangibles significantly impact customer satisfaction, while Efficiency and System Availability do not. Notably, Responsiveness emerged as the most influential factor, whereas Fulfillment had the least impact on customer satisfaction. The findings underscore the importance of enhancing service quality in the OFDS sector to improve customer experiences. The study advocates for further research to explore additional independent variables that may influence customer satisfaction, thereby contributing to the ongoing development of the online food delivery landscape in Sri Lanka.

***Keywords**: Customer satisfaction, E-S-Qual dimensions, Online food delivery service*

1. Introduction

The rapid growth of the internet and wireless technologies has significantly impacted the advancement of online retailing and e-commerce, particularly in the food delivery industry (Saad, 2021). Online meal ordering systems have become an essential component of the modern food industry, helping businesses better serve their consumers and maintain a competitive edge in the market. Online Food Delivery (OFD) service providers can be categorized into two sections: restaurants that provide their own delivery service (e.g., Pizza Hut, McDonald's, Domino's, and KFC) and multi-restaurant intermediaries (e.g., Uber Eats LK, PickMe Food, Eatts Food Delivery, EatMe Global, Savari Food). Online food delivery services benefit restaurants by boosting productivity, effectiveness, and market size (Sjahroeddin, 2020).

Many studies have focused on the service quality aspects of the online food delivery industry, as it is considered the most significant driver for sales that affects both enhancing and diminishing customer satisfaction. Technological advancements in the food delivery industry have opened up fresh waves of consumer demand, providing opportunities for third parties to enter the delivery market as middlemen between customers and restaurants (Muller, 2018). A study conducted with millennials living in Quezon City, Philippines, concluded that the dimensions of service quality influence customer satisfaction in delivery services, with the responsiveness dimension having the biggest influence (Libo-On, 2021). This study aims to examine how E-S-Qual (E-service Quality) factors affect customer satisfaction in the Western province of Sri Lanka.

The research objectives are to:

- Examine the interrelationship between Electronic Service Quality Components (i.e., Efficiency, Fulfillment, System Availability, Responsiveness, and Tangibles) and Customer Satisfaction.
- Identify the impact of Food delivery service provider's Quality on Customer Satisfaction.

This research will be useful for food Delivery service providers in identifying the most significant factors that require attention to enhance service quality and customer satisfaction. It will also benefit E-service businesses in selecting the best Food delivery service provider to deliver their orders, fulfilling the required criteria and factors to provide a quality delivery service and enhance overall customer satisfaction.

2. Literature Review

2.1 Background

The online food transaction market is experiencing significant growth, with projections indicating a continuous annual increase (Triyuni et al., 2021). The practice of ordering food through online platforms, including websites and mobile applications, has reached advanced levels in many developed nations. However, in Sri Lanka, this trend is still in its developmental stages, as consumers gradually adapt to digital purchasing practices. In this context, maintaining high service quality is essential for the success of online food delivery services.

This explanatory cross-sectional study aims to investigate how customer satisfaction among university undergraduates in Sri Lanka is influenced by the E-S-QUAL dimensions within the food delivery service industry. The primary focus of this research will be on assessing the service quality dimensions related to customer service and delivery service. A review of existing literature reveals a notable gap in understanding the satisfaction levels of Sri Lankan undergraduates, who represent a significant segment of the younger generation in the country. This study seeks to address this gap, providing insights that can be utilized by various stakeholders in the food delivery service industry to identify necessary improvements.

The research will consider the entire transaction process, from placing an order through an e-service platform to the final delivery of food to the customer.

2.2. E-Service Quality (E-S-Qual)

The increasing value of online food transactions is evident, with predictions of continuous growth (Triyuni et al., 2021). While online food ordering is well-established in developed nations, Sri Lanka is gradually adapting to this trend. This study aims to understand how customer satisfaction among university undergraduates is influenced by the E-S-QUAL dimensions within the food delivery service industry.

E-service quality, defined as the effectiveness and efficiency of online platforms for shopping and delivery, is crucial for customer satisfaction (Saad, 2021). E-S-QUAL encompasses a comprehensive evaluation of service quality before and after transactions (Dastane & Selvaraj, 2018). The dimensions of E-S-QUAL include Efficiency, Fulfillment, System Availability, Responsiveness, and Tangibles, which collectively assess the quality of customer service and delivery throughout the online food ordering process.

Research highlights the importance of maintaining high-quality websites and mobile applications to meet customer expectations and foster loyalty (Jeon & Jeong, 2017). Effective e-service requires a focus on various dimensions, including security, reliability, and responsiveness (Perbanas Surabaya, 2018). This study addresses the existing gap in literature regarding the satisfaction levels of Sri Lankan undergraduates, aiming to provide insights for stakeholders in the food delivery service sector to enhance service quality and customer satisfaction.

2.2.1. Efficiency

Efficiency is a critical aspect for any service-oriented business, as it significantly impacts both staff performance and customer satisfaction (Zemblytė, 2015). According to Ali et al. (2021), creating an optimal route that meets all operational needs is essential for successful business management. Kalia (2013) defines efficiency as the ease with which customers can navigate a website, locate desired products, and complete payment processes. Generally, customers opt for online ordering services due to their convenience, speed, and accuracy, which are contingent upon the implementation of appropriate technologies and processes.

In the realm of e-commerce, efficiency is paramount, as it is often cited as a primary motivation for online business transactions (Ghosh, 2018). In food delivery services, efficiency must be maintained not only during the order-taking process but also throughout the delivery execution (Thamaraiselvan et al., 2019; Uzir et al., 2021). Belanche Gracia et al. (2015) emphasize that efficiency encompasses how quickly and easily a website can be accessed and utilized. Implementing efficient online food delivery services can enhance market growth and operational efficiency (Sjahroeddin, 2020). The practice of bundling deliveries—where a single delivery personnel carries multiple ordered packages in one trip—can further improve delivery efficiency and mitigate the effects of unforeseen supply and demand fluctuations (Zhu et al., 2020). Regular assessments of service quality aspects, including efficiency and assurance, are necessary to identify areas for improvement.

Hypothesis 1: There is a significant impact of efficiency dimension of food delivery service on customer satisfaction.

2.2.2. Fulfillment

Fulfillment is a key criterion for evaluating the quality of online services, as it encompasses the ability to meet service commitments and accurately process orders, which directly influences customer satisfaction (Suhartanto et al., 2019). Uzir et al. (2021) define fulfillment as the capacity to provide services as requested by customers. Ensuring timely, undamaged delivery and addressing any issues that arise during the fulfillment process are critical components of high-quality customer service (Zeithaml et al., 2012).

Sukasame (2014) further elaborates that fulfillment includes the accuracy of order processing and prompt delivery. Reliability in e-service transactions is evident from the point of order placement to the final delivery (Zeithaml et al., 2012). The quality of fulfillment can be assessed based on the condition of the delivered goods and the delivery wait time, with well-packaged, undamaged products being essential to customer satisfaction (Yen, 2022). Additionally, effective fulfillment is supported by maintaining functional websites and applications that facilitate order placement (Yen, 2022). Trust is a fundamental principle in business relationships, as it is established when customers receive their orders as expected (Uzir et al., 2021).

Hypothesis 2: There is a significant impact of fulfillment dimension of food delivery service on customer satisfaction.

2.2.3. System Availability

The integration of food delivery services through websites and digital applications represents a rapidly growing trend in the e-commerce sector. Consumers now have the flexibility to select from a diverse array of cuisines offered by various food suppliers at any time and from any location (Thamaraiselvan et al., 2019). System availability is crucial in e-service platforms, as it ensures that customers can consistently access online services, thereby enhancing their perception of the businesses involved (Nemati et al., 2012). Zeithaml et al. (2012) define system availability as the technical operation of a site, specifically its accessibility and functionality. Sukasame (2014) further elaborates that system availability encompasses the ability to provide reliable services through websites or applications, facilitating accurate order placement and prompt responses to customer inquiries, as well as ensuring secure online payment and billing capabilities.

A well-functioning website or application is essential for delivering a recognizable standard of customer service in the e-service domain. Initial customer confidence is often established through their experience with the website, and a site that meets system availability criteria can significantly influence customer perceptions and encourage online purchases (Li et al., 2009). Furthermore, the seamless operation of a website, free from technical failures, is vital for maintaining privacy during transactions. According to Chai et al. (2019), the security of customer information is a critical component of e-service quality, as customers are increasingly concerned about the risks associated with sharing personal and financial data online. Therefore, e-services must assure customers of their commitment to system availability and privacy standards through their websites and applications (Puranda et al., 2022).

Hypothesis 3: There is a significant impact of system availability dimension of food delivery service on customer satisfaction.

2.2.4. Responsiveness

Responsiveness, as defined by Reis and Clark (2013), refers to the extent to which transaction parties perceive and act upon each other's needs and desires. This dimension emphasizes the importance of understanding and supporting one another in fulfilling personal goals and needs. In the context of online service provision, the speed with which a provider responds to customer demands is a key determinant of customer service quality (Balinado et al., 2021). Effective customer service transcends merely answering inquiries; it involves recognizing and addressing individual customer needs (Rajendran & Wahab, 2018).

Responsiveness can be evaluated both at the level of the food supplier and the delivery provider, particularly when these functions are fulfilled by separate entities. Tinggi Ilmu Ekonomi Sabang et al. (2018) note that responsiveness in product delivery is assessed by the delivery service provider's willingness to meet customer needs and the promptness with which it addresses inquiries. The timeliness of responses and the accuracy of information provided are critical indicators of responsiveness (Su SAN & Dastane, 2021). Essentially, responsiveness involves delivering the required information or products to customers as swiftly as possible (Kitsikoglou et al., 2014). Therefore, it is advantageous for both food suppliers and delivery service providers to possess the capability and commitment to assist customers effectively, ensuring timely service delivery.

Hypothesis 4: There is a significant impact of responsiveness dimension of food delivery service on customer satisfaction.

2.2.5. Tangibles

Tangibles refer to the visible aspects of service delivery that significantly influence customer perceptions and satisfaction (Suhartanto et al., 2019). Kimes (2011) describes tangibles as encompassing all elements of a customer's visual experience with a service provider, including equipment, staff, facilities, products, and overall appearance (Lee & Lin, 2005). These tangible elements contribute to the lasting impressions customers form about a service provider, as they can evoke memorable associations based on the quality of the equipment used and the appearance of the personnel (Balinado et al., 2021).

Physical evidence of service is categorized into several general types, such as physical facilities, personnel appearance, instruments or equipment utilized, and physical representations of the service (Kumar Panda, 2014). To optimize resource utilization, management must understand customer expectations regarding these tangible aspects, as evidence suggests that appearance significantly affects customer satisfaction (Barber & Scarcelli, 2010). In the food service context, factors such as cleanliness and the appearance of employees and delivery equipment are particularly important (Barber & Scarcelli, 2010).

While e-services inherently possess more intangible qualities, maintaining a focus on tangible aspects can enhance overall customer satisfaction (Fakfare, 2021). Santos (2012) posits that customer expectations are shaped by their interactions with tangible elements, which inform their inferences about the service quality. In delivery transactions, both the appearance of service personnel and the functionality of equipment, such as point-of-sale terminals, are critical for ensuring accurate and stress-free customer experiences during payment (Duman, 2015; Roux & de Jager, 2012). Overall, tangibles serve as visible indicators of service excellence, playing a crucial role in the service product, even though they do not constitute the complete end product themselves (Santos, 2012). Their effective management is essential for providing high-quality service and fostering positive customer experiences.

Hypothesis 5: There is a significant impact of tangible dimension of food delivery service on customer satisfaction.

2.3. Customer Satisfaction

Customer satisfaction is defined as the emotional state experienced by individuals whose needs have been met (Gajewska et al., 2020). It assesses the extent to which customers are pleased with a company's products, services, and overall functionality (Libo-On, 2021). A pivotal factor influencing repeat purchasing behavior, customer satisfaction is fundamentally determined by the discrepancy between customer expectations and the actual service received (Demyana Nathan, 2014; Rajendran & Wahab, 2018). In the context of food delivery services, customer satisfaction is influenced by various aspects, including food taste, pricing, packaging, and delivery convenience (Cha et al., 2021).

The fulfillment of customer requirements is affected by multiple criteria that impact service delivery (YuSheng & Ibrahim, 2019). A sustainable relationship between e-customers and e-businesses hinges on the quality of services provided throughout the transaction process, ultimately leading to customer satisfaction (Miao et al., 2021). Remenyi (2007) outlines that e-service transactions consist of three main stages: pre-transaction, transaction, and post-transaction. Customer satisfaction is achieved when all stages meet the necessary requirements. During the pre-transaction stage, customers seek information about e-service offerings, including prices, service provider reputation, payment options, and delivery times. The quality of information and service efficiency at this stage significantly influences customer satisfaction (Remenyi, 2007). The transaction stage involves negotiating terms and completing the transaction, where factors such as system access, efficiency, and delivery time are critical for perceived service quality (Yousif, 2015). The delivery stage is crucial for customer satisfaction, as delays can lead to negative experiences (Rajamohan Parthasarathy et al., 2021).

Delivery service providers play a vital role in enhancing customer satisfaction by ensuring high-quality services (Rivera, 2019). Food delivery can be executed by the food supplier or by separate delivery services (Chai et al., 2019). Understanding customer expectations is essential for businesses to provide exceptional service, as effective customer service leads to higher satisfaction levels (Gajewska et al., 2020).

It is important to differentiate between service quality and customer satisfaction; while service quality is a contributing factor, customer satisfaction is the outcome (Sjahroeddin, 2020). Research indicates that customer satisfaction significantly influences repurchase intentions, with satisfied customers likely to engage in positive word-of-mouth, thereby attracting new customers and fostering long-term business success (Libo-On, 2021). Measuring customer satisfaction is crucial for organizations, as it reflects their operational effectiveness and the degree of achievement in meeting customer needs (Ok et al., 2018). Overall, the quality of customer service is a critical determinant of customer satisfaction in e-service transactions.

2.4. Food Delivery Service Provider

In a typical online food delivery system, third-party delivery companies are contracted by restaurants to distribute their goods and services through digital platforms that facilitate online sales, communication, and coordination among various stakeholders (Jiang et al., 2021). Delivery personnel face numerous challenges, such as navigating traffic, using stairs and elevators, knocking on doors, and obtaining customer signatures, which can be time-consuming and physically demanding. Delivery delays exceeding the standard one-hour window, regardless of road or weather conditions, can negatively impact customer satisfaction (Zulkarnain Kedah et al., 2015).

Most delivery service providers must collect and distribute a large number of parcels daily (Chen et al., 2018). As a delivery personnel, one must be prepared to act as an accurate and committed member of the delivery team to ensure that items are properly packaged, securely delivered to the correct customer, and the job tasks are completed on time. To provide successful delivery services, personnel should be courteous, dedicated to providing a superior customer experience, and enthusiastic about delivering orders accurately, working safely, and making customers happy.

Online food delivery services are rapidly expanding into new markets and transforming consumer eating habits. As an intermediary between customers and restaurants, online food delivery service providers assist restaurants by managing distribution logistics (Rivera, 2019). The current lifestyle, with both parents working, makes it challenging for households to cook regular meals. Dining out is also not feasible due to limited time and hectic work schedules. In such situations, online food ordering satisfies the needs of busy urban residents by delivering food within a short period (Zulkarnain Kedah et al., 2015). Food delivery services were a blessing during lockdown periods, bringing food to people's doorsteps when they were confined to their homes.

While food delivery services are considered a savior, it is crucial to note that the delivery provider is the party responsible for fulfilling customers' basic need for food accurately by maintaining the link between the restaurant/food supplier and the customer. When acting as an intermediary in an online order fulfillment transaction, delivery time and safe delivery adhering to standards are the most crucial factors impacting customer satisfaction. Functional advantages, such as anticipated performance and perceived product and service quality, are essential (Hwang & Kim, 2021). Having a high-quality delivery provider benefits restaurants by performing the delivery task as expected, leading to positive customer growth and enabling customers to perceive both good quality food and accurate service.

Food delivery operations can be carried out by the food supplier or a third-party delivery service provider. Delivery becomes particularly important in online retailing, where there is a separation between order placement and merchandise delivery (Zulkarnain Kedah et al., 2015). This is where the food supplier loses control over maintaining delivery service standards. The food supplier should carefully select the delivery provider, as the delivery provider's quality impacts the food supplier's image, even though it is not under the food supplier's control. Simultaneously, it is the delivery provider's responsibility to maintain delivery standards to ensure customers are satisfied with their online food ordering experience.

In the e-service platform, customer happiness and satisfaction heavily depend on delivery time, which is under the control of the delivery service provider. Customers' experiences and satisfaction with online food delivery are influenced by various factors, including food availability, customer ratings, payment options, and human interactions. Order fulfillment variables, particularly on-time delivery, significantly impact overall customer evaluations and satisfaction (Roy Dholakia & Zhao, 2010). Food delivery service providers are now considered a crucial party in successful online food ordering transactions.

3. Methodology

3.1. Research Design

In the context of e-service transactions, customer service and the delivery service providers significantly influence customer satisfaction in the food delivery industry. The rising usage of e-service platforms, particularly among the younger generation in Sri Lanka, indicates a shift towards developing e-commerce shopping habits. This research adopts a deductive approach, utilizing a set of developed hypotheses related to five service quality factors impacting customer satisfaction. The study will be conducted as a cross-sectional study, collecting data at a single point in time.

This study employs a quantitative approach to assess the impact of E-S-QUAL factors on customer satisfaction in food delivery services. Data collection was facilitated through a structured questionnaire, divided into two sections: demographic information (age, gender, education level, and monthly income) and questions pertaining to the E-S-QUAL dimensions, measured using a 5-point Likert scale (ranging from "Very Satisfied" to "Very Dissatisfied"). A screening question was included to ensure that only respondents who had utilized online food delivery services were included in the study.

This study focuses on undergraduates in Sri Lanka as the research population.

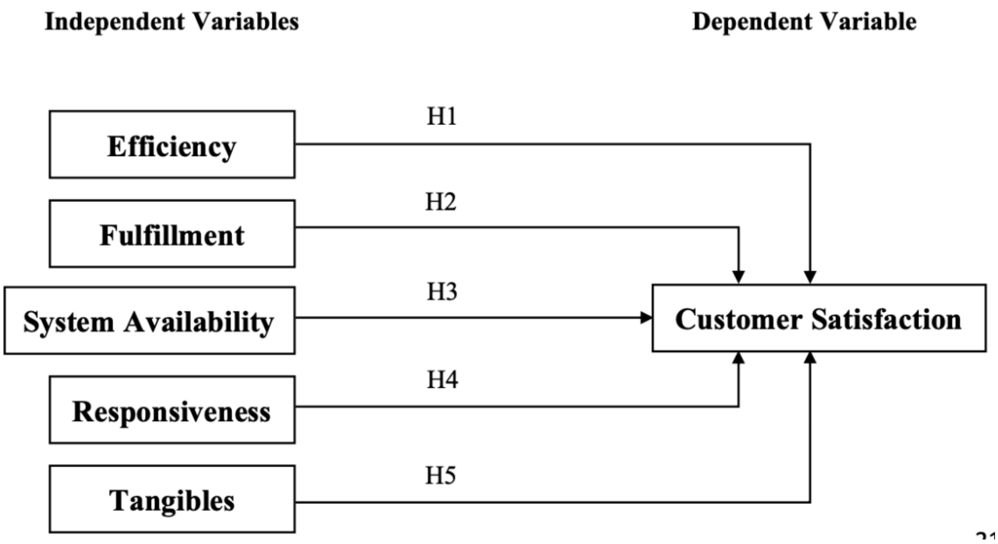
A cluster sampling method was employed, targeting undergraduates from various provinces, with a particular emphasis on the Western province due to its higher engagement with food delivery services and greater proficiency in using electronic devices and the internet. The sample size was limited to 205 respondents, reflecting the accessibility and interest of the younger generation in this region

3.2. Data Collection and Analysis Method

The data for this research was collected through an online survey using a structured questionnaire designed to gather accurate information from the targeted sample. The questionnaire utilized a 5-point Likert scale to facilitate responses. Utilizing an explanatory cross-sectional design, the study collected primary data gathered through an online questionnaire distributed to 205 respondents via Cluster Sampling.

This study employed a quantitative approach to assess the impact of E-S-QUAL dimensions on customer satisfaction among university undergraduates. The IBM SPSS statistical software package was utilized to check data validity and reliability and examine relationships. Correlation analysis and regression analysis were used to identify relationships.

3.3. Conceptual Framework



4. Data Analysis and Findings

4.1. Reliability Analysis

Cronbach's alpha is the most widely utilized metric for measuring internal consistency (Heale & Twycross, 2015). This study employs Cronbach's alpha test to check the reliability of the data gathered for each variable. An acceptable reliability score is typically indicated by a Cronbach's alpha value greater than 0.7, suggesting that the items in the scale are sufficiently correlated to warrant their use as a composite measure.

Table 1: Summary of the Reliability Analysis

The Variable	Cronbach's Alpha	Reliability	Conclusion
Efficiency	0.822	0.822 > 0.7	Reliable
Fulfillment	0.893	0.893 > 0.7	Reliable
System Availability	0.821	0.821 > 0.7	Reliable
Responsiveness	0.850	0.850 > 0.7	Reliable
Tangibles	0.889	0.889 > 0.7	Reliable
Customer Satisfaction	0.892	0.892 > 0.7	Reliable

Table 1 presents a summary of the reliability analysis conducted for various variables related to the study, including Efficiency, Fulfillment, System Availability, Responsiveness, Tangibles, and Customer Satisfaction. The results indicate that all variables achieved Cronbach's alpha values exceeding the threshold of 0.7, confirming their reliability. Notably, Fulfillment emerged as the most reliable variable with a Cronbach's alpha of 0.893, while System Availability, with a value of 0.821, was identified as the least consistent variable within the study. In conclusion, the reliability analysis demonstrates that all variables associated with this study exhibit consistent and stable results, thereby reinforcing the validity of the measures employed in assessing customer satisfaction in the context of food delivery services.

4.2. Correlation Analysis

Correlation analysis is a statistical method employed to assess the relationship or association between two or more quantitative variables (Gogtay & Thatte, 2017). In this study, the Pearson correlation matrix was employed to interpret the relationships between variables.

Table 2: Summary of Correlation Analysis

Dependent Variable	Independent Variable	Pearson Correlation	Significance
Customer Satisfaction	Efficiency	0.611	<0.05
	Fulfillment	0.677	<0.05
	System Availability	0.616	<0.05
	Responsiveness	0.730	<0.05
	Tangibles	0.715	<0.05

The results presented in Table 02 indicate a moderately positive relationship (61.1%) between Efficiency and Customer Satisfaction. This suggests that as Efficiency increases, Customer Satisfaction also tends to increase. Furthermore, the significance value of less than 0.05 confirms a statistically significant relationship between these two variables. And there is a moderately positive relationship (67.7%) between Fulfillment and Customer Satisfaction. This indicates that improvements in Fulfillment are associated with increased Customer Satisfaction, with a significance value below 0.05 confirming the relationship's statistical significance. Further, the results reveal a moderately positive relationship (61.6%) between System Availability and Customer Satisfaction, indicating that enhanced System Availability correlates with increased Customer Satisfaction. The significance value of less than 0.05 further supports the existence of a significant relationship. And there is a strongly positive relationship (73.0%) between Responsiveness and Customer Satisfaction. This suggests that as Responsiveness improves, Customer Satisfaction also increases, with a significance value below 0.05 indicating a significant relationship. Moreover, there is a strongly positive relationship (71.5%) between Tangibles and Customer Satisfaction. This indicates that improvements in Tangibles are associated with increased Customer Satisfaction, with a significance value below 0.05 confirming the significance of this relationship.

In summary, the correlation analysis reveals that all examined variables—Efficiency, Fulfillment, System Availability, Responsiveness, and Tangibles—exhibit positive relationships with Customer Satisfaction, indicating that enhancements in these areas are likely to lead to increased satisfaction among customers in the food delivery service context.

4.3. Regression Analysis

Multiple linear regression is employed to interpret the relationships between independent variables and the dependent variable. The summary of the regression analysis is presented in the table below.

Table 3: Model Summary

R Square	Adjusted R Square	Model Significance
0.646	0.635	0.000

At the outset of this analysis, the ANOVA table indicates a model significance (P value) of 0.000, which is less than the alpha level of 0.05. Consequently, we reject the null hypothesis (H0), providing sufficient evidence to affirm that the regression model is statistically significant. In this study, the R^2 value is 0.646, indicating that approximately 64.6% of the variance in customer satisfaction can be explained by the independent variables included in the model. This suggests that the model is a good fit for the data. The Adjusted R^2 value, which accounts for the number of predictors in the model, is 0.635. This implies that adding additional predictors may not significantly enhance the model's predictive power. Although the Adjusted R^2 value exceeds the threshold of 0.5, indicating an acceptable model fit, it also suggests that there is room for improvement in future research endeavors.

Table 4: Regression Table

Variable	Coefficient	P - Value
Efficiency	- 0.036	0.679
Fulfillment	0.491	0.000
System Availability	0.056	0.446
Responsiveness	0.640	0.000
Tangibles	0.524	0.000

The results displayed in Table 04 indicate that the significance (P-value) for Efficiency is greater than 0.05 (0.679 > 0.05), leading to the conclusion that the null hypothesis (H0) is not rejected. There is no significant relationship between efficiency and customer satisfaction. Similarly, for System Availability, the P-value is greater than 0.05 (0.446 > 0.05), leading to the conclusion that the null hypothesis is not rejected. There is no significant relationship between system availability and customer satisfaction. Conversely, the significance (P-value) for Fulfillment is less than 0.05 (0.000 < 0.05), resulting in the rejection of the null hypothesis and acceptance of the alternative hypothesis (H1). The beta coefficient for Fulfillment is 0.491, indicating a 49.1% positive impact on customer satisfaction. For Responsiveness, the P-value is less than 0.05 (0.000 < 0.05), allowing for the rejection of the null hypothesis and acceptance of the alternative hypothesis. The beta coefficient is 0.640, indicating a 64.0% positive impact on customer satisfaction.Lastly, the significance (P-value) for Tangibles is also less than 0.05 (0.000 < 0.05), resulting in the rejection of the null hypothesis and acceptance of the alternative hypothesis. The beta coefficient for Tangibles is 0.524, suggesting a 52.4% positive impact on customer satisfaction.

5. Discussions and Conclusions

The findings of this study provide valuable insights into the relationships between various service quality dimensions and customer satisfaction within the online food delivery industry. The reliability analysis confirmed that all variables, including Efficiency, Fulfillment, System Availability, Responsiveness, and Tangibles, exhibit strong internal consistency, as evidenced by Cronbach's alpha values exceeding the acceptable threshold of 0.7 (Heale & Twycross, 2015). Notably, Fulfillment emerged as the most reliable variable, with a Cronbach's alpha of 0.893, reinforcing its significance in evaluating customer satisfaction.

Correlation analysis revealed positive relationships between all examined variables and customer satisfaction. Specifically, Responsiveness demonstrated the strongest correlation (0.730), indicating that improvements in responsiveness are likely to lead to higher customer satisfaction levels. This finding aligns with existing literature that emphasizes the importance of timely and effective communication in enhancing customer experiences (Reis & Clark, 2013; Balinado et al., 2021). Fulfillment also exhibited a significant positive correlation (0.677) with customer satisfaction, highlighting the critical role of meeting service commitments and accurately processing orders in influencing customer perceptions (Suhartanto et al., 2019).

The multiple linear regression analysis further elucidated these relationships. While Efficiency and System Availability did not show statistically significant impacts on customer satisfaction, Fulfillment, Responsiveness, and Tangibles were found to have significant positive effects. The beta coefficients indicated that Fulfillment has a 49.1% impact, Responsiveness a 64.0% impact, and Tangibles a 52.4% impact on customer satisfaction. These results suggest that enhancing service quality in these areas is essential for improving customer satisfaction within the food delivery service context.

The lack of significant relationships for Efficiency and System Availability may suggest that while these factors are important, they do not independently drive customer satisfaction. Instead, they may serve as foundational elements that support the more impactful dimensions of Fulfillment, Responsiveness, and Tangibles. This finding is consistent with previous research that highlights the complexity of customer satisfaction, where multiple interrelated factors contribute to overall perceptions (Ghosh, 2018; Zemblytė, 2015).

In conclusion, this study underscores the importance of focusing on specific service quality dimensions to enhance customer satisfaction in the online food delivery industry. The findings suggest that businesses should prioritize improving Fulfillment, Responsiveness, and Tangibles to foster positive customer experiences. Future research could explore additional variables or contextual factors that may further influence customer satisfaction, as well as investigate the long-term effects of service quality improvements on customer loyalty and retention. By addressing these areas, food delivery service providers can better align their offerings with customer expectations, ultimately leading to enhanced satisfaction and business success.

6. Recommendations

Based on the findings of this study, which indicate that Fulfillment, Responsiveness, and Tangibles significantly impact customer satisfaction in the online food delivery industry, several recommendations can be made for future development. The analysis revealed notable concerns among customers regarding specific criteria related to these variables. For instance, respondents expressed dissatisfaction with statements such as “Online food delivery sites provide me with required information,” “Food delivery company replies to requests,” and “Delivery personnel use relevant modern-looking tools and machines.”

To address these concerns, it is imperative for online food delivery service providers to invest in technological advancements and improvements in service delivery. First and foremost, businesses should ensure that their websites and applications are regularly updated with accurate and comprehensive information. This includes providing clear details about menu items, pricing, delivery times, and any other relevant information that can enhance the customer experience (Kitsikoglou et al., 2014). Additionally, establishing a robust customer service framework that enables timely responses to customer inquiries and concerns is essential. This can be achieved through multiple channels, including live chat on websites, dedicated customer service hotlines, and responsive social media engagement.

Furthermore, the study highlighted the need for delivery personnel to utilize modern tools and technology. By equipping delivery staff with the latest technology, such as GPS navigation systems and mobile payment solutions, companies can improve the efficiency and reliability of their service. This not only enhances the delivery experience but also aligns with the expectations of a tech-savvy customer base that values convenience and efficiency (Zemblytė, 2015).

The findings of this study also serve as a foundational resource for managers and owners of online food delivery services to enhance their service quality. Recognizing that service quality significantly influences customer satisfaction, it is crucial for providers to identify and address the factors affecting service quality throughout the entire customer journey—from order placement to final delivery. This holistic approach will not only improve customer satisfaction but also foster customer loyalty and retention.

Lastly, these recommendations are applicable not only to established businesses but also to new entrants and startups in the online food delivery sector. By adhering to these guidelines, new businesses can establish a strong foundation and competitive advantage in the industry. The presence of competition drives innovation and improvement, ultimately benefiting consumers through enhanced service quality and customer satisfaction.

In conclusion, by focusing on the key areas of Fulfillment, Responsiveness, and Tangibles, online food delivery service providers can significantly enhance customer satisfaction, attract new customers, and retain existing ones. Implementing these recommendations will not only improve service quality but also contribute to the overall growth and sustainability of the online food delivery industry.

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How Lean Management Drives Operational Excellence in Sri Lanka's Apparel Sector: A Pathway to Competitive Advantage

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Abstract

This study investigates the correlation between lean management practices and operational performance in Sri Lanka's apparel industry, focusing on the significance of continuous improvement, waste elimination, leadership support, and supplier involvement in fostering operational efficiency. Motivated by the severe impacts of an economic downturn on the garment industry, this research underscores the urgent need for effective management strategies to sustain competitiveness. The study adopts a quantitative approach, collecting data through structured questionnaires from a sample of 275 managerial-level employees across 10 major apparel manufacturing companies in Sri Lanka. The sample was selected using purposive sampling, ensuring that participants have direct involvement with lean management practices. The analysis reveals that continuous improvement, leadership support, and supplier involvement significantly enhance operational performance, while waste elimination shows no significant impact in this context. These findings suggest that achieving the ambitious export targets set by Sri Lanka's apparel industry requires a strategic shift towards operational efficiency and quality enhancement. The study highlights the effectiveness of lean practices in improving operational outcomes, while also indicating that traditional strategies such as waste elimination may need re-evaluation. The implications of this research are critical for industry leaders aiming to navigate the challenges of global competition and economic pressures, as it suggests a strategic focus on continuous improvement, robust leadership, and integrated supplier involvement to drive efficiency and growth. These results not only contribute to the academic understanding of lean management but also offer practical insights for enhancing operational performance in a key sector of Sri Lanka's economy.

Keywords: *Apparel industry, Continuous improvement, Leadership support, Lean management, Operational performance, Supplier involvement, Waste elimination*

1. Introduction

The apparel sector in Sri Lanka plays a pivotal role in the nation's economy, contributing significantly to both employment and export revenues. As part of its strategic objectives, the industry has set an ambitious goal of achieving an export value of $8 billion by the year 2025. This target underscores a shift in focus from merely reducing costs to prioritizing quality and the production of specialized items, which are critical for maintaining a competitive edge in the global market. The process of delivering high-quality finished products to clients is inherently complex, encompassing various stages such as design, product development, raw material acquisition, production, and distribution. These stages are highly interrelated, requiring seamless coordination to achieve successful outcomes. In an environment of intensified competition, achieving operational efficiency has become not only a goal but a necessity, as enterprises that fail to operate efficiently risk facing the threat of closure. Operational performance, therefore, is a key determinant of organizational success, hinging on several critical factors such as cost, quality, delivery, and adaptability.

The lean management approach, rooted in the renowned Toyota Production System, offers a systematic methodology aimed at eliminating waste, optimizing resource use, and reducing costs. Lean management focuses on addressing eight distinct categories of waste within the production process: transportation, inventory, motion, over-processing, defects, overproduction, waiting, and the underutilization of talent (Liker, 2004). Originally pioneered by Toyota in Japan, the lean management concept has gained widespread global traction and is now extensively implemented across various manufacturing industries (Womack, Jones, & Roos, 1990). Its principles of efficiency and waste reduction are particularly relevant to the apparel industry, where margins are often tight, and operational efficiency can significantly impact profitability.

In Sri Lanka, the clothing sector has been proactive in adopting lean management practices, with approximately 714 companies integrating these principles into their operations (Export Development Board, 2023). This widespread adoption is driven by the industry's need to enhance operational efficiency, improve product quality, and bolster competitiveness in an increasingly challenging global marketplace (Jayalath & Gunasekara, 2022). Research consistently demonstrates that lean management can lead to substantial improvements in production efficiency and product quality, thereby supporting the apparel industry's objective of reaching higher export values (Shah & Ward, 2003). Furthermore, the implementation of lean principles enables Sri Lankan apparel manufacturers to meet stringent international standards and exceed customer expectations, contributing to long-term sustainability and growth (Hodge, Goforth, & Sainsbury, 2017).

Beyond enhancing operational performance, lean management serves as a strategic tool for achieving competitive advantage by fostering a culture of continuous improvement and innovation. The lean philosophy emphasizes the importance of employee involvement, leveraging their insights to streamline processes, which can result in significant productivity gains and cost savings (Bhasin, 2012). As the Sri Lankan apparel industry continues to navigate the challenges posed by global competition and economic pressures, the strategic application of lean management practices will be crucial in achieving not only operational excellence but also securing a sustainable competitive edge in the market. This approach not only aligns with the industry's economic goals but also supports broader objectives such as improving working conditions, enhancing product quality, and ensuring long-term sustainability.

In conclusion, the apparel industry in Sri Lanka stands at a critical juncture, where the adoption of lean management practices could define its future trajectory. By focusing on operational efficiency, quality enhancement, and continuous innovation, the industry can not only meet its ambitious export targets but also establish itself as a global leader in apparel manufacturing.

2. Problem Statement

The prevailing economic crisis in Sri Lanka, exacerbated by a substantial increase in the inflation rate to 48.19%, has severely impacted the garment industry. In January 2023, garment exports suffered a notable loss of $388.9 million, reflecting an 18.8% decrease compared to the previous year and an 8.7% drop from December 2022 (Central Bank of Sri Lanka, 2023). This sharp decline underscores the urgent need for improved operational performance to sustain competitiveness in the garment industry. The economic downturn has intensified the challenges faced by Sri Lankan apparel manufacturers, making the adoption of effective management strategies critical for survival and growth.

The garment industry, a significant contributor to Sri Lanka's economy, has traditionally relied on cost-reduction measures to maintain its competitive edge. However, the current economic environment demands a shift in focus towards enhancing operational efficiency and quality. According to the Joint Apparel Association Forum (JAAF), the Sri Lankan apparel sector aims to achieve an export value of $8 billion by 2025, emphasizing the importance of quality and specialized items over mere cost reduction (JAAF, 2022). This goal highlights the necessity for innovative management approaches that can drive operational excellence and ensure long-term sustainability.

The study by Klein et al. (2020) underscores the importance of waste reduction and continuous improvement as catalysts for process transformation, principles that are integral to lean management. Lean management, which originated from the Toyota Production System, focuses on eliminating waste, optimizing resources, and reducing costs. It addresses eight categories of waste: transportation, inventory, motion, additional processing, defects, overproduction, waiting, and untapped talent (Liker, 2004). Despite the widespread adoption of lean practices globally, many Sri Lankan apparel manufacturers struggle to fully leverage the benefits of these strategies.

Given the significant challenges faced by the apparel industry, this research aims to investigate the correlation between lean management practices and operational performance in Sri Lanka's apparel manufacturing sector. This study aims to provide practical insights on integrating lean practices with Sustainable Development Goals (SDGs) 8 and 12, which emphasize decent work and economic growth, and responsible consumption and production, respectively (United Nations, 2015). By improving operational efficiency and minimizing waste, lean management not only supports economic growth through enhanced productivity and competitiveness but also advances sustainable industrial practices. This dual focus allows businesses to expand sustainably while reducing their environmental impact, contributing to wider economic and environmental goals. The research will address existing gaps and propose actionable strategies to optimize lean practices, thereby enhancing operational performance and promoting sustainable development within the Sri Lankan apparel industry.

3. Literature Review

3.1 Theoretical Underpinning

Lean management traces its origins back to the Toyota Production System introduced in the 1970s, which emphasized efficiency and waste reduction (Gunarathne et al., 2017). Over the decades, lean management has been characterized in various ways, focusing on the relentless pursuit of waste removal and optimizing resources to deliver value to the client (Bhamu & Sangwan, 2014; Al-Shawi & Manhal, 2020). Lean management identifies eight types of waste: defects, overproduction, waiting, underused talent, transportation, inventory, motion, and overprocessing (Pierce & Rich, 2015). This methodology emphasizes value, value flow, process flow, pull production, and perfection, advocating for a systematic approach to achieving high performance and continuous value addition (Liker & Morgan, 2006).

Contemporary studies have reaffirmed the relevance of lean management across various industries, highlighting its ability to provide a competitive edge and improve operational performance (Al-Shawi & Manhal, 2020). Lean management's holistic approach not only addresses waste but also integrates continuous improvement, leadership support, and supplier involvement as critical components (Gustafsson & Frost, 2018). (Gustafsson & Frost, 2018).

3.2 Continuous Improvement and Operational Performance

Continuous improvement, a core principle of lean management, involves the ongoing effort to enhance products, services, or processes by making incremental improvements over time (Klein et al., 2022a). This approach is fundamental to lean management, aiming to achieve more with fewer resources and align organizational activities with strategic objectives (Gupta et al., 2016). It encompasses both internal and external processes, focusing on optimizing organizational activities, redrawing flow, reducing waste, and generating lower costs (Klein et al., 2022b).

Studies have shown that continuous improvement practices significantly impact operational performance by fostering a culture of regular evaluation and enhancement (Goh, Goh, & Ho, 2021). Organizations that embrace continuous improvement tend to exhibit higher efficiency, better quality control, and greater adaptability to market changes (Demir, 2020). Moreover, recent research by Aij and Teunissen (2021) highlights the importance of leadership support in sustaining continuous improvement initiatives, ensuring long-term operational excellence. Continuous improvement not only improves operational metrics but also contributes to employee engagement and satisfaction by promoting a culture of ongoing learning and development (Bhattacharjee & Gopalakrishnan, 2021). (Demir, 2020).

Hypothesis 1 (H1): There is a relationship between continuous improvement and operational performance in the apparel industry in Sri Lanka.

3.3 Waste Elimination and Operational Performance

Waste management in lean practices involves identifying and removing unnecessary steps in processes that do not add value (Klein et al., 2022a). Among lean practices, the elimination of waste is a fundamental aspect, seen as a continuous pursuit in lean management philosophy (Wickramasinghe & Wickramasinghe, 2017). Tools such as value stream mapping are employed to identify inefficiencies and streamline processes (Abbasian-Hosseini et al., 2012).

Research indicates that effective waste elimination leads to significant improvements in operational performance, including reduced costs, enhanced quality, and faster delivery times (Tiso et al., 2021). By focusing on waste elimination, organizations can create more efficient workflows and reduce the likelihood of defects and delays (Alves & Alves, 2015). Contemporary studies by Wilson and Roy (2018) emphasize the role of technology in enhancing waste elimination efforts, suggesting that digital tools can further streamline processes and improve accuracy in waste identification. Furthermore, Bhamu and Sangwan (2020) argue that integrating waste elimination practices with sustainability initiatives can enhance both operational efficiency and environmental performance, contributing to long-term business success. (Alves & Alves, 2015).

Hypothesis 2 (H2): There is a relationship between waste elimination and operational performance in the apparel industry in Sri Lanka.

3.4 Supplier Involvement and Operational Performance

Supplier involvement is critical in lean management as it ensures that all parts of the supply chain are optimized for efficiency and quality (Gunasekaran et al., 2015). Effective supplier involvement includes developing partnerships, sharing information, and collaborating on continuous improvement initiatives (Lamming et al., 2001). Studies have shown that strong supplier relationships contribute to improved operational performance by enhancing the quality of inputs, ensuring timely delivery, and fostering innovation (Dabhilkar et al., 2016). When suppliers are integrated into the lean management framework, they can contribute to the overall efficiency and competitiveness of the organization (Vanichchinchai, 2019).

Recent research underscores the strategic importance of supplier involvement in achieving operational excellence. For instance, Hald and Ellegaard (2020) highlight that close collaboration with suppliers leads to enhanced operational flexibility and responsiveness. They argue that such collaborations are essential for managing supply chain disruptions and maintaining continuous improvement efforts. Furthermore, Flynn, Huo, and Zhao (2019) emphasize that supplier integration in lean practices results in better alignment of processes and goals, thereby reducing waste and improving quality.

Contemporary studies also explore the role of digital technologies in enhancing supplier involvement. Choi et al. (2019) discuss how digital platforms facilitate real-time information sharing and collaborative planning between manufacturers and suppliers. This digital integration supports lean management by enabling more accurate demand forecasting and inventory management, ultimately leading to improved operational performance.

Hypothesis 3 (H3): There is a relationship between supplier involvement and operational performance in the apparel industry in Sri Lanka.

3.5 Leadership Support and Operational Performance

Leadership support is essential in lean management as it provides the necessary direction, resources, and motivation for continuous improvement initiatives (Klein et al., 2022a). Leaders play a crucial role in fostering a culture that supports lean principles, facilitating communication, and ensuring that lean strategies are aligned with organizational goals (Ashtiani et al., 2017). Leadership support involves developing and implementing structures and processes that anticipate and respond to the challenges of lean initiatives that cross internal boundaries, transforming commitments to change into actual change, and supporting and sustaining new behaviors and practices.

Research indicates that leadership support significantly impacts operational performance by enabling organizations to effectively implement lean practices, sustain improvements, and achieve long-term success (Aij & Teunissen, 2017). Leaders who are committed to lean management can drive transformational change and create an environment conducive to continuous improvement (Ravi &

Subramanian, 2016). This support is not limited to top management but extends to all levels of leadership, ensuring that lean principles are integrated throughout the organization.

Contemporary literature highlights the evolving role of leadership in lean management. Marodin and Saurin (2021) suggest that transformational leadership, which inspires and motivates employees to exceed expectations, is particularly effective in implementing lean practices. They found that transformational leaders are more successful in fostering a culture of continuous improvement and sustaining lean initiatives over time.

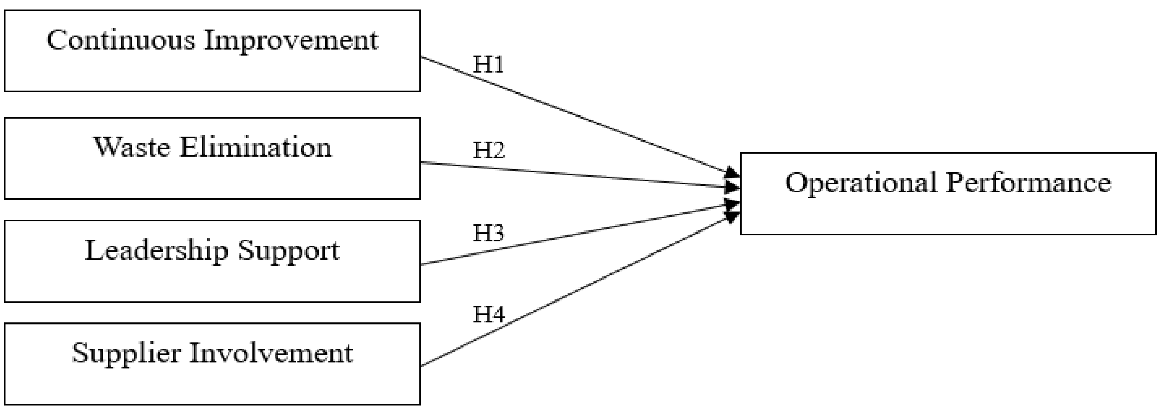
Moreover, a study by Jadhav, Mantha, and Rane (2019) points out that leadership support is critical in overcoming resistance to change, a common barrier in lean implementation. Effective leaders can facilitate change management by communicating the benefits of lean practices and involving employees in decision-making processes, thus enhancing buy-in and commitment to lean initiatives.

Recent developments also emphasize the importance of leadership training and development in lean management. According to Hu et al. (2020), providing leaders with specific training on lean principles and tools enhances their ability to support and sustain lean transformations. This training equips leaders with the skills needed to identify and address barriers to lean implementation, further improving operational performance.

Hypothesis 4 (H4): There is a relationship between leadership support and operational performance in the apparel industry in Sri Lanka. (Lamming et al., 2001).

4. Conceptual Framework

Figure 1: Conceptual Framework



Source: Author generated

4.1 Continuous Improvement

Continuous improvement is defined as an ongoing effort to enhance products, services, or processes through incremental and breakthrough improvements (Klein et al., 2022a). It involves systematically refining and optimizing processes to achieve higher levels of efficiency and effectiveness (Demir, 2020). Gupta et al. (2016) describe it as the core of management philosophy aimed at doing more with fewer resources by linking continuous improvement activities to strategic objectives.

4.2 Waste Elimination

Waste elimination in lean management refers to the systematic identification and removal of non-value-adding activities from processes to enhance efficiency (Wickramasinghe & Wickramasinghe, 2017). Abbasian-Hosseini et al. (2012) emphasize that waste elimination is a continuous pursuit in lean philosophy, utilizing tools such as value stream mapping to identify and eradicate inefficiencies.

4.3 Supplier Involvement

Supplier involvement entails the active participation of suppliers in an organization's processes to enhance quality, reduce costs, and improve overall performance (Gunasekaran et al., 2015). Dabhilkar et al. (2016) highlight that supplier involvement in product development can significantly improve alignment and coordination, resulting in better operational performance.

4.4 Leadership Support

Leadership support in lean management is crucial for providing direction, resources, and motivation necessary for successful implementation of lean practices (Klein et al., 2022a). Aij and Teunissen (2017) argue that effective leadership is essential for fostering a culture of continuous improvement and overcoming resistance to change.

4.5 Operational Performance

Operational performance is typically defined as the efficiency and effectiveness of an organization's processes in producing goods and services (Shah & Ward, 2003). It encompasses several dimensions, including cost, quality, delivery, and flexibility (Ravi & Subramanian, 2016). According to Demir (2020), operational performance is a critical determinant of organizational success, reflecting the ability to meet customer requirements and achieve competitive advantage.

5. Methodology

5.1 Research Philosophy

The research philosophy describes the strategy or technique used in the research. This study is based on Positivism philosophy, wherein the researcher maintains a strategic distance from individual bias and is not part of the study (Melnikovas, 2018; Gunarathne et al., 2017).

5.2 Research Approach

The main approach used for theory development in this research is the deductive approach, which focuses on variable testing and hypothesis formulation (Saunders et al., 2019).

5.3 Research Choice

This research utilizes a quantitative method, specifically a mono-method research choice, where data collection was performed using a structured questionnaire with a 5-point Likert scale derived from previous studies related to lean management practices (Bhatta et al., 2017; Klein et al., 2022a; Bashar et al., 2021b).

5.4 Unit of Analysis

The unit of analysis for this research is managerial-level employees in apparel manufacturing companies in Sri Lanka. This is due to the focus on evaluating the impact of lean management practices at the managerial level within these organizations.

5.5 Population and Study Sample

The population for this study comprises apparel manufacturing companies in Sri Lanka that had implemented lean manufacturing practices by 2019, as identified in previous research (Aryarathne & Galahitiyawe, 2020b). This population includes a total of 714 apparel manufacturing plants operating across the country. These companies represent a significant portion of Sri Lanka's textile and garment industry, which is a key driver of the nation's economy.

To ensure the study's findings are robust and representative, the top 10 apparel manufacturing companies were selected for the sample, based on their market capitalization. These companies collectively account for more than 75% of the market share, making them critical players in the industry and ideal for this study (Top Apparel Manufacturing Companies Based on Market Capital in Sri Lanka, n.d.). The selection of these companies ensures that the study captures insights from the most influential firms in the sector, where the implementation of lean practices is likely to have the most significant impact on operational performance.

A total sample size of 275 managerial-level employees was determined, aligning with established methodologies in similar studies within the field (Aryarathne & Galahitiyawe, 2020a). This sample size allows for sufficient statistical power to detect meaningful relationships between lean management practices and operational outcomes. Specifically, data were collected from 28 managerial-level employees from each of the 10 selected manufacturing plants. These employees were chosen because of their direct involvement in the implementation and oversight of lean manufacturing practices, making their insights particularly valuable for understanding the operational impact of these practices.

The study employed purposive sampling, a non-probability sampling method, to select participants. This approach was chosen due to its effectiveness in targeting specific individuals who possess the necessary expertise and experience related to lean management practices. Purposive sampling ensures that the participants included in the study have the requisite knowledge to provide informed responses, thereby enhancing the reliability and relevance of the findings (Aryarathne & Galahitiyawe, 2020a). This method is particularly suitable for this research as it focuses on managerial-level employees who are not only familiar with but also play a critical role in the execution of lean strategies within their organizations.

This sampling strategy, combined with the carefully selected sample size and population, ensures that the study provides a comprehensive and accurate assessment of the impact of lean management practices on operational performance within Sri Lanka's leading apparel manufacturing companies.

5.6 Measurement of Constructs

Respondents were asked to rate the extent of lean management practices implemented in their organization on a 5-point Likert scale (1 = strongly disagree to 5 = strongly agree). The constructs include:

Continuous Improvement- This construct involves encouraging continual improvement, frequently measuring product and process quality, using QC tools, and extensively applying the PDCA (Plan-Do-Check-Act) cycle (Klein et al., 2022a; Gupta et al., 2016).

Waste Management- This construct includes efforts to reduce waste, suggesting waste reduction, identifying waste, and continuously working to eliminate waste (Klein et al., 2022a; Wickramasinghe & Wickramasinghe, 2017).

Leadership Support- This construct assesses the involvement of top executives, their anticipation of change, encouragement of lean-based improvements, allocation of resources, and trust in managers (Klein et al., 2022a; Ashtiani et al., 2017).

Supplier Involvement- In lean management, supplier involvement is crucial as it ensures that all parts of the supply chain are optimized for efficiency and quality (Gunasekaran et al., 2015). Effective supplier involvement includes developing partnerships, sharing information, and collaborating on continuous improvement initiatives (Lamming et al., 2001).

Operational Performance- This construct includes improvements in process efficiency, adherence to product specifications, timely delivery, production flexibility, and speed of launching new products (Klein et al., 2022a; Aij & Teunissen, 2017).

5.7 Data Analysis Strategies

Data collected via questionnaires were analysed using the Statistical Package for Social Sciences (SPSS). Descriptive and inferential analyses were used to describe the aspect of lean management practices on the operational performance of apparel manufacturing plants. Additionally, correlation and regression analyses were employed to analyse the relationship between the independent and dependent variables.

6. Analysis and Findings

6.1 Demographic Analysis

Table 1: Companies

Company name	Frequency	Percent
Brandix	27	11%
Emjay International	18	7%
Hayleys fabric	30	12%
Hela clothing	27	11%
Hydramani	28	11%
Intex South Asia	37	15%
MAS	34	14%
Star garments	19	8%
Yuppy socks	11	4%
Virtue tape industry	20	8%
Total	251	100%
Sample size	275	
Response percentage	91%	

Table 1 presents detailed demographic data concerning the companies involved in the study. The research surveyed a total of 251 managerial-level employees across ten leading apparel manufacturing companies in Sri Lanka. Initially, a sample size of 275 was targeted, resulting in an impressive response rate of 91%. This high response rate reflects the strong engagement and willingness of the managerial staff to contribute to the study, which enhances the reliability and representativeness of the findings.

Notably, the table also highlights that the highest response rates were recorded from Intex South Asia, which accounted for 15% of the total responses, and MAS, contributing 14%. This substantial participation from these two companies underscores their significant role within the industry and suggests a strong commitment to lean management practices among their managerial teams.

The high level of engagement from Intex South Asia and MAS not only enriches the dataset but also provides valuable insights into how leading firms within the Sri Lankan apparel sector are adopting and benefiting from lean management practices.

6.2 Reliability Analysis

Table 2: Reliability

Variables	No of items	Cronbach's Alpha
Continuous improvement	5	0.946
Waste elimination	5	0.949
Leadership support	5	0.949
Supplier involvement	5	0.951
Operational performance	5	0.947

The study demonstrates high reliability across various constructs related to lean management, with Cronbach's Alpha values indicating strong internal consistency for each scale. The continuous improvement scale, essential for maintaining competitive advantage, shows a Cronbach's Alpha of 0.946, reflecting its high reliability (Demir, 2020). Similarly, the waste elimination scale records a Cronbach's Alpha of 0.949, verifying its effectiveness in measuring efforts to reduce non-value-adding activities, a core aspect of lean management (Wickramasinghe & Wickramasinghe, 2017). Leadership support, critical for the successful implementation of lean practices, also presents strong internal consistency with a Cronbach's Alpha of 0.949, emphasizing its role in providing necessary direction and resources (Aij & Teunissen, 2017). The supplier involvement scale, with the highest Cronbach's Alpha of 0.951, underscores the importance of including suppliers in lean initiatives to boost quality and innovation (Gunasekaran et al., 2015). Lastly, the operational performance scale shows a Cronbach's Alpha of 0.947, confirming consistent measurement of critical organizational success factors like cost, quality, delivery, and flexibility (Ravi & Subramanian, 2016). Overall, all constructs surpass the acceptable reliability threshold of 0.7, ensuring the validity of the data collected in the study.

6.3 Correlation Analysis

Table 3: Correlation Analysis

		Mean_CI	Mean_WE	Mean_LI	Mean_SI	Mean_OP
Mean_CI	Pearson Correlation	1	.881**	.864**	.835**	.820**
	Sig. (2-tailed)		.000	.000	.000	.000
	N	251	251	251	251	251
Mean_WE	Pearson Correlation	.881**	1	.912**	.888**	.840**
	Sig. (2-tailed)	.000		.000	.000	.000
	N	251	251	251	251	251
Mean_LI	Pearson Correlation	.864**	.912**	1	.920**	.872**
	Sig. (2-tailed)	.000	.000		.000	.000
	N	251	251	251	251	251
Mean_SI	Pearson Correlation	.835**	.888**	.920**	1	.866**
	Sig. (2-tailed)	.000	.000	.000		.000
	N	251	251	251	251	251
Mean_OP	Pearson Correlation	.820**	.840**	.872**	.866**	1
	Sig. (2-tailed)	.000	.000	.000	.000	
	N	251	251	251	251	251

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

The correlation analysis reveals robust positive relationships between various lean management practices and operational performance within Sri Lanka's apparel industry. Notably, Continuous Improvement (CI) and Operational Performance (OP) exhibit a correlation coefficient of 0.820, which underscores the significant role that continuous improvement practices play in enhancing operational performance. This finding aligns with the literature, which consistently highlights continuous improvement as a critical driver of efficiency and effectiveness in production processes (Demir, 2020).

Similarly, the correlation between Waste Elimination (WE) practices and operational performance is strong, with a coefficient of 0.840. This relationship indicates that the systematic removal of wasteful activities—such as excess inventory, unnecessary motion, and defects—substantially contributes to operational efficiency. Effective waste elimination not only reduces costs but also streamlines processes, leading to faster delivery times and improved product quality (Wickramasinghe & Wickramasinghe, 2017).

Leadership Support (LS) emerges as an even more potent factor, showing the strongest positive correlation with operational performance, marked at 0.872. This highlights the pivotal role that leadership plays in the successful implementation and sustainability of lean practices. Leaders who are committed to lean principles can drive organizational change, foster a culture of continuous improvement, and ensure that resources are allocated effectively to support lean initiatives (Aij & Teunissen, 2017). Leadership support is therefore essential for overcoming resistance to change and embedding lean practices deeply within the organizational fabric.

Additionally, Supplier Involvement (SI) demonstrates a strong correlation with operational performance, with a coefficient of 0.866. This suggests that active engagement with suppliers, through collaborative planning, information sharing, and joint problem-solving, can significantly enhance operational outcomes. When suppliers are integrated into the lean management framework, they contribute to improved quality of inputs, more reliable delivery schedules, and greater innovation, all of which are critical for maintaining a competitive edge in the global apparel market (Gunasekaran et al., 2015).

Overall, these findings underscore the substantial impact that enhancing continuous improvement, waste elimination, leadership support, and supplier involvement can have on operational performance. In the context of Sri Lanka's apparel manufacturing sector, where competition is fierce and operational efficiency is paramount, these lean practices are not just beneficial—they are essential. The correlations observed suggest that a comprehensive approach to lean management, which integrates these key practices, can drive significant improvements in operational outcomes, positioning Sri Lankan apparel manufacturers to better meet both domestic and international market demands.

6.4 Regression Analysis

Table 4: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.893[a]	.797	.794	.41002

Table 5: Anova Table

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	162.702	4	40.675	241.953	.000[b]
	Residual	41.356	246	.168		
	Total	204.058	250			

a. Dependent Variable: Mean_OP

b. Predictors: (Constant), Mean_SI, mean_CI, Mean_WE, Mean_LI

Table 6: Coefficient Analysis

		B	Std. Error	Beta		
1	(Constant)	.380	.122		3.108	.002
	Mean_CI	.184	.062	.189	2.955	.003
	Mean_WE	.057	.077	.060	.736	.463
	Mean_LI	.335	.088	.336	3.805	.000
	Mean_SI	.337	.075	.346	4.482	.000

a. Dependent Variable: Mean_OP

Table 7: Hypotheses Testing Results

Hypothesis	Result
There is a significant relationship between Continuous improvement and operational performance.	Accepted
There is a significant relationship between Waste elimination and operational performance.	Rejected
There is a significant relationship between Leadership support and operational performance.	Accepted
There is a significant relationship between Supplier involvement and operational performance.	Accepted

The model summary (Table 4) indicates an R square value of 0.797, suggesting that 79.7% of the variance in operational performance, the dependent variable, is explained by the four independent variables: Continuous Improvement (CI), Waste Elimination (WE), Leadership Support (LS), and

Supplier Involvement (SI). This high R square value reflects the substantial explanatory power of the model, indicating that these factors collectively account for a significant portion of the variability in operational performance. Furthermore, the Adjusted R square value of 0.794, which adjusts for the number of predictors, reaffirms the model's robustness and reliability in explaining the dependent variable.

The ANOVA results (Table 5) provide further validation of the model's strength, with an F-value of 241.953, which is statistically significant at the $p < 0.001$ level. This highly significant F-value demonstrates that the regression model as a whole is statistically significant, meaning that the independent variables—CI, WE, LS, and SI—jointly explain a significant amount of the variance in operational performance. This finding underscores the importance of these variables in influencing operational outcomes within the context of the study.

In the coefficient analysis (Table 6), the individual contributions of each independent variable to the model are elucidated. Continuous Improvement (CI) shows a coefficient of 0.184 with a p-value of 0.003, indicating a statistically significant positive relationship with operational performance. This suggests that improvements in continuous improvement practices are likely to lead to enhancements in operational performance. In contrast, Waste Elimination (WE) exhibits a coefficient of 0.057 with a p-value of 0.463, indicating that this variable is not significantly related to operational performance in the current model, highlighting a potential area where further investigation or strategy refinement might be necessary.

Leadership Support (LS) emerges as a critical factor, with a coefficient of 0.335 and a p-value of 0.000, indicating a strong and significant positive impact on operational performance. This finding suggests that leadership's role in guiding and supporting lean management initiatives is pivotal in driving operational success. Similarly, Supplier Involvement (SI) also demonstrates a significant positive relationship with operational performance, with a coefficient of 0.337 and a p-value of 0.000, underscoring the importance of integrating suppliers into the lean management framework to enhance efficiency and performance outcomes.

The hypotheses testing results (Table 7) corroborate these findings, confirming that H1, H3, and H4—concerning Continuous Improvement, Leadership Support, and Supplier Involvement, respectively—are accepted, indicating significant positive relationships with operational performance. However, H2, which posited a significant relationship between Waste Elimination and operational performance, is rejected, suggesting that waste elimination does not significantly impact operational performance in this study's context.

While the study provides valuable insights, it also acknowledges certain methodological limitations. Notably, the study did not test the assumptions critical for Ordinary Least Squares (OLS) regression, such as linearity, independence of errors, homoscedasticity, and normality of residuals. These assumptions are vital for ensuring the reliability and validity of the regression results, and failure to verify them could lead to biased outcomes and inaccurate conclusions (Wooldridge, 2015). Additionally, the study opted for multiple regression, despite the ordinal nature of some dependent variables, which could have benefited from ordinal regression models like ordered logit or probit. These models might provide more accurate estimates for ordinal data, reflecting the complexity of the relationships being studied (Long & Freese, 2014). Nevertheless, by adhering to key assumptions where possible, the study maintains that multiple regression remains a valid and insightful method for analysing the relationships between the variables in question.

7. Discussion

The findings from the coefficient analysis and hypothesis testing results reveal several important insights into the relationship between lean management practices and operational performance in Sri Lanka's apparel industry. One of the key takeaways is the significant positive relationship between Continuous Improvement (CI) and operational performance, as indicated by a coefficient of 0.184 and a p-value of 0.003. This result aligns with a substantial body of literature that underscores the critical role of continuous improvement in driving operational efficiency and effectiveness. Continuous improvement entails a systematic, ongoing effort to enhance products, services, and processes, directly contributing to the overall operational performance of an organization. The impact of these practices is well-documented, with studies showing that continuous improvement leads to better quality, reduced cycle times, and increased customer satisfaction—factors that are essential for achieving operational excellence (Demir, 2020; Bessant & Caffyn, 1997; Imai, 1986). This finding supports the perspective that organizations focusing on continuous improvement are more likely to achieve sustainable operational success over time.

In contrast, the analysis revealed a non-significant relationship between Waste Elimination (WE) and operational performance, as indicated by a coefficient of 0.057 and a p-value of 0.463. This finding stands in contrast to some previous studies that have emphasized the importance of waste reduction as a critical component of lean management aimed at enhancing performance (Womack & Jones, 1996). The unexpected outcome suggests that, within the context of Sri Lankan apparel manufacturing, other factors may overshadow the direct impact of waste elimination. This could imply that while waste elimination is important, its benefits may be more indirect or require a longer time to manifest significantly in operational performance metrics. It is possible that the maturity level of lean practices within the companies studied, or specific industry challenges unique to Sri Lanka, could impact the effectiveness of waste elimination strategies. Further research could be instrumental in exploring these aspects to understand the nuances behind this finding (Hofer et al., 2012).

Leadership Support (LS) emerged as another critical factor positively influencing operational performance, with a significant coefficient of 0.335 and a p-value of 0.000. This finding underscores the essential role that leadership plays in the successful implementation of lean management practices. Effective leadership ensures that the organization has a clear vision, adequate resources, and a culture that supports continuous improvement and adherence to lean principles (Aij & Teunissen, 2017). Leaders are instrumental in driving change, facilitating effective communication, and ensuring that lean strategies are aligned with the broader organizational goals (Ashtiani & Arshadi, 2017). This result is consistent with existing literature that highlights the importance of proactive and committed leadership in sustaining lean initiatives and embedding a culture of continuous improvement across the organization (Dombrowski & Mielke, 2014). The influence of leadership on operational performance is profound, as it not only drives immediate improvements but also ensures the long-term success and competitiveness of the industry (Ravi & Subramanian, 2016).

Finally, the analysis highlights the significant positive relationship between Supplier Involvement (SI) and operational performance, as indicated by a coefficient of 0.337 and a p-value of 0.000. This finding emphasizes the importance of integrating suppliers into the lean management framework. Effective supplier involvement is critical for developing strong partnerships, sharing valuable information, and collaborating on continuous improvement initiatives (Gunasekaran et al., 2015). Research indicates that strong supplier relationships contribute to improved quality of inputs, timely delivery, and innovation, all of which are crucial for achieving operational excellence (Dabhilkar et al., 2016). The integration of suppliers into the lean management process significantly enhances the overall efficiency and competitiveness of the organization. This finding is further supported by studies that underscore the critical role of supplier involvement in achieving lean supply chain objectives and enhancing overall performance (Vanichchinchai, 2019; Gunasekaran et al., 2015).

Overall, these findings highlight the multifaceted nature of lean management practices and their varying impacts on operational performance in Sri Lanka's apparel industry. The positive relationships between continuous improvement, leadership support, and supplier involvement with operational performance demonstrate the importance of these factors in achieving excellence. However, the unexpected results regarding waste elimination suggest that more nuanced, context-specific strategies may be necessary to fully leverage the benefits of lean practices in this industry.

8. Conclusions, Practical Implications and Suggestions for Future Research

This This study provides a comprehensive analysis of the impact of lean management practices—specifically continuous improvement, waste elimination, leadership support, and supplier involvement—on the operational performance of Sri Lanka's apparel industry. The findings indicate that continuous improvement, leadership support, and supplier involvement play significant roles in enhancing operational performance. However, the anticipated positive impact of waste elimination was not observed, suggesting that the current strategies employed for waste management in the industry may require a thorough re-evaluation.

The positive correlation between continuous improvement and operational performance underscores the critical importance of fostering a culture of ongoing enhancement within organizations. To effectively embed this culture, companies should invest in regular training sessions, workshops, and other developmental programs that empower employees to take an active role in identifying and implementing process improvements. Encouraging continuous feedback and fostering an environment where innovation and incremental improvements are valued can lead to substantial gains in operational efficiency and product quality.

Leadership support emerged as another pivotal factor influencing operational success. The findings highlight the necessity for management to demonstrate a strong, visible commitment to lean principles. Leaders who actively participate in lean initiatives and maintain open communication channels with their teams can significantly bolster continuous improvement efforts. By fostering a culture of trust and collaboration, leaders can drive transformational changes that align operational practices with strategic goals, thereby enhancing overall performance.

The study also emphasizes the significant impact of supplier involvement in the lean management framework. Establishing strong, collaborative partnerships with suppliers, particularly by involving them early in the product design and development stages, ensures that suppliers are fully aligned with the company's lean objectives. This collaborative approach not only enhances the quality of inputs but also improves production processes, leading to greater efficiency and operational excellence. Supplier integration into the lean framework is thus a critical strategy for achieving sustained improvements in both product quality and production efficiency.

Despite these successes, the lack of a significant relationship between waste elimination and operational performance suggests that the current waste management strategies may not be as effective as expected. This finding points to the need for organizations to reassess their waste elimination practices to ensure that they are not merely focusing on waste reduction as an isolated goal, but rather integrating it into a broader strategy that aligns with overall operational objectives. Companies may need to adopt more sophisticated tools and techniques, or perhaps reconsider the specific aspects of waste management that are emphasized, to better contribute to operational efficiency.

Looking ahead, this study opens several avenues for future research. Longitudinal studies could be particularly valuable, providing deeper insights into how lean management practices influence operational performance over time. Such studies would help to establish a clearer causal relationship and identify the long-term benefits of sustained lean management efforts. Additionally, comparing the impact of lean practices across different sectors could offer a broader understanding of how these practices perform in various industrial contexts. This comparative approach could help identify sector-specific challenges and best practices, offering more tailored strategies for different industries.

Furthermore, incorporating qualitative research methods, such as interviews and case studies, could complement the quantitative findings of this study. These methods would allow for a more nuanced exploration of the mechanisms through which lean practices influence operational performance, providing richer, context-specific insights. Such qualitative data could help uncover the subtleties of how lean management practices are perceived and implemented within organizations, offering a more comprehensive understanding of their impact.

In conclusion, while this study highlights the significant benefits of lean management practices in improving operational performance, it also underscores the need for continuous assessment and adaptation of these practices. By addressing the gaps identified in waste elimination strategies and exploring the suggested avenues for future research, organizations can better harness the full potential of lean management to drive sustained operational excellence and competitive advantage in the global marketplace.

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Impact of Supply Chain Transparency on the Purchase Intention of Apparel Customers in Colombo District

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Abstract

Unethical practices within the apparel industry's supply chains have prompted customers to critically evaluate their purchasing behaviours. While numerous studies have highlighted the importance of supply chain transparency in addressing the ethical issues within the apparel industry and its role in building trust between companies and customers, only a few researchers have focused on how customers perceive transparency and how it impacts their behaviour. The research gap identified in this study therefore revolves around the limited exploration of the effects of perceived supply chain transparency on customers.

Both primary and secondary data were used for this explanatory, cross sectional study. Primary data were collected by distributing an online questionnaire among 270 respondents using snowball sampling method. The collected data were then analysed by using statistical analysis tool SPSS. Secondary data was gathered by referring to previous research articles which have been published in similar fields of study.

The results of the analysis indicated that the independent variable (supply chain transparency) is reliable and has a strong and significant relationship with customer purchase intention. However, researcher has recommended to conduct future research on this topic by taking more independent variables into consideration.

Keywords: *Degree of assessment, Degree of disclosure, Purchase intention, Supply chain transparency.*

1. Introduction

1.1 Background of the Research

The clothing and textile industry has become a subject to arguments worldwide because of the unethical conditions of the production facilities and supply chain practices (Khan et al, 2016). James and Montgomery (2017) have claimed that apparel industry is highly globalized and often have complex labour-intensive supply chains, and therefore it is associated with many ethical issues related to social practices. Apparel companies sometimes work with thousands of factories at the same time, and many do not even know where all of the different components of their garments are made (Fashion Revolution, 2017). The supply chain arrangement of the apparel sector is further complex when accounting for the additional thousands of sub suppliers and sources of raw materials. This presents an explanation for why many apparel companies do not have control of their supply chain, and sometimes not being aware of the poor social conditions in some factories (Jonsson & Ygge, 2018).

Figure 1: Degree of Disclosure and Degree of Assessment

As customers are getting more aware of unethical business behaviour, they are more inclined to analyse the adverse supply chain practices and reflect on their consumption behaviour and are starting to change accordingly (Harrison et al, 2005). Therefore, many researchers in the last decade have acknowledged the general importance of transparency in building relationships between customers and companies, especially when communicating its social responsibility related achievements (Reynolds & Yuthas, 2008).

1.2 Problem Statement

According to Hein (2002), the lack of openness with stakeholders has increased scepticism while decreasing trust and confidence that organizations operate within the constraints of social, ethical, and environmental standards. In addition, both external and internal stakeholders are becoming even more empowered by advancements in communication technology, thereby making everyone "always-on, always connected" and creating transparency as a routine expectation (Bennis et al, 2008; Tapscott and Ticoll, 2003). However, despite all these significances of supply chain transparency, only a few researchers have been studying the effect of perceived supply chain transparency on customers (Kang & Hustvedt, 2014).

Research Objective

To study the impact of supply chain transparency on customer purchase intention.

Research Question

What is the impact of supply chain transparency on customer purchase intention?

2. Literature Review

2.1 Purchase Intention of Apparel Customers

Purchase intention have been defined as the personal inclinations of an individual towards a particular brand by Bagozzi et al. (1979) and Ostrom (1969). Although sounds similar there is a difference between intention and attitudes. Attitudes can be simply termed as summary assessments whereas intention indicate an individual's motivation in the sense of that individual's willingness to perform a certain behaviour (Eagly and Chaiken, 1993). According to Spears and Singh (2004) purchase intention are concisely termed as an individual's intentional plan to make an attempt to buy a specific brand.

The dynamics of the present-day shoppers are driven by a feeling of good commitment towards society and the environment (Shaw et al, 2006). The new sustainable and ethical customer therefore differs from others as they are considerably more motivated to purchase from companies that promote fair working conditions in order to decrease the risk of having an indirect negative impact on society (Lundblad & Davies, 2016). Dickson (2001) similarly found that customers purchasing decisions are increasingly affected by ethical concerns such as the risk of negative social impacts. In this regard, apparel companies that are involved in sustainability and CSR can offer an ethical choice for these conscious customers, yet still meet the consumption demand of customers and their need for identity construction (McNeill & Moore, 2015).

In research it is sometimes somewhat difficult to study the actual purchase behaviour, which is why scholars often base their research on the purchase intention (Jonsson & Ygge, 2018). In accordance with the TRA the behaviour is determined by the intention (Ajzen, 1991). Therefore, purchase intention can be explained as the probability that a customer will plan or be willing to purchase a certain product in the future (Wu et al, 2011). According to Jonsson and Ygge (2018) even though this is not a direct evidence that an actual purchase will be performed, purchase intention is very useful in customer research to predict the buying decision.

2.1.1. Theory of Reasoned Action

The Theory of Reasoned Action (TRA) proposes that an individual's behaviour is derived by his/her intention to conduct the behaviour and that this intention is thus a component of his/her attitude towards the behaviour and subjective norms such as the opinions of family members and other closely related individuals (Fishbein & Ajzen, 1975). This concept was first theorized in 1967 by Fishbein and Ajzen and has ever since been vividly applied as a conceptual framework to examine customer behaviour (Jonsson & Ygge, 2018).

As the name may indicate, this theory proposes that an attitude is formed by the individual's belief to engage in a certain behaviour and is based on the expected outcome from performing that particular behaviour (Ajzen & Madden, 1986). Simply put, the behaviour is determined by the intention (Ajzen, 1991). According to Ajzen (1991), intentions are capable of capturing the motivational factors that power a behaviour. This involves the degree of willingness of an individual to attempt, or the amount of effort he/she is planning to employ to perform the behaviour. TRA specifies that there exist two major determinants that will predict the intention. These are attitudes toward behaviour, and the pressure of subjective norms (Fishbein & Ajzen, 1975). Ajzen and Fishbein (1980) define attitudes toward the behaviour as the person's own personal favourableness or non-favourableness toward that behaviour, whereas subjective norms are explained as a person's perception of important social influences that matters to him/her such as family and friends (Ajzen & Fishbein, 1980; Ajzen & Madden, 1986). TRA is working from the approach of rationality, meaning that people make reasonable use of the information that they are proposed to. Therefore, the behaviour is explained to be a result of a conscious decision (Fishbein & Ajzen, 1975).

Figure 2: Theory of Reasoned Action

Source: Jonsson and Ygge, 2018

2.2. Supply Chain Transparency

Many scholars have given a definition to the general understanding of transparency; however, these differ in approach depending on its context (James & Montgomery, 2017). Ball (2009) for example uses a wide understanding of it being synonymous with openness, while Mol (2015) and Doorey (2011) with a similar wide understanding describes transparency as the disclosure of information in a business context. In other words, transparency is focussed on revealing information about rules, plans, processes and actions. It can be simply termed as getting to know answers for questions such as why, how, what, and how much (Transparency International, 2018).

In a highly globalized context where external suppliers and sub suppliers are common business practices, the demand for transparency is expanded surpassing the corporate boundaries and into supply chains (Mol, 2015). In this context researchers sought a need for a more specific definition of what we hereby will refer to as supply chain transparency which incorporates the degree of information regarding the supply chain which is available to other actors (Awaysheh & Klassen, 2010). Cramer (2008) refers to supply chain transparency as the disclosure of supplier information, Carter and Rogers (2008) defines it as the degree of information a company is willing to share about its supply chain practices, and O'Rourke (2003) even describes it as being a key attribute of which one is able to judge a company's supply chain. Similarly, Doorey (2011) and Laudal (2010) adopts an ability of traceability through production to the approach. Egels-Zandén, Hulthén and Wulff (2014) specifically describes it as disclosure of information such as the names of the suppliers, sustainability conditions of suppliers, and the purchasing practices of the customers. Additionally, researchers often pay specific attention to the elements of ethics and sustainability in the supply chains (Mol, 2015). Supply chain transparency applies a stakeholder perspective (Morgan et al, 2018). In particular, supply chain transparency focusses on investigating how the information relevant to supply chain is communicated to different stakeholders (Morgan et al, 2018). Present day researchers have been requesting over the years to expand the concept of transparency by revealing non-operational information with external stakeholders instead of sharing information with internal supply chain partners (Schnackenberg & Tomlinson, 2016).

Researchers today deem transparency to be desirable for corporations in order to achieve favourable characteristics such as legitimacy (Carter & Rogers, 2008), accountability (Dubbink et al, 2008) and trust (Augustine, 2012), which all ultimately relates to the perception of the company in the eye of the customer.

Jonsson and Ygge (2018) have attested the presence of two dimensions of supply chain transparency called degree of disclosure and degree of assessment. Fashion Revolution (2017) describes degree of disclosure as "if you can't see it, you can't fix it". Hence the degree of disclosure can be defined as the amount and type of information regarding the supply chain that a particular organization is willing to share with the outside stakeholders. It is an essential element in achieving legitimacy as it allows external actors to monitor sustainability claims (Laudal, 2010). By making information regarding the supply chain public, it helps stakeholders, non-government organizations, unions, communities and the workers themselves to reinforce and uphold ethical standards (Fashion Revolution, 2017). Therefore, Jonsson and Ygge (2018) have suggested that transparency in terms of disclosure thereby facilitates the understanding from all involved parts of what went wrong, who is responsible and how to fix it, and thereby reinforcing the accountability of companies. Jonsson and Ygge (2018) have further stated that companies can further gain competitive advantages when increasing their level of information disclosure. By applying the "We have nothing to hide" approach toward openness can be a way of differentiating themselves from the companies that perform badly in this matter. On the other side, some companies are only acting transparently on their more successful examples of activities, called CSR-washing. This has led stakeholders to react with skepticism to solely rely on the information disclosed by the company (Egels et al, 2015).

The idea of companies not having full knowledge about their supply chain might seem improbable, but the truth is that many companies have a very limited visibility of their supply chain, and further having a poor understanding of how to acquire the information, what it means and how to report it (Marshall et al, 2016). This is because many organizations have highly complex and globalized supply chains, which cross many national borders and can pass through hundreds of workers during the process (Marshall et al, 2016). Degree of assessment refers to the degree of control, knowledge and insight the company has regarding their supply chain, thus whether or not they have a good grasp of the information (Marshall et al, 2016). A high degree of assessment increases the companies' ability to track suppliers, which decreases the risk for including unauthorized suppliers that do not comply with CSR standards in the chain, and thereby harming the reputation of a company (Fashion Revolution, 2017).

According to Parris et al. (2016), a firm should have significantly pertinent information in order to enhance the view of a particular firm's transparency. An ideology which is generally accepted is that information should be adequately applicable to the considered population to activate their decision-making dynamics. At the point of unveiling information by a firm about itself to its stakeholders such as customers, suppliers and government, it transforms a signal of transparency (DeKinder and Kohli, 2008). But one proviso that is imperative to be kept in the mind is that the information must be viewed as significant to stakeholders, and hence applicable. The Global Reporting Initiative (GRI), which is a non-profit firm that encourages other firms to willingly share their information in the form reports, has created a bridge between the information relevance and transparency. It proposes that information unveiled/reported by firms should be valuable, easy to understand, and adequate (GRI, 2006) in order to facilitate stakeholders to arrive at accurate decisions.

According to Parris et al. (2016), firms which are externally transparent are willing to share information such as their present and future customers, members involved in the supply chain, investors, and other partners with their stakeholders. When transparency among supply chain members increases, the efficiency in the flow of materials in supply chain also significantly increases which means that there is a positive relationship between transparency and efficiency in the flow of materials. (Hultman & Axelsson, 2007). At the same time Bhaduri and Ha-Brookshire (2011) suggests that customers of transparent organizations will ultimately have greater purchase intention, thereby enabling such firms to outperform their competitors (Parris et al, 2016).

2.2.1. The Supply Chain Transparency Matrix

In order for a company to select a supply chain disclosure strategy, they first need to account for several elements such as: their knowledge and insight in the supply chain, what type of information to disclose, and how much of it they want to reveal (Jonsson & Ygge, 2018). Marshall et al. (2016) included these aspects when they developed their transparency matrix, in which the two dimensions of transparency, degree of disclosure and degree of assessment, mirrors four typical supply chain disclosure strategies. Therefore, the strategies in this are based on the amount and depth of evaluation and the level of public data disclosure (Jonsson & Ygge, 2018).

Figure 3: The Supply Chain Transparency Matrix

Source: Jonsson and Ygge, 2018

The companies that fall under the transparent strategy strive for the greatest amount of disclosure of information regarding the supply chain, often both internally within the company as well as externally towards stakeholders. In general, these companies tend to perceive disclosure as a core competence and capability. An excellent example of this is the apparel company Everlane, who has adopted what they call "radical transparency" that includes total disclosure of their factories and costs (Everlane, 2020). Everlane has taken the general notion of transparency and transformed it into the foundation of their business model. The category Secret Companies include strategies in which the companies have high degree of assessment, thus knowledge about their supply chain activities, but only disclose little or no information to external actors. These companies view their supply chain information as intellectual property that creates competitive advantage and therefore deliberately only conceal supply chain information. Examples of activities that can be secret could be the development of new products manufacturing processes, sources of supply, recipes, technical specifications and customers and suppliers. Coca Cola has for example never revealed their secret recipe, and the same goes for KFC's fried chicken batter. The Distracting Companies on the other hand report information to external actors, but in a way that unpurposely or purposely distracting. The companies which unpurposely distract are simply not able to understand or evaluate what information is of relevance and report excessively on other or all kinds of practices. On the other hand, some companies deliberately distract external actors and stakeholders from discovering questionable practices by focusing excessively on self-selected practices, while deemphasizing others. This strategy includes CSR-washing practices, which are common in many industries among them the one of apparel (Fashion Revolution, 2017). The last category is the Withheld Companies that entirely withhold information from external actors and stakeholders. The reasons for them not to disclose information regarding the supply chain could either be that they simply do not have the information and thereby unknowingly withhold information, or that they intentionally avoid disclosing information because it includes harmful practices that would have a negative effect on the company's reputation. (Jonsson & Ygge, 2018).

We live in a sophisticated world in which the interest for sustainable practices in the entire supply chain and the global communication via advanced technologies continuously develop. However, Badhuri and Ha-Brookshire (2011) has postulated that regardless of all these improvements, present day customers do not have sufficient accessibility to accurate information regarding the sustainability efforts carried out by firms all around the world. At present customers have started to demand several companies to present them with precise information on the social and environmental impacts of the activities carried out by them (Burchell & Cook, 2006). For an example, a study conducted by Singh et al. (2008) has indicated that there is a solid requirement for the availability of transparency between organizations and customers with respect to the sustainable business practices that the organizations claim to perform. According to the results of this study, Singh et al. (2008) have discovered that customers exhibit an interest in getting to know the relevant information about the manufacturing processes of the products that they consume. Therefore, these scholars have arrived at the conclusion that an opportunity to excel at their industries prevails for organizations if they are willing to educate customers regarding the origin of the products and thereby satisfying the customers' hunger for knowledge. Since transparency is closely related with visibility and accessibility of business information, Vishwanath and Kaufmann (2001) have suggested five specific dimensions of transparency. They are accessibility, comprehensiveness, relevance, quality and reliability of information. Strutnin (2008) has identified the significance of maintaining supply chain transparency for the purpose of developing the loyalty of customers, a renowned brand image and for guaranteeing the quality and safety norms of the products manufactured. He has recommended organizations to develop a traceable supply chain that depicts the development of source materials through different processors, producers and several members of the supply chain pipeline to the end users. Carter and Rogers (2008) have also recommended that it is imperative for organizations to be transparent with their business activities in order to keep up with the level of authenticity which is required to build a renowned reputation.

3. Methodology

3.1 Sampling Method

According to Saunders et al. (2016) this research can be identified as an explanatory, cross sectional study since it establishes a causal relationship between several variables at a particular period of time.

Sekaran and Bougie (2016) has defined sampling as the process of identifying the correct people, objects, or events as representatives for the whole population. These two scholars have also mentioned that several factors such as the objective of the research, degree of precision required, the acceptable risk in estimating that degree of precision, the degree of variability in the population, the cost and time limitations and in certain scenarios, the size of the population itself, have a significant impact on arriving at decisions about sample size. Further according to Sekaran and Bougie (2016) sample sizes of in between 30 and 500 are ideal for the majority of the research. Therefore, in this study, considering the time constraint as well, the researcher has limited the sample size to 270. The study has considered both male and female participants aged over 20, as both conventional literacy and IT literacy were prerequisites for completing the questionnaire. According to Nikolopoulou (2022), snowball sampling begins with a convenience sample of one or more initial participants. In this research also, considering the time and other physical constraints, researcher initiated the data collection process using a selected group of apparel customers in Colombo district based on convenience sampling and requested them to share the questionnaire with suitable respondents, thereby initiating snowball sampling method.

3.2 Data Collection

Primary Data

Primary data were collected by sharing a structured questionnaire in the form of a Google form which consists of demographic data and several important aspects relevant to purchase intention of customers. The research questionnaire consists of two major sections. First section includes questions pertaining to the demographic information of the respondents whereas the second section includes several statements arranged according to a 5-point scale Likert scale.

Secondary Data

Secondary data for this study were collected from various academic and industry sources relevant to the field of supply chain transparency in the apparel industry. Specifically, peer-reviewed journal articles, industry reports, and conference papers were reviewed to provide a comprehensive understanding of the topic. To access these sources, databases such as Emerald Insight, Academia, and Google Scholar were utilized. These platforms provided a wide range of articles that discussed ethical concerns, transparency issues, and customer behavior in the apparel industry.

The selection of secondary data was based on the relevance of each study to the research questions, publication recency, and the credibility of the sources. Preference was given to recent studies published within the last decade, which provided updated perspectives on the rapidly evolving supply chain practices in the apparel sector.

3.3 Data Analysis

A quantitative approach is followed in this study to accurately assess the impact of supply chain transparency on the purchase intention of apparel customers. The collected data was then analysed by using the statistical analysis software IBM SPSS statistics 20.0 package. This software was used in order to test the validity and reliability of data, to establish regression model and to test hypotheses suggested by the researcher.

Researcher has identified supply chain transparency as the independent variable and the purchase intention of the apparel customers as the dependent variable. Researcher has explained the relationship between these variables and why he expects such relationships exist between them.

Relationship between supply chain transparency and the purchase intention of apparel customers

Reynolds and Yuthas (2008) argue that transparency built on disclosing CSR efforts is one of the essential conditions for the development of positive relationships between customers and companies. This is due to the fact that disclosure of information of supply chains becomes the foundation of knowledge and awareness of a company's business practices for the stakeholders (James & Montgomery, 2017). Further according to Jonsson and Ygge (2018) companies can gain competitive advantages when increasing their level of information disclosure. Researchers today deem transparency to be desirable for corporations in order to achieve favourable characteristics such as trust which ultimately relates to the perception of the company in the eye of the customer (Augustine, 2012).

H1: Supply chain transparency has a positive impact on the purchase intention of apparel customers.

3.4 Operationalization

Table 1: Operationalization of the Research

Variable	**Indicator**	**Measurement**	**Source**
Customer Purchase Intention	I am likely to consider a brand that I have purchased previously when I purchase an apparel product next time	Strongly Disagree = 1 Strongly Agree = 5	Adopted from Krishnamurthy and Sivaraman (2002)
	I am likely to purchase an apparel product suggested to me by a friend.		
	I am likely to check reviews before purchasing an apparel product.		
	I am likely to ask the salesperson about the apparel products of a specific brand the next time I visit a store.		
Supply Chain Transparency	I am knowledgeable about the social issues in the clothing business.		Adopted from Jonsson and Ygge (2018)
	I believe the brands that I purchase from provide me with a lot of information regarding the social practices in their supply chains.		
	I believe the information regarding the social practices in supply chains of the brands that I purchase from are complete.		

	I believe the brands that I purchase from have the ability to control the social practices in their supply chains.		

4. Findings and Discussion

4.1 Reliability Analysis

Reliability refers to testing both consistency and stability of a specific variable. Cronbach's alpha is computed in terms of the average inter correlations among the items measuring the concept. The closer Cronbach's alpha is to 1, the higher the internal consistency reliability (Sekaran & Bougie, 2016). However, as a standard, a scale is considered reliable if its Cronbach's alpha value is greater than 0.7.

Table 2: Summary of Reliability Analysis

The variable	**Cronbach's Alpha**	**Reliability**	**Conclusion**
Customer Purchase Intention	0.752	0.752 > 0.7	Reliable
Supply Chain Transparency	0.789	0.789 > 0.7	Reliable

As represented by table 2, the reliability of both the variables (customer purchase intention, supply chain transparency) is above 0.7, which implies that all the variables concerned in the study are reliable. It demonstrates that all the measuring items are held together in the measurement of each variable. In other words, all the variables in this study produce consistent and stable results. Both customer purchase intention and supply chain transparency are reliable with Cronbach's Alpha values of 0.752 and 0.789 respectively.

4.2 Correlation Analysis

McLeod (2020) has simply defined correlation as a measurement which can be utilized to measure the degree to which two variables are related. Precisely it is utilized to measure the strength of a linear relationship which exists between two variables (Bock, 2020). In this study, Pearson correlation matrix has been used to interpret the relationships between variables.

Table 3: Correlation between Customer Purchase Intention and Supply Chain Transparency

Dependent Variable	**Independent Variable**	**Pearson correlation**	**Significance of the relationship**
Customer Purchase Intention	Supply Chain Transparency	**0.643**	**0.000**

There is a strong positive relationship between customer purchase intention and supply chain transparency. Also, the relationship is 64.3% (When supply chain transparency increased, customer purchase intention can also be increased). Since the significance value is less than 0.05, there is a significant relationship between customer purchase intention and supply chain transparency**.**

4.3 Regression and Hypothesis Testing

In this study, linear regression has been used in order to interpret the relationship between the independent variable and the dependent variable. On the other hand, hypothesis testing is a statistical technique which is utilized in order to test the hypotheses. The alternative hypothesis is accepted by rejecting the null hypothesis if the significance value gained from the analysis is less than 0.05.

Table 4: Summary of Regression

Hypothesis Testing	**Beta Coefficient**	**Significance**	**Accept/Reject**
H1: Supply chain transparency has a positive impact on the purchase intention of the apparel customers.	0.643	0.000	**Accept**

The positive beta coefficient of 0.643 suggests a statistically significant and positive relationship between supply chain transparency and customer purchase intention. This implies that as the level of transparency in the supply chain increases, there is a corresponding positive impact on customers' intention to make purchases.

It explains that there is a 64.3% impact from supply chain transparency to customer purchase intention of apparel customers in Colombo district. This is a positive relationship as described. It implies that an apparel company can increase the purchase intention of its customers in Colombo district by 0.643 units if that company can enhance supply chain transparency by 1 unit.

H1: Supply chain transparency has a positive impact on the purchase intention of apparel customers

According to significance values in regression results, for supply chain transparency the value is lesser than 0.05 (0.000 < 0.05). Therefore, H1 is accepted.

5. Limitations and Recommendations for Future Researchers

5.1 Limitations

There are certain limitations which are engaged with this study. The study focusses only on one variable which affects the customer purchase intention of the apparel customers. However, the considered variable is a dominant variable which has a strong impact on the customer purchase intention. The researcher had to overlook other factors mostly due to the time constraint. Time constraint had an impact on selecting a relatively smaller sample size as well. Having to collect primary data only by distributing an online questionnaire can also be identified as a limitation of this study. Due to the travel restrictions and other health guidelines imposed by the government due to Covid 19 pandemic situation, the physical distribution of a questionnaire was not an option. Hence, the researcher had to rely solely on responses gathered by distributing an online questionnaire for primary data.

5.2 Recommendations for Future Research

Researcher has identified the potential to further enhance the fitness of the model. Several limitations such as time constraint and travel restrictions forced the researcher to limit the number of independent variables to only one. A model developed with more independent variables such as customer morality, customer loyalty and green supply chain practices is expected to have a greater model fitness. Additionally, it is advisable to conduct future studies by stressing more exclusively on the mediating role of degree of disclosure through degree of assessment (Jonsson & Ygge, 2018). Researchers should also investigate whether supply chain transparency has an impact on customer trust and customer attitudes. Therefore, additional research in this ever-growing field of study is to be recommended in order to provide further improvements that organizations can implement in their operations.

While conducting this study, researcher observed that a considerable number of respondents lacked significant knowledge on the concept of supply chain transparency. The number of respondents who had proper awareness on supply chain transparency initiatives of organizations decreases further. The result of this study suggests that supply chain transparency has a strong positive relationship with customer purchase intention. However, when customers are unaware about this concept, they may end up in not purchasing products from a certain brand even though that particular company has a greater transparency. Therefore, being transparent is not sufficient. Organizations should properly communicate these practices and enhance the awareness of the customers as well. Hence, it is advisable for apparel companies to take progressive steps towards enhancing the knowledge of customers and make them aware about the social, environmental and economic benefits of purchasing from transparent brands. The responses obtained from the research questionnaire also revealed that the majority of the respondents are unlikely to check reviews before purchasing an apparel product. According to the opinions of the respondents, product reviews are useful when purchasing products such as electronic items. When it comes to apparel industry, product reviews become less significant because purchase intention vary largely from one individual to another. Therefore, it is recommended for apparel companies to include more objective information such as the source of origin, means of transportation and the working conditions of employees instead of highly subjective product reviews in their websites.

6. Conclusion

Rapid globalization and complex labour-intensive supply chains have resulted in several ethical issues related to the social practices in apparel companies. The overwhelming demand has pushed the companies to extend their supply chains to extents as far as it has never been to. As a result of this many apparel companies no longer possess the controlling power over their supply chains. Hence, the amount of information that a company knows about its supply chain (Degree of Assessment) and the amount of information that a company is willing to share with its stakeholders (Degree of Disclosure) have gradually decreased. Therefore, this study was conducted in order to fulfil the purpose of determining the impact of supply chain transparency on purchase intention of apparel customers in Colombo District. In order to fulfil this purpose a research question was developed.

What is the impact of supply chain transparency on customer purchase intention?

It was theorized under literature review that there is a direct relationship between supply chain transparency and customer purchase intention. Jonsson and Ygge (2018) have mentioned that companies can gain competitive advantages when increasing their level of information disclosure. This statement was corroborated by the findings of this study. With a Pearson's correlation value of

0.643 and a significance value of less than 0.05 (0.000 < 0.05), it was concluded that supply chain transparency has a strong positive impact which is also significant on purchase intention of customers.

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International Journal of Contemporary Business Research
Volume 3, Issue 1_2024

Exploring Consumer Acceptance of Refurbished Smart Phones in the Sri Lankan Market: Circular Economy Adoption in Sri Lanka

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Abstract

The circular economy is a paradigm of production and consumption that incorporates sharing, leasing, reusing, repairing, refurbishing, and recycling existing resources. Due to environmental contamination, the majority of economies are transitioning from linear to circular economies. Refurbishment is a procedure in which a professional firm collects and repairs used things before reselling them to new customers. In this study, researchers focused on identifying the factors that influence consumer acceptance of refurbished smartphones. This study is qualitative since there is a lack of knowledge about the circular economy concept in the Sri Lankan context. Researchers conducted eight semi-structured interviews to collect data for the study. Purposive sampling technique was used to select respondents for the study. The interviews lasted for 20 to 30 minutes and were transcribed into a Word document. Thematic analysis was used to analyze the interview data. Researchers discovered the factors under the topics of personal factors, advantages, obstacles, and risks of accepting refurbished smartphones by Sri Lankan mobile phone consumers. Finally, researchers discovered that consumers prefer brand-new smartphones over refurbished smartphones. However, consumers choose refurbished smartphones over second-hand smartphones

Keywords: *Circular economy, Consumer acceptance of remanufactured products, Refurbished smartphones*

1. Introduction

Many countries are concerned about the safe disposal of electrical and electronic trash, or E-waste. E-waste contains a variety of dangerous elements and substances that are harmful to both human health and the environment (Peluola, 2016). Until recently, the most well-known economic model was the linear model, which was based on continuous expansion and the use of numerous resources (Kirchherrr et al., 2023). The linear economy model focuses on transforming natural resources for wastes after production processes rather than using concepts such as recycling. “The Circular Economy is a paradigm shift attempting to replace the end-of-life concept with reducing, reusing, recycling and recovering materials and to slow down, close and narrow material and power loops” (Graces Ayerbe et al., 2019). (CE) is a viable solution for the linear model because of the positive role played by this model which is beneficial for the environment as well as its healthy interaction with the economic system (Ghisellini et al., 2016). Since the CE has a positive relationship with the environment, it is becoming more and more popular among academics, corporations, and government organizations.

CE prioritizes the use of renewable resources, reducing wastage and extending the lifespan of products and materials to develop regenerative and restorative economies (Vidal-Ayuso et al., 2023). The stylish and technological market has begun to invent new mobile phone trends frequently. This affects customer attitudes and reduces the useful life of mobile phones (Thavalingam & Karunasena, 2016). This will result in a large amount of mobile phone e-waste worldwide. According to the Waste from Electrical and Electronic Equipment (WEEE) Forum, there are around 16 billion phones in use worldwide, with over 5 billion anticipated to generate e-waste this year (World Economic Forum, 2022). In CE, extending the life of a product is a viable strategy to reduce e-waste within an economy. Mobile phone refurbishment is a method of extending the life of a mobile phone and reducing mobile phone e-waste within an economy. The term ‘refurbishing’ refers to the process of restoring used products to a specified working condition in form and function (Hazelwood & Pecht, 2021).

Approximately 45-50% of Sri Lankans currently own a smartphone (GSMA Intelligence, 2023). There are frequent fluctuations and changes in the Sri Lankan smartphone market. However, a considerable amount of people in Sri Lanka is unable to afford the newest and most expensive smartphone models available because of the economic downturn in the country (ikman. lk, 2023). As a result, the intriguing trend of the used smartphone market reaching unprecedented heights has emerged lately (ikman. lk, 2023). The market for used smartphones in Sri Lanka is growing at the moment. Furthermore, customers who buy reconditioned devices in developing nations have access to comparatively newer smartphones at attractive prices (Hazelwood & Pecht., 2021). Since Sri Lanka is also a developing country, Sri Lankan consumers can buy newer refurbished smartphones at a reasonable price. Therefore, it is preferable to be aware of Sri Lankan consumers' purchasing intentions for refurbished mobile phones on the market.

According to the latest data from the Census and Statistics Department, Sri Lanka's digital literacy increased by 2% in 2018 to 42.4%, up from 42.4% 2017 with the Western Province leading the way but other provinces performing below average (Daily ft,2019). Because of the higher digital literacy in the Colombo district the researcher used the Colombo district to collect the sample. Therefore, this research intends to explore the consumer purchase intention towards refurbished mobile phones in the Colombo district in Sri Lanka. When choosing the sample to generalize the results, cultural, geographic, market, and demographic factors may be considered (Tripathy et al., 2018). Investigating the customer acceptability of refurbished goods in various cultural situations would also be fascinating (Van Weelden et al., 2016). Because of these cultural and demographic differences, it is not possible to extrapolate the acceptability of refurbished smartphones from other nations to Sri Lanka.

The research related to consumer reactions to refurbished products is still in its early stages (van Weelden et al., 2016). Thus, more research is needed to uncover consumers' responses toward the purchase of refurbished products in an actual market setting (van Weelden et al., 2016). Therefore, the current research contributes to the literature by providing new knowledge related to product life extension by identifying the factors that are influencing the acceptance of refurbished mobile phones by Sri Lankan customers. considering the above facts, the researcher developed the research problem as "What are the factors that influence on the consumer acceptance of refurbished Smartphones in consumers in the Colombo district, Sri Lanka?"

2. Literature Review

2.1. Circular Economy in Sri Lanka

The circular economy is becoming more and more popular worldwide because of environmental pollution. In Sri Lanka, there has been a discernible rise in e-waste over the last 20 years, and future growth is anticipated (Ranasinghe et al., 2019). It is evident, then, that Sri Lanka is having issues as a result of the large amount of e-waste that is building up in the country's economy. However, emerging countries such as India, Brazil, Bangladesh, Sri Lanka, Bhutan, and China are struggling to successfully implement remanufacturing and refurbishment processes (Govindan et al., 2016). The majority of Asian nations including Sri Lanka are having difficulties in implementing circular economy principles like refurbishment and remanufacturing practices within the economy.

2.2. Advantages of Adopting the Circular Economy

Adopting a circular economy gives several benefits to the economy as well as to the environment. A lot of nations and organizations are currently concentrating on CE strategies to make efficient use of resources to get rid of unsustainable ways of production and consumption (De Los Rios & Charnley, 2017). Reduction in carbon and greenhouse gas emissions is one of the main advantages of adopting circular consumption (Chaudhary et al, 2015). In addition, recycling-focused supply chains are more expensive but also have greater environmental advantages. Improvement of human health due to less pollution in the circular economy is another advantage of circular consumption (Sagarbossa & Russo, 2017). One method for implementing the circular economy concept is extending the product's life cycle. Regaining value from old products and encouraging a change to a more sustainable consumption model that reuses valuable resources and produces less trash are two major benefits of the circular economy (Ellen MacArthur Foundation, 2012). Thus, it can be stated that the circular economy provides several advantages for both the national economy and the environment.

2.3 Barriers to the Circular Economy's Adoption

Many obstacles exist when it comes to integrating circular consumption into an economy. The biggest obstacles to the circular economy include the need for increased financial support from the government, difficulties establishing an efficient circular supply chain, financial difficulties brought on by consumer behavior, and difficulties in redesigning products (Holly et al., 2023). Government support is essential to implement circular economic practices within a country. High investment related to circular economy practices is another barrier. The majority of Asian nations including Sri Lanka are having difficulties in implementing circular economy practices within the economy because of the above barriers.

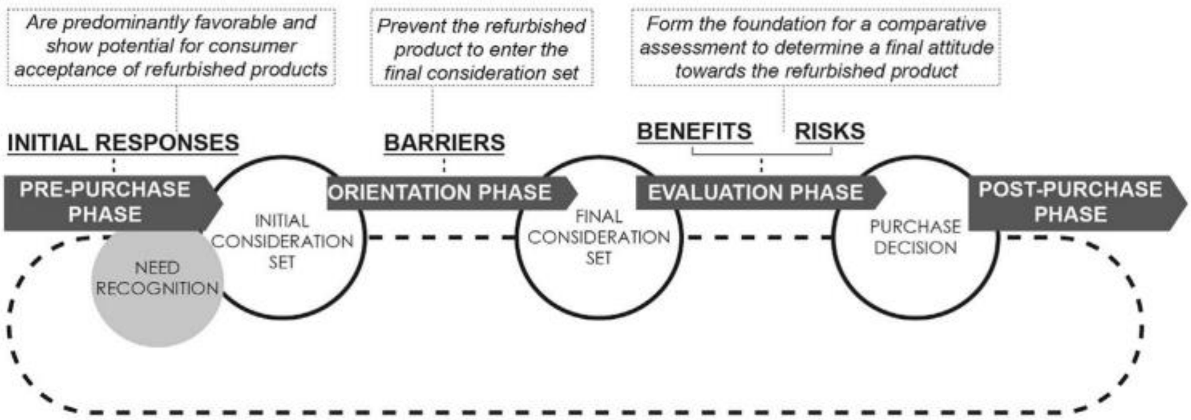
2.4. Consumer Purchase Intention of Buying Smartphones.

Since smartphones first became widely available in the 1990s, the industry has experienced some of the greatest growth rates, with over three billion users globally (Aytekin, Ayaz, & Tüminçin, 2019). Purchase intention is the deliberate decision made by customers to select goods or services, and it can be triggered when they feel that a company is meeting their expectations in terms of appearance or attitude (Spears and Singh, 2004). Wang et al. (2013) found that purchasing attitude, perceived behavioral control, subjective norm, and product knowledge all have a direct impact on purchase intention. Customers prefer a reputable brand when purchasing a new phone to minimize the risks associated with the purchase and remove the instability brought on by the variety of phones available on the market (Surucu et al., 2020). This study is based on a theoretical model of consumer decision-making developed by E. Van Weelden et al. (2015).

This model uses multiple steps to illustrate the decision-making process of consumers. In the initial response stage, it shows the factors that influence to show the interest of consumers towards a certain product. In the orientation phase, consumers decide on alternatives to satisfy their unfulfilled needs. In the orientation phase, consumers identify the barriers to their purchasing decisions.

Finally, in the evaluation phase, customers evaluate the risks and benefits of purchase decisions before purchasing the product. Following an assessment of the risks and rewards, they will consider purchasing the product.

Figure 01: Model of the Consumer Decision-Making Process of Refurbished Mobile Phones



Source: E.Van Weelden et al., 2015

2.5. Product Life Extension of Smartphones

The topic of CE has recently gained popularity among academics and practitioners. Regaining value from old products and encouraging a change to a more sustainable consumption model that reuses valuable resources and produces less trash are two major benefits of the circular economy (Ellen MacArthur Foundation, 2012). In CE, prolonging a product's life is a workable way to cut down on e-waste within an economy. Within the framework of the circular economy, refurbishing is a method that holds great promise for achieving high original value retention rates by extending the life cycle of the product. This leads to a reduction of mobile phone E-waste within an economy.

2.6. Refurbished Smartphone Market

Refurbishment is the procedure by which an expert business gathers discarded goods and fixes them to a satisfactory and functional state before selling them to new customers (Rathore et al., 2011).

According to future predictions, consumption of refurbished products will increase by USD 97.2388 Billion in 2023 to USD 262.1891 Billion by 2032 (Market Research Future, 2023). Therefore, it’s clear that refurbishment is an emerging consumer behavioral pattern in the whole world. Refurbishment is a more affordable and socially responsible way of creating low-end product versions for customers (Weelden et al., 2016). Purchasing a refurbished smart phone provides more advantages for the customers such as the affordability of high-end products at lower prices. Major Smartphone manufacturers, telecom providers, and numerous more third parties offer refurbished devices (Hazelwood et al., 2021). In 2016, smartphone manufacturers Apple and Samsung joined the market for "certified" refurbished smartphones (Benjamine, 2016). Consumers who buy reconditioned devices in developing nations have access to comparatively newer smartphones at attractive prices (Hazelwood et al., 2021). Since Sri Lanka is also a developing country, consumers can purchase refurbished branded smartphones for significantly lower price points.

2.7. Smartphone Market in Sri Lanka

There are frequent fluctuations and changes in the Sri Lankan smartphone market. However, a significant percentage of the population is unable to afford the newest and most expensive smartphone models available because of the economic downturn in the country (ikman. lk, 2023). As a result, the intriguing trend of the used smartphone market reaching unprecedented heights has emerged lately (ikman. Lk, 2023). The market for used smartphones in Sri Lanka is currently rising. Sri Lanka's smartphone sector is expected to generate $0.7 billion in revenue by 2024 and it is expected to expand by 4.60% per year (CAGR 2024-2028) (Statista, 2024). Therefore, there is an increasing trend of purchase of smartphones in the Sri Lankan context and the smartphone industry is a highly growing sector in the world.

Furthermore, Sri Lanka has also undergone a rapid increase in the generation of mobile phone waste (Thavalingam & Karunasena, 2016). Therefore, policymakers need to take necessary actions to reduce mobile phone e-waste within the country. According to the CE principle, the use of refurbished products is a viable way of reducing e-waste in an economy. Also, by adhering to circular economy principles like refurbishment, Sri Lanka can contribute to the global circular economy goals to preserve the environment. In response, (Wastling et al., 2018) claimed that the role of the consumer in CE should be questioned and has yet to be completely investigated. Thus, more research is needed to uncover consumers' responses toward the purchase of refurbished products in an actual market setting (van Weelden et al., 2016).

Therefore, this research intended to explore the factors that affect the consumer acceptance of refurbished smartphones by Sri Lankan consumers in the Colombo district.

3. Research Questions

1. What are the benefits that encourage consumers to accept refurbished mobile phones?
2. What are the obstacles that impact the consumer acceptance of refurbished smartphones?
3. What are the potential risks that have negatively impacted consumer purchasing intentions for refurbished mobile phones?

4. Research Objectives

1. To identify the benefits associated with purchasing refurbished smartphone phones.
2. To identify the obstacles that impact the consumer acceptance of refurbished smartphones.
3. To identify the potential risks that have negatively impacted consumer purchasing intention for refurbished smartphones.

5. Methodology

Qualitative research is mostly used to generate knowledge and comprehend respondents' experiences, expectations, and preferences (Anderson, 2021). Therefore, the primary goal of this study is to investigate the factors that contributed to a rise in the purchase intention of refurbished mobile phones in the Sri Lankan setting. This study utilized eight semi-structured in-depth interviews through the zoom platform is used to explore customer intentions for purchasing refurbished products, aligning with the exploratory objective of the research because in-depth interviews yield valuable insights into consumers' thoughts and experiences (Patton, 2002). Purposive sampling was used to select the respondents for the study. After interviewing eight respondents, the researcher reached to the saturation point. Interviews lasted for 20 to 30 minutes. Interviews are transcribed to documents and thematic analysis is used to analyze the data.

6. Data Analysis and Presentation

In this chapter, the researcher is focused on finding answers to the research questions. This study addresses three questions. The first question is focused on identifying the benefits of purchasing refurbished mobile phones, and the second research question addresses the obstacles that consumers experience when purchasing refurbished mobile phones.

The final research question concerns the potential risks of purchasing refurbished mobile phones. The study is based on the model developed by E. Van Weelden et al. in 2015.

6.1. Pre-Purchase Phase-Initial Response

During the initial reaction stage, we can determine whether consumers accept refurbished Smartphones or not. The interviewed respondents expressed their ideas as follows:

"*Since I need the product to be original, I would rather buy a brand-new smartphone than a refurbished one."* ***(Respondent 2)***

"Purchasing a refurbished smartphone is very safe as compared to a used one, as refurbished phones come with a significant extended warranty period." ***(Respondent 01)***

"I would go for the refurbished smartphone because I don't have money to buy a brand-new smartphone" ***(Respondent 06).***

6.1.1. Personal Factors

Consumers' initial purchasing decisions are influenced by their personal opinions. Consequently, customers' personal opinions have a direct impact on their purchase decisions. The following are some of the personal factors uncovered by the researchers in this study that influence customer purchase decisions.

Brand Loyalty

The perception of the brand determines consumer acceptance of refurbished mobile phones. Some consumers choose to buy refurbished mobile phones from their favored brand rather than those from other brands.

"I will always choose an Apple phone over another mobile phone if I want to purchase a refurbished smartphone". ***(Respondent 1).***

"If I'm going to purchase a refurbished smartphone, I prefer Apple smartphones over Android smartphones because I don't think the Android refurbished smartphones are reliable—there could be issues with the device." ***(Respondent 02)***

Based on the above opinions, the majority of respondents choose to buy refurbished Apple iPhones over Android smartphones due to brand loyalty. Many respondents reject Android refurbished devices due to a lack of trust in them.

Lack of Originality of the Product

The company is replacing some parts of refurbished mobile phones because of defects. Some people opt not to purchase refurbished devices because they wish to use the phone in its original condition.

"Due to the addition of additional components to the mobile phone, the product lacks originality. Because of this, I would rather get a new smartphone than a refurbished one to retain the original features and the experience." ***(Respondent 2)***

Based on the opinions expressed above, it is apparent that some people prefer the product's originality and dislike the transformation process that occurs during refurbishment.

Environmental Consideration

E-waste is a massive global concern. Most countries are implementing circular economy principles. The refurbishment process is also tied to the circular economy notion, as it minimizes E-waste and helps to preserve the environment. Some respondents like to contribute to this environmental preservation by buying refurbished smartphones.

"These smartphones help to lessen the world's increasing e-waste. So, I want to do my part to protect the environment and lessen e-waste". ***(Respondent 02)***

"It is beneficial to recycle batteries and other components rather than throwing them into the environment. As a result, the refurbishment procedure helps to preserve the environment by reducing E-waste within the country". ***(Respondent 04).***

Peer Reviews and Comments in the Social Media

The majority of respondents prefer to consider another person's prior experience when acquiring a refurbished smartphone. They consider social media remarks on the smartphone as well as the shop, which have a significant impact on the respondents' purchasing decisions.

"If I decide to acquire a refurbished smartphone, I will look into my friends' previous experiences with refurbished cellphones. I'd like to take them with me to the store if I'm going to buy a reconditioned smartphone." ***(Respondent 05)***

"I would like to do my own research regarding the product which is intended model of smartphone and shop by using social media like YouTube, Facebook, and Instagram " ***(Respondent 06)***

6.2. Final Consideration – Orientation Phase

If the customer chooses to proceed with the refurbishment product after completing the first stage, they will evaluate the obstacles to implementing the purchasing decision.

6.2.1. Obstacles

Lack of Awareness

Most individuals are unaware of the availability of refurbished mobile phones and do not know where to get one in Sri Lanka. The story of smartphone refurbishing is not well-known among smartphone buyers. Respondents shared the following opinions on the above factor.

"Until now I didn't have the awareness related to the refurbished smartphones in the market."

"I'm not sure if Sri Lanka has stores that sell refurbished smartphones." ***(Respondent 02).***

"I don't know a specific shop to buy a refurbished smartphone in Sri Lanka. People don't know the real story behind the refurbished smartphones in the market." ***(Respondent 01).***

Trust Over Smartphone Retailers

Smartphone purchasers don't trust smartphone sellers because of their unethical practices. Some participants expressed the view that smartphone retailers sell refurbished phones at brand-new prices without revealing about the refurbishment.

"I don't trust Sri Lankan smartphone shop vendors because they might offer refurbished phones for sale at brand new prices." ***(Respondent 02).***

"Some smartphone members sell the repaired products as brand-new products at a brand-new price and it's an illegal thing". "By using the IMEI number, we can track refurbished smartphones." ***(Respondent 08).***

While some respondents are aware that the smartphone's IMEI number can be used to determine whether it has been refurbished, some smartphone purchasers are unaware of this technique.

6.3. Purchase Decision-Evaluation Phase

During this phase, buyers assess the advantages and risks of their purchasing decision. Here, smartphone buyers evaluate the benefits and risks of purchasing refurbished models in comparison to new and used models. If the benefits exceed the risks, they make the final purchase choice.

6.3.1. Advantages

Price

When compared to a brand-new smartphone, refurbished smartphones are substantially less expensive. Electronic product prices increased as a result of Sri Lanka's economic recession prevailing in the country. Therefore, smartphone buyers can save money by buying a refurbished smartphone rather than a brand-new one. Respondents expressed their opinions on the above factor as follows:

"The cost of mobile phones is high due to Sri Lanka's economic recession, but purchasing a refurbished smartphone can save you 10% to 15% on costs." ***(Respondent 01).***

"Buying refurbished mobile phones allows me to purchase a phone at a lower price point."

(Respondent 02).

"Advantages of purchasing a refurbished mobile phone include cost savings…." ***(Respondent 03)***

Warranty

The refurbished mobile phones are attached to the manufacturer and come with a manufacturer warranty, which is an advantage of purchasing a refurbished smartphone over a used smartphone. The below opinions are expressed by the respondents.

"The refurbished devices are still linked to the manufacturer and come with a warranty. Consequently, I believe that purchasing refurbished smartphones is preferable to purchasing secondhand smartphones without a warranty". ***(Respondent 01).***

"One benefit of buying a refurbished smartphone is that we can have a warranty period for them. Most used devices do not come with a warranty period like this". ***(Respondent 03).***

Connection to the Original Manufacturer

The original manufacturer is in charge of the smartphone's refurbishing process. Therefore, the trust in the smartphone is high due to the original manufacturer's involvement. Respondents expressed their opinion over the above factor as follows.

"For example, if I purchase a refurbished Apple smartphone, there is still a high level of trust in the product because it is still tied to the original manufacturer". ***(Respondent 05)***

Fewer Defects in Refurbished Smartphones

Refurbished smartphones may have fewer problems than used mobile devices because the original manufacturer is involved in the repair process. The respondents expressed their opinions as follows:

*"When we buy used mobile phones from someone, we are unaware of defects in them. Some people hide their mobile phones' defects to sell them. Refurbished phones are company-certified phones, so we can obtain a considerable time as a warranty for the phone, but the warranty for used phones is only valid for a short period".****(Respondent 01).***

"We will receive a device that is thoroughly tested and a device in brand new condition."

(Respondent 07)

Some people prefer to buy a refurbished smartphone since the phone is in better condition than a used smartphone.

6.3.2. Risks

Performance Risk

There is a greater chance of having defects with refurbished smartphones compared to buying a brand-new smartphone. These are the opinions presented by the respondents.

"There is a significant risk when buying a refurbished smartphone because I'm not sure what kind of defects and problems caused the refurbishment. "Except for Apple iPhones, I don't 'trust other brands refurbished devices" ***(Respondent 06)***

Therefore, some respondents prefer to buy brand-new smartphones rather than refurbished devices. Consumers perceived refurbished products as being of lower quality products. So, they are refraining from buying those products.

Unethical Practices of Smartphone Shop Owners

The majority of respondents do not trust the opinions of smartphone shop dealers due to their fraudulent actions.

"Some smartphone members sell the repaired products as brand-new products at a brand-new price *and it's an illegal thing. By using the IMEI number, we can track refurbished smartphones."* ***(Respondent 08).***

"Before acquiring a refurbished smartphone, I would like to do my own research on the model I'm going to buy because I don't want to be fooled by the smartphone store owner." ***(Respondent 06).***

Some respondents are aware of tracking the refurbished smartphone by using the IMEI number. Because of unethical actions by smartphone shop owners, the majority of respondents increased their knowledge of the smartphone they intend to purchase.

Most of the respondents are unaware of the circular economy concepts. However, some of them have a fundamental understanding of the circular economy concept and principles.

"I don't know about circular economy and principles related to the circular economy."

(Respondent 01).

"According to my opinion circular economy means a system where resources are used efficiently, products are reused or recycled, and waste is minimized". ***(Respondent 03)***

"Yes, I'm familiar with the circular economy principles, which include designing out waste and pollution, keeping products and materials in use, and regenerating natural systems" ***(Respondent 03)***

Therefore, it is obvious that smartphone buyers have little awareness of Circular Economy principles.

7. Results and Discussion

In this study, the researcher focuses on determining the acceptability rates of refurbished mobile phones among Sri Lankan smartphone customers. Refurbishment is a procedure that adheres to the circular economy concept. In this study, the researcher revealed the smartphone steps of purchasing decision using the model of E.Van Weelden et al., (2015) and discovered that in this process, the refurbished smartphone purchaser evaluates the purchasing decision in several stages before making the final purchasing decision. In the pre-purchasing stage, consumers consider personal factors before going for a final purchasing decision. Personal aspects include brand loyalty, product originality, environmental considerations, peer reviews, and social media remarks.

In the second stage Final Consideration- Orientation phase, smartphone buyers consider the barriers influencing the purchasing decision. In this research researcher found the following factors as obstacles to purchasing a refurbished smartphone. Lack of knowledge about used smartphones and a lack of trust in smartphone shops are obstacles to purchasing refurbished smartphones. The study of E Van Weelden et al, 2015, shows that the majority of consumers do not purchase refurbished equipment due to a lack of information and misunderstanding of what refurbishing entails.

During the purchasing decision-evaluation phase, the refurbished smartphone buyer will conduct a risk-benefit analysis. The researcher identified price advantage, warranty, connection to the original manufacturer, and fewer defects as benefits of purchasing a refurbished smartphone. According to Xu et al. (2017), remanufactured products are 30% to 40% less expensive in China. Therefore, it's obvious that the remanufactured products are less expensive compared to the brand-new products.

The quality and warranty of remanufactured products are somewhat similar to those of brand-new products, making them appealing to purchase (Thierry et al., 1995).In this research also researcher found the above two factors as advantages of purchasing refurbished smartphones. Researchers identified the performance risk and unethical practices of smartphone shop owners as the potential risks of purchasing refurbished smartphones. According to Wang et al., 2013, performance risk is identified as a risk of purchasing refurbished products. Consumers make a purchasing decision if the advantages outweigh the risks. Another important result of this study is a lack of consumer awareness of the circular economy and related concepts.

8. Significance of the Study

8.1. Theoretical Significance

The circular economy has not been widely recognized in Sri Lanka. As a result, this study aims to investigate the factors influencing customer acceptance of refurbished smartphones in the Colombo district in Sri Lanka. People in South Asian countries are not aware of the circular economy principles. Refurbishment is one of the main Circular economy concepts that reduces the E-Waste within a country. Research in consumer response related to the acceptance of refurbished smartphones in the early stages specifically in South Asian countries including Sri Lanka. The findings of the other contexts do not apply to the Sri Lankan context due to cultural differences, geographical differences, and consumer preferences. Hence, the purpose of this study was to contribute completely add new knowledge regarding the circular economy to the current literature from the perspective of smartphone consumers in Sri Lanka. Therefore, in this research uncovered the advantages, obstacles, and risks of accepting refurbished smartphones by Sri Lankan consumers.

8.2. Practical Significance

Every year, millions of electronic items are discarded as a result of manufacturing defects or obsolescence. Therefore, E-waste is a global issue in today’s context. Circular Economy concepts are gaining traction in today's economy as a result of global warming and pollution. Most countries throughout the world are transitioning to a circular economy. The people of Sri Lanka are unaware of the circular economy concept. Refurbishment is a circular economy idea that extends the product life cycle while reducing environmental pollution through the reuse of existing resources and reducing the demand for natural resources. This will reduce environmental pollution by slowing down the replacement cycle. Sri Lankan consumers are unaware of the refurbished smartphones available in the Sri Lankan market. The findings of the study provide some understanding regarding the circular economy concepts and advantages, barriers, and potential risks of acceptance of refurbished smartphones. Therefore, the consumers use the findings to do risk-benefit analysis before purchasing refurbished smartphones over brand-new smartphones. Mobile phone E-waste is a major concern for Sri Lanka as well. Policymakers in Sri Lanka also need to adopt circular economy principles like refurbishment to reduce Mobile phone E-waste in the country by promoting refurbished products. The Sri Lankan government can have contracts with smartphone vendors to establish refurbished facilities in Sri Lanka to promote refurbishment as well to earn income for the economy. However, in order to prevent unethical practices by smartphone retailers, the government must implement suitable legislation to manage this industry.

9. Conclusion

The refurbishment is a circular economy principle, and it extends the product life cycle. The circular economy is an emerging concept, and many economies are transitioning to circular economies. In this study, the researcher utilized the model of E. Van Weelden et al.'s (2015), consumer decision-making model to investigate the factors influencing the adoption of refurbished smartphones during various decision-making phases. During the initial reaction stage, personal factors impact the decision to buy refurbished smartphones. Brand loyalty, product originality, environmental considerations, peer review, and social media comments are all personal aspects that impact purchasing decisions.

In the final consideration-orientation stage, consumers consider the barriers to the purchasing decision of refurbished smartphones. During the final consideration-orientation stage, consumers consider the obstacles to purchasing refurbished smartphones. Lack of awareness, and trust over the smartphone retailer are the obstacles to the purchase decision of refurbished smartphones. In the purchase decision stage, consumers evaluate the risks and advantages of purchasing refurbished smartphones.

The advantages of purchasing refurbished mobile phones are price, warranty, connection to the original manufacturer, and fewer defects when compared to second-hand devices. The risks of purchasing refurbished smartphones are performance risks and unethical practices of smartphone owners. Most of the respondents choose brand-new smartphones over refurbished smartphones. However, respondents prefer to purchase refurbished smartphones over second-hand smartphones. The majority of respondents are unaware of the circular economy and associated concepts, and others have a fundamental understanding of the concept.

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The Impact of Sustainable Human Resource Management Strategies on Organizational Performance in the Licensed Commercial Banks in Sri Lanka: Moderating Role of Line Manager Involvement

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Abstract

Contemporary organizations and international corporations frequently encounter challenges in uncertain competitive environments. Sustainable human resource management techniques aim to develop motivated employees and enhance organizational performance. Management strategies provide employees with long-term opportunities to utilize abilities to use and demonstrate the enthusiasm for learning new. This paper highlights the results of a current investigation to evaluate the moderating role of line manager support and the influence of sustainable human resource management techniques on the performance of companies. The aim of this investigation is to examine how line managers understand sustainable human resource management practices, including the responsibilities and the effects these practices have on organizational performance. The demographics of 24 Sri Lankan Licensed Commercial Banks were examined in the current investigation. As part of the research approach, a mixed technique was implemented, and 107 participants were compelled to complete a self-administered questionnaire. To ensure a significant amount of validity and reliability, this investigation used a range of practical consistency strategies. The SPSS version 21 application was used to obtain the investigation's results. The theoretical framework empirical research was used to establish three hypotheses. These findings support a concept of stakeholder significance in the framework of sustainable human resource management from the perspective of line managers.

Keywords: *Human resource management, Line manager involvement, Organizational performance, Sustainable human resource management practices*

1. Introduction

The demand for more knowledge on business and management, as well as the advancement of human resources and practices, has arisen because of Sri Lanka opening its economy to foreign commerce and investment and consequently establishing the nation as a capable player in the international and global economy (Darwish, 2012). The literature and conceptual frameworks that describe how to successfully implement sustainable human resource management strategies are inadequate. Here is when the study's applicability becomes apparent. Exploring several sustainable human resource management approaches and how they impact organizational performance is the goal of this study. Sustainable and responsible human resources regulations, their daily implementation, as well as their upcoming disclosure, will all have an impact on an organization's internal stakeholders, employees, and their overall well-being and satisfaction, as well as the external participants. Brand reputation and image are favorably impacted by the seeming sustainable human resource management practices. There are significant theoretical and practical repercussions to the primary target of the recommended study being the regulated commercial banking industry. Due to its key location, small population, and scarce resources, the nation presents a significant regional economy that demands strategic investment. As a result, this work is anticipated to add to the literature on sustainable human resource management, especially in the context of Sri Lanka, where more research is desperately needed. This study indicates to contribute to the increasing amount of knowledge in this field of study by exploring and elucidating the theoretical relationship between sustainable human resources management practices and organizational performance. In addition, this study contributed to the domain of study by building on earlier research in the area by providing a variety of theoretical and empirical findings into value-added sustainable human resource management from the impact of human resource practices on organizational performance indicators. The theoretical premise underlying this study's empirical research is that motivated individuals would stay with an organization longer and make positive contributions to its overall financial performance.

2. Literature Review

An in-depth analysis of the preceding works of literature by several authors is given in this going over. Sustainability strategies are creative methods for improving the environment and human behavior overall. Sustainable human resource management provides managerial compliance to the sustainability principles. Employees need to understand why sustainability is important for achieving organizational goals, the consequences when sustainability is disregarded, and specifically what happens when sustainability is disregarded as an operational challenge (Ehnert, 2006). The connections within sustainability and human resource management challenges have only recently come to the forefront, with sustainable human resource management evolving new strategies in acknowledging advantages of impression in comparison of conventional human resource management, which is an improve towards a sustainable development. Sustainability has been continuously an aspect of inquiry and scrutiny in management studies. According to Opatha (2019), there is an expanding appreciation for and desire for people management in Sri Lankan business organizations. An upsurge in the number of human resource management-related initiatives occurring place on the island across multiple domains serves as further confirmation overall of that.

2.1 Overview of Banking Sector in Sri Lanka

Sri Lanka is bounded by the Indian Ocean is an island in South Asia. It is divided into 25 districts and 9 provinces, with Colombo functioning as the nation's urbanized capital and Sri Jayewardenepura-Kotte as its national capital. The official languages of the nation are Sinhala and Tamil. The Central Bank of Ceylon was established by the post-independence Government of Ceylon in 1948 to provide a desirable financial regulation platform and an adaptable corporate sector to foster and advance economic expansion. This was completed to accommodate flexible advances in the economic and monetary framework of that moment. The structure of the economy is made consisting of the Central Bank, which could serve as the primary monetary authority, as well as other regulatory bodies, financial enterprises, trades, investments, a trading and settlement system, a legal framework, and standards. The financial system performs the critical accounting role of a mediator by purchasing from extra inventory and financing to ones in demand. There are three basic categories of organizations that can only be granted, controlled, and monitored by the Central Bank, despite acknowledge that companies receive investments from the general public. Corporations encompass licensed commercial banks, licensed specialist banks, and registered financial enterprises. There are 24 licensed commercial banks, of which 11 are locally developed and 12 are domestic branches of foreign banks. They are all spread out across the nation and the community, with 1,711 branches together with additional service locations (Central Bank Sri Lanka, 2021).Authorities and a regulatory framework are anticipated to oversee and manage the industry of banking. The payment and payment settlement system is the method employed for establishing and carry out financial system processes. The banking industry in Sri Lanka has many potential. However, there are many young individuals in society today, and it anticipates that the banking sector will grow substantially.

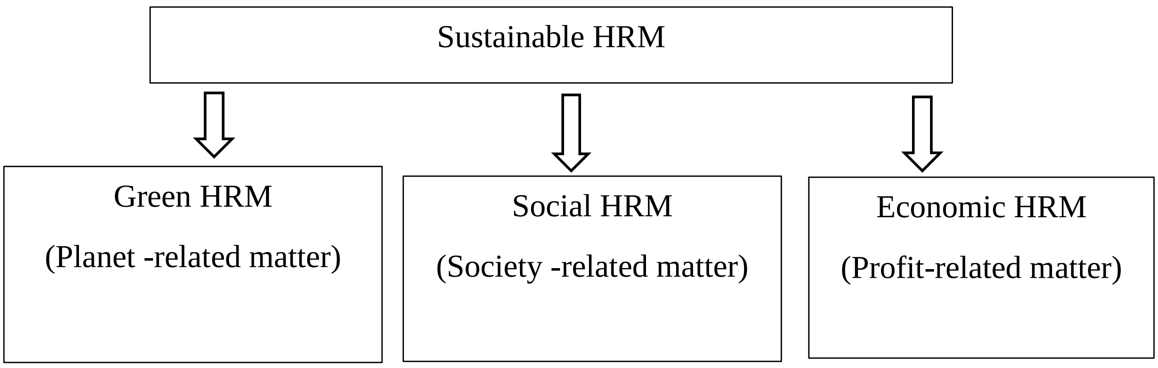
It has been accepted that it is essential to run sustainable human resource management practices with greater efficacy and effectiveness. It was also thought required to change staff members' perceptions of the workplace, encourage them to identify more with the organization, and increase employee awareness of profit in the banking industry. The longstanding lack of complete integration of employee relations into overall business planning and its perception as a second-order, purely facilitative approach have important ramifications for top-level corporate implications. A commercial bank is a financial institution that has been granted permission by the Central Bank to conduct specific banking operations, especially the maintenance of current financial accounts for private customers where investments may be transferred by check and directly retrieved. Deposit participants are required to provide at least some adequate notification before completing a transaction, and they also administer savings accounts. Along with offering a wide range of financial services, they also act as "approved dealers" for currency exchange after receiving permission from the honorable minister of finance.The 1,711 branches and other financial institutions throughout the nation run by the 24 licensed commercial banks, which are particularly well-suited to offer short-term loans as they frequently rely on short-term public deposits for their liquidity.

2.2 Sustainable Human Resource Management

The term "human resource management" refers to all practices created to help manage stakeholders such as employees and customers within a business. Human resource management should ultimately seek out the best method to increase an organization's production through its workforce. Human resource management is a planned, comprehensive approach to managing both the organization's environment and setting as well as its employees. The department members provide the knowledge, necessary resources, learning, administrative support, mentoring, legal counsel, management guidance, and talent management oversight necessary for the entire business to operate efficiently (Heathfield, 2021). Considering the fact that sustainability and sustainable development have an assortment of definitions, the phrase "three principles" is a generally recognized stance on sustainability (Liliana and Alexandru-Ionut, 2014). The "three main pillars" of sustainability economic, social, and environmental trends and outcomes are frequently referred to as such. These pillars and the sustainability criteria make it feasible to take into account the purpose of sustainable human resource managemnet and the relevant management techniques.

The majority of the investigations (72 articles, or 59.02%) are focused on green HRM, according to the investigation, whereas only a minor number (19 papers, or 15.57%) are focused on Triple bottom line. This indicates that, in contrast to the other two discussion sections, the green human resource management specific fields typically offer access to the equipment for research purposes. The prevalence of this attitude may have decreased as a result of changing environmental circumstances, but social and economic problems (such as business failure) remained important. Therefore, expanding research in the more uncharted areas of study will help the whole dimensions. Furthermore, a sizeable percentage of studies focus on eco-friendly human resource management methods, either as a predictor, a mediator, or through volume growth. Other sustainable human resource management techniques interact with regulations. While some studies used a combination of sustainable human resource management techniques (Celma et al., 2018; Yusliza et al., 2017), others (Guerci et al., 2016) concentrated on a specific sustainable approach, such as green hiring or learning. A different group of studies that looked into sustainable human resource management would not focus on a specific procedure or a wide range of behaviors. These studies investigate sustainable human resource management practices as a combination of practices, however there aren't many research that have done this. Instead, it has been widely acknowledged in the leading strategic humnan resource management publications that a fundamental shift is required, from the simple and discrete techniques to a multipack of human resource management practices, to produce more accurate data about the effects of human resource management strategies and practices (Alfes et al., 2013; Chang and Huang, 2005). This indicates that there is a substantial space in the literature that is currently available on the focus on articles of sustainable human resource management practices, which gives a chance for study to investigate focusing greater attention on sustainable human resorce management as a combination of operations. Refer to the figure below.

Figure 1.:Dimensions of Sustainable HRM



Source: (Opatha, 2016)

2.3 Social Human Resource Management

The deliberate, scientific administration of an organization's human capital is known as human resource management. The term "sustainability" is widely accepted in many organizations, and many of them have been adequately persuaded to view it as one of the guiding principles of their corporate strategy, a methodology that places a strong emphasis on its core components and operations for the benefit of society, the economy, and the environment. The development of this business plan makes an assurance that an organization will have a good impact on society, the environment, and the global economy. To emphasize the people-related component, social human resource management, which includes employee and social implications, or the contributions that human resource management may make to societal outstanding performance, could be implemented. Potential impacts of human resource management to diversity in the workforce, employee engagement, work-life balance, workplace quality, and organizational health and safety (Storey, 1992). The sustainable existence of society that promotes equality, morality, a healthy lifestyle, and knowledge is frequently referred to as social sustainability. The results show that the ideas that occur are mainly controlled and linked to societal sustainability. The studies mentioned above demonstrate that social sustainability is human resources' top priority (Ehnert, 2009). Enhancing organizational objectives, career planning, and direction contributes to a more positive working environment. The social equilibrium within the company is aided by these qualities. The idea of sustainability within the company was frequently brought up, and in this context, human resource management provided a substantial appropriate foundation for advancing policies and processes. The corporation's fundamental values and philosophy performed a significant role in improving the workplace atmosphere. This was in line with the findings of Lo et al. (2012), who concluded that norms of society are crucial for implementing sustainability and motivating improvements. The participants thought that corporate culture increased employee satisfaction, which was a crucial component of a productive work environment. Sustainable leadership has received attention from researchers as a crucial component of the social sustainability process. A significant portion of manager support comes from human resource management. It was asserted that, as opposed to only allowing the managers, human resource management has the power to inspire managers to achieve an effective change within the organization in a variety of approaches. DuBois and DuBois (2012) make the opposite claim that human resources do not actively engage in sustainable practices. The role of human resource management in formulating and advancing reforms was the focus of this research. The study emphasized the conundrum surrounding leaders' attitudes about human resource management. Additionally, the informants communicate the idea that the social sustainability initiative is acknowledged as a company obligation and a necessity necessary to keep a positive work environment for the employees. Additionally, several of the huma resource management practices stated in the original sources are the result of ethical deliberation.

2.4 Green Human Resource Management

The term "green human resources management "refers to a group of policies, practices, and strategies that support the green implementation of a company's top management team to create an organization that is resource-competent, socially responsible, and environmentally complex. Green human resource management, a significant trend or component of human resource management, a broad topic of organizational management, is a way of worldwide project in any organization or their range of skill and motivation. The situation appears from the literature that companies are diligently implementing practices for better environmental management, with reduced costs and increased revenue flows, to accomplish significant environmentally related business goals (O'Donohue and Torugsa, 2016). Human resource management is essential to enhance a firm's competitive advantage (Combs et al., 2006). Because it provides a necessary foundation for effectively managing enterprises' environmental impact, research demonstrates that green human resource management is among the greatest techniques for improving businesses' environmental performance (Sudin, 2011). Environmental performance is the organization's dedication to environmental preservation and its ability to show environmental care by establishing quantifiable operational benchmarks (Paille et al., 2014; Roscoe et al., 2019). A significant percentage of businesses globally are still utilizing green human resource management strategies today. It will take a significant academic and professional commitment to the human resource management field to evaluate and appraise these green human resource management approaches, which firms and other organizations are said to be using or planning to utilize. Green human resource management became a quickly expanding topic of organizational studies research after the 1990s. As a result, the objective of this article is to evaluate green human resource management systems using meta-analytic research done by experts in the field. Arulrajah, Opatha, and Nawaratne (2015) set out to evaluate and document green human resource management techniques in firms utilizing the literature that is currently available. At the level of the individual, as well as the functional levels, green human resource management is significant. Employees are both consumers and employees in terms of their separate sectors since they have personal lives in addition to their professional ones. The use of environmentally friendly practices is promoted in both spheres of life. By going green, personnel will be able to develop into upstanding members of society who significantly contribute to environmental sustainability as well as significantly and uniquely contribute to effective business management (Opatha, 2013).

2.5 Economic Human Resource Management

The goal of Sri Lanka's economy is the raising of peoples' quality of living. In comparison to the previously indicated timeline, Sri Lanka's economy hopes to raise living standards in the future. Like that, the term "standard of living" describes the level of contentment that Sri Lankans feel because of receiving their necessary services within the boundaries. Economic human resource management might be viewed as the third "P," or income, of the triple bottom line. Economic human resource management offers high-performance organizations, corporate performance strategies, strategic intent, employee engagement, employee retention, staff turnover reduction, and reduced absenteeism. Whenever examining economic sustainability, consider sustainability that promises economic growth at the expense of the environment. In addition to other benefits, human resources produce economic gains when it contributes to long-term societal sustainability (Ehnert, 2009). Sustainable construction frequently cited economic sustainability as a goal. From an ethical perspective, it was claimed that the only element necessary to guarantee economic sustainability was presentation strategy. The importance of sustainability work was examined considering the intense competition among businesses and the requirement for businesses to stand out from rivals. Being a qualified applicant is even more important considering study, which indicates that sustainability profiles appeal to workers, particularly younger individuals. Sustainable employment was also emphasized by several scholars as a means of enhancing economic sustainability. The human resources department needs sufficient funding to undertake change in a satisfactory manner. Furthermore, as was already mentioned, human resource management initiatives are problematic because there is zero proof that the conventional human resource management methods are being applied successfully. Numerous permits are needed to demonstrate the effectiveness of organizational procedures. In addition, it stated that by receiving this certificate, the company was promoting its sustainability initiatives.

2.6 Organizational Performance

The leadership of sustainable human resources and organizational performance have a direct relationship, and the structure of sustainable human development continues to carry out a more thorough investigation into the sustainable growth of the company in its endeavors to achieve a long-term mission and targets that the organization plan (Anand and Sen, 2000). These long-term directed changing perspectives and operations are centered on producing sustainable human resource management outcomes, such as job satisfaction, employee motivation, retention, and in existence, as well as a social culture between employees and management and employee commitment and involvement. Additionally, they want to hire people and choose them wisely from an economic and social perspective. Due to the sustainable human resource management goals mentioned above, the following metrics will be utilized to measure overall performance increases in revenue, efficiency, product/service quality, customer experience, market value, market share, future investments, and productivity. The analysis has therefore proven that sustainable human resource management has a direct impact on organizational performance. This outcome is also in line with theories put forward by David, George, and Bill (in 1999) that sustainable human resource management can have an impact on organizational, employee satisfaction and goodwill, operational efficiency, the quality of work, creativity and innovation, and employee attitudes at work. Studies show that human resource management has a big impact on how well a business performs. An organization would see significantly higher financial and sales returns than firms that do not widely and actively promote sustainable human resource management and implement it into management choices. According to research, cultural factors can assist an organization in achieving several of its objectives and might possibly be the most important component in determining an organization's effectiveness (Denison, 1990).

2.7 Relationship between Sustainable Human Resource Management and Organizational Performance

Even though humans are typically thought of as an organization's most significant resource, a lot of organizations have been successful in utilizing their potential. Human resource management is defined as the creation of behavioral norms, practices, and processes that have an influence on how individuals behave, feel, and succeed. Each company adheres to human resource management to the letter. Human resource management practices are part of the organization's management of its human resources. Procedures for sustainable human resources have the potential to improve and preserve corporate performance (Satyendra, 2020). Human resource management, which would not merely play a tiny part in those aims and goals, supports the aim and mission of the organization. Considering that human resource management practices are in line with employee engagement is a requirement for the firm to expand and produce effectively. Human resource management procedures and policies must also be effective to provide the company with a competitive edge and to establish the conditions required for achieving the specified goals (Satyendra, 2020). It is well known that a company's human resource base gives it a competitive edge. The professionals, executives, and workers in the fields of technology, advertising, finance, logistics, and many more can all be categorized as human resources in a business. Organizational human resources are also essential to the success of even the most progressive management in this day of unequaled technological innovation. For organizational management to function properly, it is important that the organization implements appropriate and successful human resource management practices and processes. Human resource management is described as a system of human resource practices for a particular job or group of jobs that emphasizes reaching the intended levels of employee performance to meet the aims and objectives of the company. The network of practices is the main emphasis of this human resource management concept because a wide range of behaviors influence how well employees perform. Additionally, it's important to remember that human resource management strategies are developed and used in accordance with the business setting. Although there are different standards for executive and non-executive staff in some companies, everyone is treated fairly in organizations. It is feasible that certain organizations have different requirements for service and operational divisions. Strategies must be put into practice for the company to function properly and efficiently. The procedures must meet the operational requirements of the company. Action is also taken to meet compliance standards. The approaches must be developed in a way that, when used, dramatically improves the organization's internal organizational processes and employee happiness. Human resource management procedures have a continual, considerable impact on employee productivity. An expanding workforce, adjusting to varied work settings and cultures, preparing people for change, reorganizing, and the pervasive and frequently detrimental influence of technology are all standards that the organization's effective human resource management practices have knowledge about. Future human resource management practices shouldn't be consistent. Processes need to be altered frequently to successfully address the issues brought on by the organization's worldwide conditions (Satyendra, 2020). Employee exposure to and perspectives on sustainability are improved by both formal and unstructured sustainability frameworks. Organizational frameworks and cultural norms that support them are required for the implementation of sustainability objectives (Lo et al., 2012). This occurs because workers are more likely to act as system architects at work if their employer improves the work environment (Dumitru et al., 2016). When an employee shares the same values as the organization, they are more likely to feel proud of their time spent there (Tang et al., 2012).

Table 1: The Justifications of the Previous Research.

Authors	Findings	Research Details
(Collins and Clark, 2003)	The study's findings provided evidence in favor of the idea that better business success is positively correlated with HRM. This improvement in performance is the outcome of resources that are focused on employees being strengthened and developed.	The poll included 73 high-tech businesses from the mid-Atlantic regions of the USA.
(Gerhart, 2005)	It was determined that there are some restrictions on how HRM and company accomplishment can be connected. According to this investigation, excellent employee relationships and company efficiency can be reached without HRM.	Between 1995 and 2005, literature on human resource management was examined for this investigation.
(Boselie et al., 2005)	There are significant limits when it pertains to assessing HRM effectiveness and its influence on corporate performance, according to this systematic investigation. As a result, it is impossible to draw the conclusion that HRM has a beneficial effect on company success.	The investigation covered pieces from 1994 to 1995. Studies from 2003 were also discussed in parallel.

(Farouk et al., 2016)	The investigation comes to the conclusion that HRM is associated with improved strategies inventiveness, organizational innovation, and overall business success.	The poll included 165 banks from the United Arab Emirates. There were 23 different human resource practices evaluated via the investigation.
(Foss et al., 2015)	This comprehensive investigation covered the idea that workers who receive rewards for their efforts are inclined to share their expertise. As a result, expertise-sharing human resource management inspires workers, subsequently improving efficiency.	6 Danish auto component manufacturers with more than 18760 employees, of which 8855 took part in the study. Survey were used to collect the data.
(Mallen et al., 2015)	Competent HRM organizations have been shown to positively affect an organization's capacity to grow and enhance the results of its business plan, according to this analysis.	251 businesses with outstanding HRM performance took part in the study.
(Gerhart, 2005)	It was determined that there are some restrictions on how HRM and business success can be connected. According to this investigation, excellent employee relationships and company productivity can be attained without HRM.	Between 1995 and 2005, literature on human resource management was examined for this study.
(Datta, et al., 2005)	It was highlighted that the sort of studies are used to determine the association between HRM and corporate performance.	An investigation was conducted among 132 manufacturing enterprises with at least 100 employees.

Source: Based on material by M. Bakator et al. (2019)

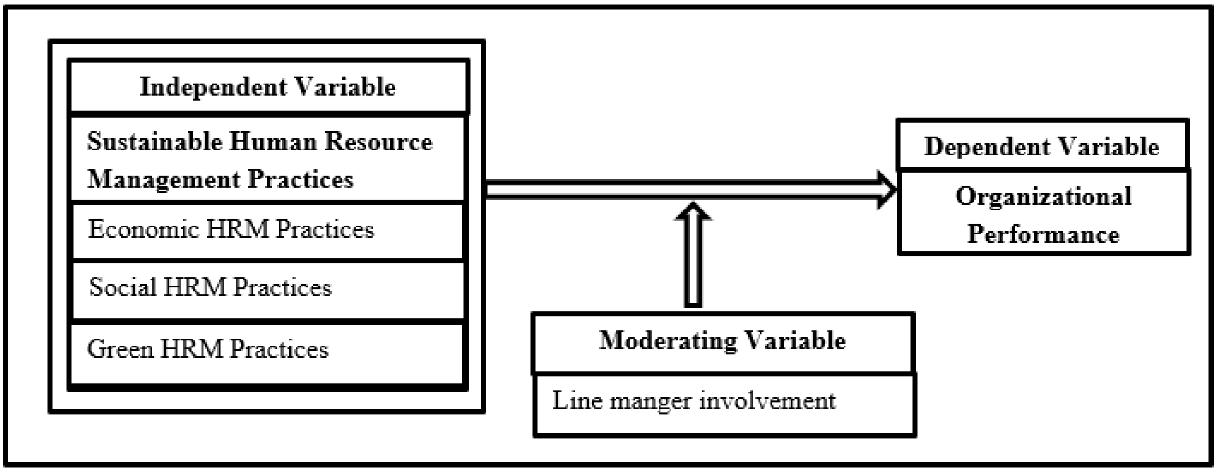
2.8 Line Manger Involvement

An academic analysis suggests that line managers may play a significant role in fostering staff development and learning.The idea of line managers serving as trainers or adjustable factors has been the subject of extensive discussion in recent years. The human resource development article typically sticks to concept and word in order to encourage line managers to fulfill this task. As of right now, there are a number of challenges and problems associated with giving line managers responsibility for human resource development, which must be thoroughly investigated and seriously addressed. The line manager has been one of the major positions that is expanding along with business management and entrepreneurship in the contemporary world. Because it is the simplest solution for executive or non-executive directors to communicate with their staff, line managers have now become particularly essential to the framework of the business organisation (Renwick, 2003). The concept "line manager" emerged in business, and its objective was to manage all company-wide operations while attempting to increase the standard of performance and product output. In order to enhance an entity's sustainability, the line manager is primarily responsible may broaden and interact with those of other managerial level. For addition, line managers' coordination with human resource managers, financial managers, or even risk-taking managers can help the company to maintain operate and achieve its objectives. In the intensely challenging economy, it is fundamental to outsource human resource management functions to line managers (Budhwar, 2000). The prime objective of decentralising human resource management processes is to present management professionals with the possibility to devote their resources at the corporate strategy, permitting the human resource activity to be incorporated directly into the planning process. To comply with that, line managers are given substantial responsibility for supervising human resource management procedures. It has been claimed that line managers are best prepared to respond to regional situations and needs, permitting them to seize control of HRM in their region. Furthermore, as they become more concerned in several HRM operations, such as performance assessment, learning and development, and employment, the line managers and HRM function has increased in significance.

3. Methodology

The present subsection provides a summary of the research methodology and research plan created to empirically investigate the theoretical model described in the prior chapter. This part defines the basic information investigation methodology, demographic and sample issues, and the key survey tool constraints, including survey design, pilot research, survey requirements, and survey processes. Additionally, it facilitates the evaluation of the research variables and provides a summary of the statistical models used in the current study within that framework. The conclusion is the center of the main ethical issues that the present research is encountering. The study decides to get in touch with every organization in the population in order to collect data. As was previously mentioned, the current study uses banking organizations as its unit of analysis. The human resource director, four-line managers who work in Sri Lanka's banking industry are the responses that are being directly targeted. In Sri Lanka, there are 24 companies offering financial services and guidance in the banking services sector. It was contacted by all 24 corporations because of the small total population. The research uses a survey method, which is a well-liked way for collecting data utilizing validated quantitative measurements, as was already described (Darwish and Nusairat, 2008). The primary information was collected through a self-completed questionnaire that the line managers of the licensed commercial banks should fill out. The self-administered questionnaire was applied in this research.

Figure 2: Conceptual Framework



Source: *Author's Compilation, 2022*

A triangulated investigation incorporates or combines quantitative and qualitative research approaches in a scientific study. Two sub-types of mixed research include mixed model research, which employs both quantitative and qualitative methods inside or across study phases, and mixed method research, which employs both qualitative and quantitative strategies for numerous research processes (Creswell, 1994). The present literature employs a hybrid strategy to address the main planned study and achieve its successes. The main source of data used in the study, which is in line with the suggested study, is primary data. This subsection's goal is to provide examples of key data types and the resources from which they were collected. A complete survey was created in order to collect the primary data for the current study, which examines the effect of sustainable human resource management methods on organizational performance. Throughout this study, it is important to note that a questionnaire is defined as a continually written series of questions to which employees or whoever the prospective participants may be may provide their responses, most commonly in the form of a set of possibilities that have been expressly specified (Sekaran, 2003). From the head offices of the 24 licensed commercial banks in Sri Lanka, four line managers, and the head of the human resources department were nominated. Because of the study's engagement with the line managers and their academic backgrounds and professional networks, gathering data from the potential respondents was made simpler. Emails and phone calls were used to communicate with a sizable majority of managers. The majority of participants decided to send the survey by email or a widely used mobile application (WhatsApp, Viber, etc.), which they thought to be more pleasant to complete. This was because the survey method was supplied in both softcopy (Google-form) and hardcopy formats. The cover letter that came with the questionnaire included a summary of the research questions. Participants were required to complete the survey in order for this study to be completed. The questionnaire has very specific instructions for participants, and it looks well with a cover letter outlining the goals of the study and protecting participant anonymity. A questionnaire was created as opposed to the conceptual framework. There were a total of 50 items in the survey, broken down into 5 divisions. In order to gather information on the respondents' demographic profiles, Part-I had four categories: age group, gender, highest degree of education completed, and job experience in the most recent organization. Part II contained 21 statements that did not use sustainable human resource management techniques. Eight-line manager involvement-related questions were in Part III. Part-IV contained 8 line manager support-related events, whereas Part-V contained 13 things relating to organizational performance for companies. The questionnaire, which was effectively used after the pilot study, has five main components. It was specified that feedback made by respondents would be kept anonymous and treated in a confidential manner. Respondents accepted a two-week engagement period. Those who submitted the questionnaire obtained a message or phone call to encourage non-participants to complete the assessment.Sample size of the each bank was 5. 107 respondents completed the survey. 89.1% of respondents to the study, according to the results. Saunders, Lewis, and Thornhill (2009) state that surveys that are self- administered and in-person interviews ought to have a rate of responses of at least 50%.

3.1 Hypotheses Development

The presumed existence of a correlation between variables that are investigated with the use of empirical data are known as assessment research hypotheses. As per Teddlie (2007) and Creswell (2011), a research study may choose to employ hypotheses in order to establish a connection among the numerous factors that have been noted. The theoretical underpinning of the questionnaire is evaluated by hypotheses testing, which looks at how independent factors influence the dependent variable. The data presented gathered from line managers in Sri Lanka's banking sector and head level employees in human resources was then combined with the findings. Based on the above described logic, assume the following:

Hypothesis 1: Impact between dimensions of sustainable human resource management practices and organizational Performance.

The organizational performance was greatly impacted by sustainable human resource management techniques and line manager involvement. According to earlier studies, people are more willing to advocate for sustainable practices in order to improve organizational performance. The issue of sustainable human resource management has been promoted by over three decades of research. The proper research covers a wide range of topics, from the industry's substantial contributions to the present day's ground-breaking studies. In addition, there is little agreement among academics as to what sustainable human resource management entails (Avery, 2005). For instance, various studies have used the terms "sustainable construction of people management," "sustainable work systems," "sustainable command structure," "sustainable organizations," "sustainable human resource management," "green human resource management," and "human resource management centered on social responsibility" to describe these initiatives (Ehnert, 2006). Even if labels or criteria may change, they all highlight the need for human resource management in businesses to maintain a balance between economic and social goals in order to achieve organizational performance (Morrison, 2003).

H1: There is a positive impact between dimensions of sustainable human resource management practices and organizational performance in the licensed commercial banks in Sri Lankan context.

Hypothesis 2: Relating to moderating impact of line manager involvement on the relationship between Sustainable Human Resource Management Practices and Organizational Performance.

The subject follows logically that line manager involvement in sustainable human resource management methods has a positive effect on organizational performance. Sustainable behaviors are the independent variable, and organizational performance is the dependent variable. The moderator is the line manager's participation. Line manager support is believed to materialize between the times that sustainable human resource management methods are put into use and when they start to influence organizational performance. Line manager engagement, as a result, has a temporal quality, serves as a role of sustainable practices, and helps to explain how sustainable practices affect the variability of organizational performance. The second hypothesis of the investigation was developed considering this justification.

H2: Line manager involvement moderates the impact between sustainable human resource management practices and organizational performance.

Hypothesis 3: Relating to pragmatic suggestions for improving the practice of sustainable human resource management as per the perception of line managers in Sri Lankan Licensed Commercial Banks.

The goal of environmentally friendly human resources is to create a healthy workplace culture for the company's clients over the ensuing decades. The job is influenced by both societal developments and regulations. The various points of view were discussed regarding the discussion of work fulfillment, which was shown to be more important to accomplish performance. It was believed that advancement and improvement in the many disciplines contributed to a happy work environment. To progress sustainability-related issues and be able to show how doing so would increase the profitability of their firms, human resource experts and line managers need to be especially determined to do so. The following assumption is used to develop the third hypothesis.

H3:Recommend the pragmatic suggestions for improving the practice of sustainable human resource management as per the perception of line managers in Sri Lankan Licensed Commercial Banks.

4. Results

When examining prospects for frameworks, methods, and regulating procedures to achieve change within an organization, considerations regarding sustainable practices focused on the degree of significance the firm provides to good characteristics and talents. With relation to the involvement of line managers, a discussion of the organization's most feasible methods for evaluating sustainable human resource management practices was offered. Responses were questioned on the main performance measures used to assess development prospects.

4.1 Reliability and Validity of the Research Constructs

A dimension or metrics should satisfiers the concept it is monitoring throughout time and managed for the assessment to be reliable (Field, 2009). The inter-item uniformity of the present study indicator was examined utilizing the most frequently used scale reliability parameter, Cronbach's alpha coefficient, invented by Cronbach. In the research world, executing Cronbach's alpha is a routinely popular and commonly acknowledged method for determining reliability (Tabachnick and Fidell, 2007). Nunnally (1967) states that an alpha coefficient of.50 or above is essential to predict internal consistency, even though other academics claim that an alpha coefficient of.70 or higher is an appropriate value (Sekaran, 2003). Table 2 illustration of the reliability analysis statistics demonstrates that all measures achieved the reliability standard, with Cronbach's alpha coefficients.

The internal consistency dependability has been investigated by the investigator applying Cronbach's Alpha.

Table 2

Variable Name	Cronbach 's Alpha	Decision Rule	Comment
Sustainable Human Resource Management Practices	0.984	0.984>0.7	Reliable
Line Manager Involvement	0.853	0.853>0.7	Reliable
Organizational Performance	0.847	0.847>0.7	Reliable

4.2 Validity of the Research Constructs

The reliability of the scientific studies or whether the constructs accurately estimate what they were intended to evaluate are both recognized by validity (Golafshani, 2003). Content validity and construct validity are two frequently adopted approaches for executing validity tests that are used in social science research to determine how well the research methodology is operating. The research mechanisms utilized for this analysis have already been constructed in to safeguard their face validity because they were method is slightly after a careful examination of the previous research. Additionally, it is improved considering the advice of the pertinent professionals. Additionally, the conceptualization and successful implementation of the parameter review of the literature helped to insure this relevance. After creating a preliminary characterization found in the narrative, the variables' measurements and components were meticulously defined. Additionally, the method's core consistency dependability was very elevated. To ensure the logical progression of the issues and their correspondence to the constructs they monitor, all the recovered items have also been assessed and adequately assessed by several members who are experts in the field.

Relationship between the dimensions-

Hypothesis 1: Relationship between dimensions of sustainable human resource management practices and organizational performance. The correlation showed a very high positive correlation since the Pearson correlation coefficient was 0.905 and significant at 0.001.

Table 3

		OP	Sustainable HRM
OP	Pearson Correlation	1	0.905
	Sig. (2-tailed)		0.001
	N	107	107

Hypothesis 2: The correlation table showed the individual significance of the moderate variable. It showed a 0.714 level of significance and a 0.000 value. Thus, the individual significance of the moderate variable of line management involvement was significant with a very strong correlation and when there were no independent variables the significance level of the moderate variable was not present.

Table 4

		OP	Line manager involvement
OP	Pearson Correlation	1	0.714
	Sig. (2-tailed)		0.000
	N	107	107

4.3 Testing Hypotheses

The primary objective is to determine how the dimensions of sustainable human resource management practices improve the performance of the organization. The model description indicated that the model had an R square value of 0.721. Therefore, it can be expected that all the independent and moderate variables will be able to predict or explain 72.1% of the variance in the dependent variable of organizational performance. Given that the regression model has predictability of greater than 50%, the model may be considered dependable.

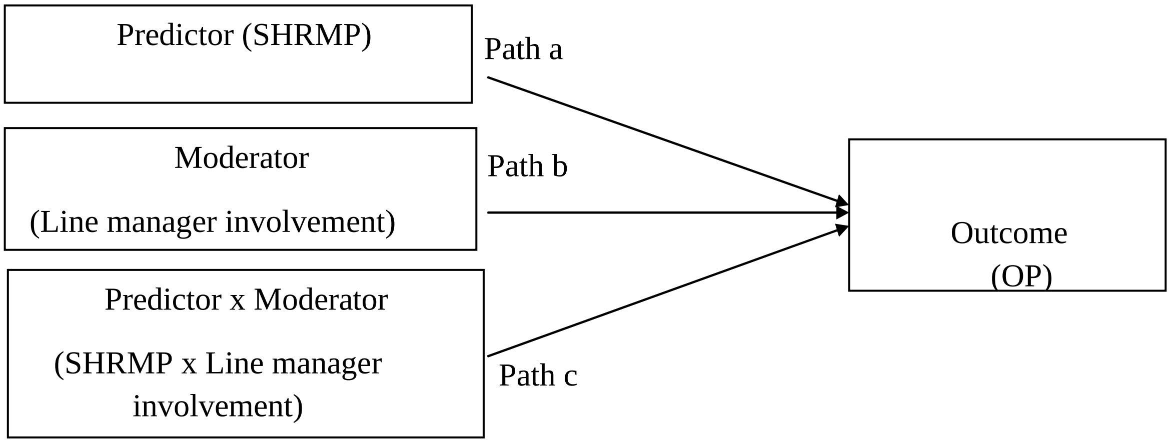
Table 5

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.862[a]	.721	.682	0.215

ANOVA[a]					
Model		R Squares Change	Df	F	Sig.
1	Regression	.721	5	58.68	.000
a. Dependent Variable: OP					

The second objective is to investigate whether line manager involvement has a significant moderating effect on Sustainable Human Resource Management Practices and Organizational Performance. The model summary of hierarchical multiple regression, table 6 showed how the variables explained the variation of the dependent variable. Therefore, the considerable level of variation is explained by the moderate variable. The Baron and Kenny three steps method was used When it comes to the overall significance of the regression model existing between line management involvement and organizational performance. The p value for path C is 0.024 (P 0.05), which indicates that the effect is statistically significant, according to table 6 Additionally, the relations term, which has the value 0.563, was linked to the R square change, per Table 6. In other words, the first order effect of SHRMP on OP depended on the outstanding character, while the interaction between SHRP and line manager involvement accounted for an extra 56% of the variance in organizational performance.

Figure 3: Moderation Model of the Research



Source: *Constructed by the author based on Baron and Kenny (1986)*

According to Judd and Kenny (1981) and Baron and Kenny (1986), establishing the moderating effect entails three essential steps:

Step 1: Researchers must show that independent circumstances have a substantial influence on the dependent variable. This phase is critical because it explains that an impact evolves that possibly will be moderated; without it, it would be exciting to demonstrate the consequences of moderation.

Step 2: Next, investigators must decide whether the independent variables considerably adjust the moderating variable. The moderator variable is explanations as an outcome fluctuating in this technique.

Step 3: In the third step, investigators should demonstrate the relationship between the foremost independent variable and the dependent variable using the moderating variable.

Table: Testing Moderating variable of line manager involvement using Hierarchical Multiple Regression.

Table 6

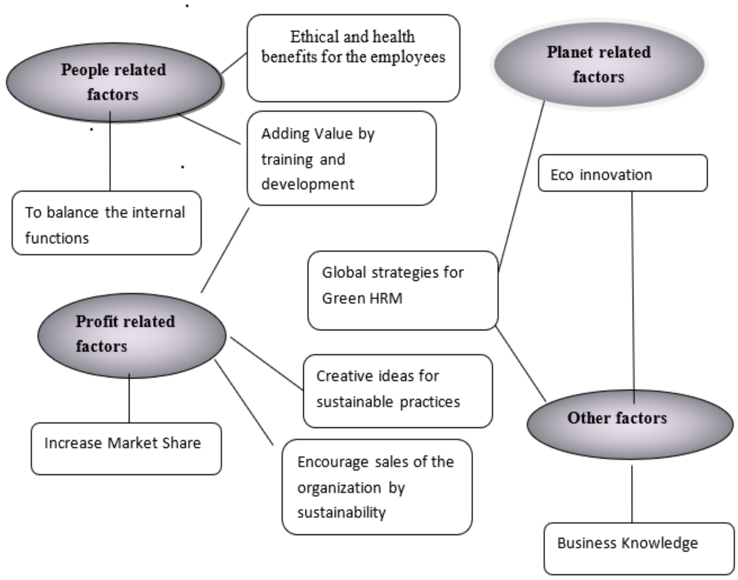
Testing Step	β	B Std. Error	Sig. t	R^2
Step I (Path a) Outcome: OP Predictor: SHRMP	0.743	.068	0.000	0.239
Step II (Path b) Outcome: OP Predictor: Line manager involvement	0.399	.105	0.000	0.521
Step III (Path c) Outcome: OP SHRMP x LMI	0.523	.147	0.024	0.563

Source: *Survey Data*

4.4 Thematic Analysis

The third research objective focuses on examining the major components highlighted in sustainable human resource management research. The main conclusions drawn from the papers considered in this subsection have been summarized by researchers. A summary of the main sustainable human resource management principles and the people who worked on them are shown in figure 4 in general. For this study, a methodical approach was used. Inductive analysis is used to analyze data using Braun and Clarke's (2006) theme analysis method. Prior to moving on to important research issues, focus on the many types of sustainable human resource management practices. According to Boyatzis (1998), a code is "the most fundamental component, or component of the raw information or facts which can be evaluated in a significant way interpretivist." The analyst is currently attempting to group the data into pertinent groups. According to Braun et al. (2006), processing can be carried out either manually or with the aid of a software program. For this study, a methodical approach was used. Colored pencils can be used to stress appropriate foreseeability throughout manual cording, according to Braun et al. (2006). Following an order, all retrieved raw data were integrated into each function. After compiling a thorough list of all conceivable characters, the investigator worked together to organize the potential sources of errors into categories. This was accomplished by gathering all the necessary details about the data samples that fit the above concepts. Concept maps and graphs are among the approaches Braun et al. (2006) suggest using to accomplish this. The study made use of a thematic map. These are the terminology used to describe how a theme was produced using a combination of algorithms. On these issues, the researcher also conducted an analytical analysis. This led to the improvement of those themes. The researchers carried out this using the known internal homogeneity and heterogeneity standards (Tellis, 1997). That necessitates both significant and obvious variances across all themes as well as data that is coherently relevant across all topics. At this point, the analyst clarified the concepts and examined the information they contained. According to Braun et al. (2013), characterizing and enhancing include both figuring out what each theme is about and comprehending what component of the facts each theme stands for. Figure 5 shows the theme map for "why sustainable human resource management practices should link with organizational performance" as it has been finished. Thematic analysis has stretched the parameters of the qualitative research inquiry. They illustrated how intricate the sustainable human resource management paradigm is. It was making the connection between triple bottom line human resources, socially responsible human resources, and green human resources as the three essential elements of sustainable management (Miranda et al, 2020). According to the study, regardless of how much of the common good human resource is related to the social, ecological, or triple bottom line dimensions, it falls under one of the key categories mentioned above. Research should look at the various viewpoints that academics chose while looking into the sustainable practices model that contributes to the conversation on sustainable human resource management classifications. Through thematic analysis, which will recommend the practical suggestions for improving the practice of sustainable human resource management as per the perception of line managers of Sri Lankan Licensed Commercial Banks, the seventh objective in chapter one of this study was accomplished. In this study, the line managers were asked for their opinions on how to implement sustainable human resource management considering globalization's impact on scientific and technical advancement.

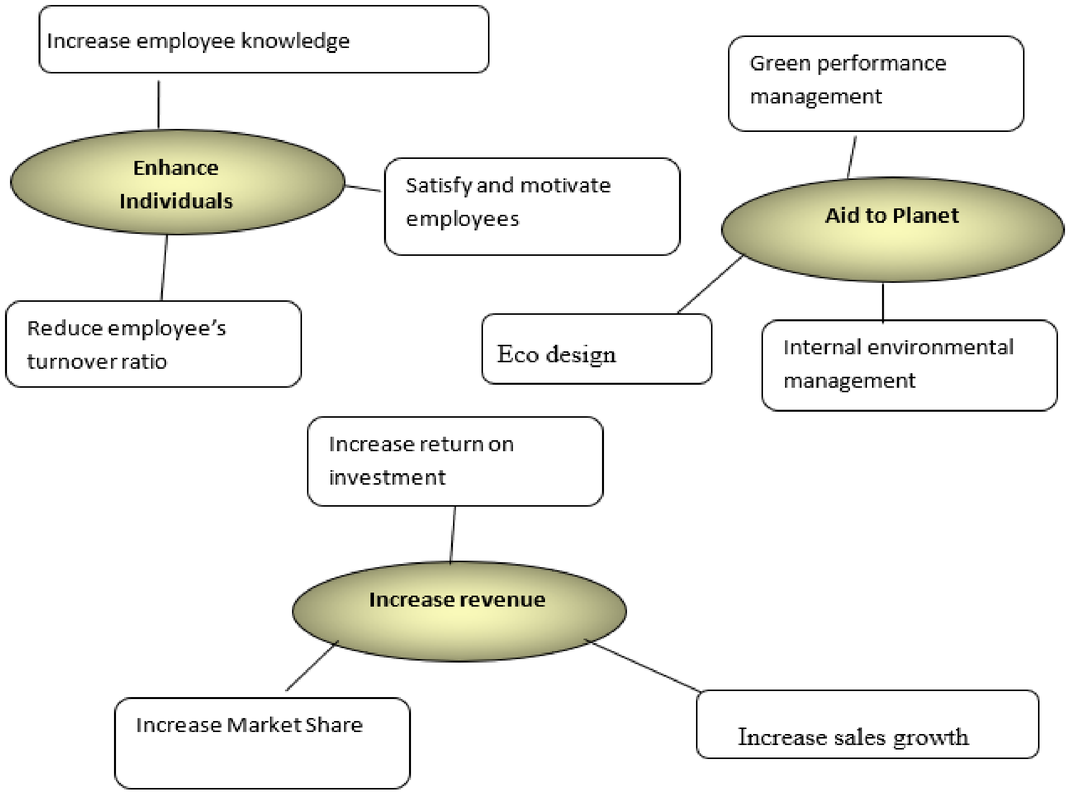
Figure 4: Initial thematic map showing why sustainable human resource management practices should link with organizational performance.



Source: Survey Data

In this chapter, the technique for data collecting and analysis was explained. Considered at statistics from outliers, the impact of missing data, and the fundamental presumptions of multivariate techniques. Based on the research of extreme values, there were no noteworthy events that could be accepted as essential values. The results equally show that all the information is distributed evenly, even after excluding the organization-related variables that have been altered by considering their logarithms. The findings also proved that there was a substantial degree of correlation between the independent variables and the dependent variables in this study.

Figure 5: Final thematic map showing why sustainable human resource management practices should link with organizational performance.



Source: Survey Data

5. Conclusions

Accordingly, by analyzing the overall effect of sustainable practices on organizational performance measurements and identifying those characteristics that result in greater success, the suggested study offers to the body of knowledge (Renwick et al., 2013). According to this analysis, implementing green, social, and economic practices can improve an organization's organizational performance, which in turn supports a company's sustainability. Furthermore, the findings of this study validate and sustain traditional insight. According to the report, more sustainability can be reached by implementing environmental management strategies in human resources and innovation. The study's primary purpose was to consider whether sustainable HRM practices are considerably and favorably connected with organizational performance. According to the data findings, organizational performance and sustainable HRM are favorably and significantly associated with the moderating effect of top management support and line manager involvement. As a result, the first analyzing theme was implemented out, showing how sustainable development and practices might improve an organization's performance. A sustainable approach is a sustained engagement and organized technique that advances socially responsible and sustainable standards to enhance perceived organizational performance. It places a strong emphasis on putting new practices into proper procedures so that businesses can become more successful and productive. As a result, the first analytical concept was carried out, showing how sustainable development and practices might improve an organization's performance. Thus, the current research encourages the use of sustainable management aspects in the cross-functional domain by highlighting the ways in which creative approaches can build capital to improve green, social, and economic performance. In light of these findings, the environmental design needs to take goals and objectives into account (Pham et al., 2020). As a result, line manager support plays a key role in moderating the relationship between performance and sustainable HRM practices. The banking industry, which controls the ever-changing world, is always looking for new and innovative business ventures to enter or expand into in order to stay relevant. Companies face pressure to make the best use of its people and physical resources in order to reduce costs and maintain a competitive edge.Human resource management and sustainable innovation capacity can lead to more environmentally friendly companies by binding sustainable human resource management and organizational performance to the moderating impact caused line manager involvement, which has not been investigated in insufficiently developed countries' economic development (Chaudhary, 2020). It also attempts to advance sustainable research performance by examining potential interactions between the three primary elements in the banking sector to guarantee sustainability. The present research investigation expands the body of knowledge on sustainable human resource management practices from a philosophical viewpoint, with assistance from upper management along with participation from line managers in the working environment. Moreover, the principles of ethics direction of the sustainable human resource management practices relationship banking framework in Sri Lanka's licensed commercial banking sector is supported by the current study in terms of assessments of line manager engagement, moderating influence, and organizational performance. The study also includes empirical studies showing that line manager involvement govern the relationship between sustainable practices and organizational success. This method adds to the quantity of knowledge already in existence, improving our understanding of the topic. In highly modern nations such as the US and the UK, the majority of the prior research presented in this section was conducted. Thus, researchers in humna resource management have often noted that in many cases, more research is required and that drawing broad conclusions from these findings is still difficult (Almarzooqi, Khan, and Khalid (2019); Paauwe and Boselie, 2005). In response to that call, this study the first of its kind for Sri Lanka was conducted, and its importance has already been highlighted. The design of this study should serve as a foundation for similar analyses in situations involving the licensed commercial banking industry. The present investigation extended to the experimental study by building on earlier research in the environment and demonstrating the value-added Sustainable human resource management practices forward through influence on organizational standards for performance assessment. According to the study, the majority of sustainable human resourece management activities can reduce employee turnover rates, and at the very least, a number of human resource practices have a positive impact on the performance of organizations. Considering the vast amount of research on sustainable practices that have been conducted over the past ten years, no based on proof study has attempted to show that subjective and objective organizational performance metrics are positively correlated. Therefore, the goal of the present investigation is to close this gap by conducting a thorough analysis of sustainable human resource management practices in Sri Lanka and identifying the disparities between objective and subjective organizational performance measurements and how they relate to human resource practices. This study favored using both subjective and objective organizational assessments to measure the viability of the proposed theories. These findings broaden comprehension of the research and raise some important concerns regarding the previously accepted and defended relationship between elements of sustainable practices and organizational performance indicators. Because of these findings, the research's study area might be more problematic than it has ever been. Though there at present insufficient proof in the literature on sustainable human resource management to support their practicality, the majority of empirical work on sustainable HRM-practices has recommended integrating these measurements because they are deemed necessary and can accurately reflect performance measurements. It is highly recommended by observations to source performance data about an organization primarily from HR directors or similar players. Alternatively, we suggest integrating some objective performance measures in order to reach a definitive decision in regards to this problem.

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The Influence of Determinants on Corporate Dividend Policy: An Empirical Study of Food, Beverage, and Tobacco Companies Listed on The Colombo Stock Exchange in Sri Lanka

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Abstract

The formulation of corporate dividend policy is a critical decision in corporate finance, yet the determinants influencing these policies remain inconclusive, particularly within specific industries. This study aims to examine the key factors that influence the dividend policies of companies within the food, beverage, and tobacco sectors listed on the Colombo Stock Exchange (CSE) in Sri Lanka. By including tobacco companies alongside food and beverage firms, the research captures a broader spectrum of the industry, recognizing the interconnected nature of these sectors in the Sri Lankan market. Adopting a quantitative approach, the study analyzes data from 15 selected companies over a ten-year period (2011-2020), using secondary data sources. The impact of profitability, leverage, firm risk, and firm size on dividend policy was assessed through multiple regression analysis. The findings reveal that both profitability and leverage have a significant positive relationship with dividend per share, while firm size exhibits a significant negative relationship. Conversely, firm risk shows a negative but statistically insignificant relationship with dividend per share. These results provide valuable insights for financial managers in developing dividend policies and assist investors in making informed investment decisions. The inclusion of tobacco companies ensures that the findings are relevant to the entire spectrum of the food and beverage industry, reflecting the unique dynamics of these sectors in Sri Lanka.

Keywords: *Dividend policy determinants, Firm risk, Firm size, Leverage, Profitability*

1. Introduction

1.1. Introduction

The expectation of Shareholders for investment in a firm is to receive regular income in the form of a dividend that may be cash or another valuable monetary value. Shareholders consider that the income of the firm is one of the factors considered for shareholders' return rather than price changes, but there are some other determinants which influence the dividend policy. Therefore, it is important to consider consistent dividend patterns. Dividend policy is principally concerned with the decisions related to dividend payout and the retention of the firm. (Lease, Lewellen, & Schlarbaum, 1974) stated that the practice is adopted by managers in organizing dividend payout decisions. It describes the amount of cash to be distributed to the shareholders and what is to be retained by the firm for further investment. A policy of firms considers the number of profits to be retained and that to be distributed among shareholders. The firms mainly focus on the maximization of the wealth of shareholders since every investor aims to get a return from the shareholder's investment. Therefore, it depends on the dividend policy of the firm and related decisions.

Table 4: Dividend Value in CSE Company

Company name	DY value
Aitken spence plantations	17.6
Grain elevators	14.5
C.W.Mackie & CO	13.0
Vallibel power	12.2
Frist capital	11.2
Watawala plantations	11.1
LB Finance	10.6
Three Acre farms	10.3
People insurance	9.4
Alliance Finance	9.2

Source: Softlogic Stockbrokers

High Dividend Yield Stocks (As of September 3rd):

This table lists companies with high dividend yields, along with their share price, PER, PBV, and ROE.Aitken Spence Plantations stands out with the highest dividend yield of 17.6%, which is exceptionally high compared to the market average of 2.6%. This suggests that the company is distributing a substantial portion of its earnings as dividends, making it attractive to income-focused investors. Grain Elevators and C.W. Mackie & Co also show strong dividend yields (14.5% and 13.0%, respectively), indicating robust dividend payments relative to their share prices. Vallibel Power has a notable ROE of 26.0%, indicating efficient use of equity capital to generate profits, while Watawala Plantations has the highest ROE of 35.8%, reflecting strong profitability relative to shareholder equity. LB Finance and Three Acre Farms also exhibit strong performance with double-digit ROE values, making them potentially attractive to investors seeking both dividend income and capital appreciation. Companies with high dividend yields, such as Aitken Spence Plantations and Grain Elevators, might be appealing for investors looking for consistent income. However, it is crucial to consider the sustainability of these dividends, as very high yields could sometimes signal underlying risks or a lack of growth opportunities.

Table 5: Dividend Value S & P Company

Company	Dividend per share value
Expolanka holdings plc	8.19
Chevron lubbricants	7
Melstacorp plc	5.4
Hayleys plc	5.34
Hatton national bank	4.5
Sampath bank	4.6
Commercial bank	4.5
Dipped products	3
Royal ceramic lanka	2.9
Softlogic life insurance	2.8
CIC holdings	2.35
Hemas holdings	2.25
Lanka IOC	2
John keels holdings	8.19
Richard pieris company	0.6
Sri lanka telecom	0.25
Browns investment	0
LOLC holdings	0
Vallibel one plc	0

Source: www.reddit.com

This table lists the DPS of S&P 20 companies, showing how much dividend income you would earn by owning one share from each company. **Expolanka Holdings PLC** and **John Keells Holdings**

PLC have the highest DPS at 8.19, suggesting strong dividend payouts compared to others in the S&P 20 list. **Chevron Lubricants Lanka PLC** also has a solid DPS of 7, followed by **Melstacorp PLC** (5.4) and **Hayleys PLC** (5.35). These companies are likely maintaining a consistent dividend policy, rewarding shareholders with a steady income stream.On the lower end, companies like **Sri Lanka Telecom PLC** and **Richard Pieris and Company PLC** offer minimal DPS (0.25 and 0.6, respectively), which might indicate lower profitability or a more conservative approach to dividend distribution. Some companies, such as **Browns Investments PLC** and **LOLC Finance PLC**, do not offer a clear DPS, either due to insufficient data or a decision to retain earnings rather than distribute them.

Business operations have evolved significantly due to globalization and market capitalism, leading to diverse approaches in business functions, policies, and procedures across different regions. Emerging markets, like Sri Lanka, differ from developed markets in the factors that influence dividend policy. Identifying the determinants of dividend policy and their effects on shareholders in such contexts is challenging, especially as market conditions and investor expectations differ from those in developed economies.

This study specifically examines the determinants of dividend policy in the food, beverage, and tobacco sectors listed on the Colombo Stock Exchange (CSE) in Sri Lanka. The sector exhibits varying dividend per share (DPS) rates across different companies, with some firms showing high DPS rates while others report lower or fluctuating rates. These variations can be attributed to factors such as profitability, leverage, firm size, and firm risk. However, the current research lacks a comprehensive statistical analysis that clearly presents these determinants and their impact on dividend policy, which this study aims to address.

The existing literature on dividend policy predominantly focuses on developed markets, with limited empirical research conducted in developing countries like Sri Lanka. As a result, there is insufficient understanding of how dividend policy determinants operate in the Sri Lankan context. This study seeks to fill this gap by providing a detailed analysis of the impact of profitability, leverage, firm size, and firm risk on the dividend policies of companies in the food, beverage, and tobacco sectors in Sri Lanka.

1.2. Problem Statement

Business operations and their functions were drastically developed with globalization and market capitalism. Different companies adopt diversified approaches in their business functions, policies, and procedures. It is noticed that emerging markets differ from developed markets, and the determinants of dividend policy in business entities can be different from developed markets to developing markets. Hence, it is difficult to identify the determinants of the dividend policy and its influence on the shareholders as situations in different contexts have changed. It is important to enhance our knowledge of this debatable issue from an emerging market perspective. When analyzing the empirical study papers, the researcher highlighted the various kinds of ideas about the determinants of the dividend policy ((Periyathamby, 2012), (Al-Kuwari, 2009)).

According to the Colombo Stock Exchange (CSE, 2020), the dividend policies of companies in the Sri Lanka Food, Beverage & Tobacco sector have different rates. Some companies have higher DPS rates for the financial year (Ceylon Tobacco Company PLC, Nestlé Lanka PLC). But some companies have lower dividend per share (DPS) rates (Distilleries Company of Sri Lanka PLC, Browns Investment PLC), and some companies use the dividend per share (DPS) at a middle rate (Lion Brewery Ceylon PLC, Ceylon Cold Stores PLC).

According to the Global Industry Classification Standard (GICS) industry groups as of May 31, 2021, under the Colombo Stock Exchange, annual reports have stated that the dividend per share (DPS) of the food, beverage, and tobacco sector has changed the over years. Sometimes dividend per share (DPS) decreases each year. For example, Carson Cumberbatch PLC company. And dividend per share (DPS) of some companies has increased over the years, like Tobacco Company PLC, and Three Acre Farms PLC. When the profitability of listed companies increases, dividend per share (DPS) also increases (Ceylon Tobacco Company PLC, Three Acre Farms PLC). The dividend per share (DPS) also reduces with decreasing profitability according to research (Nestle Lanka PLC). On the other hand, the dividend per share (DPS) decreases when the leverage level increases (Nestle Lanka PLC). When the leverage level of this listed company decreases, the dividend per share (DPS) increases (Lanka Milk Food (CWE) PLC). Furthermore, the dividend per share (DPS) increases when the firm size (total asset of the company) increases (Carson Cumberbatch PLC). The researcher shows that when the total asset of the company which means the size of the firm decreases, the dividend per share (DPS) also decreases (Distilleries Company of Sri Lanka PLC). Therefore, it is important to identify the impact of significant determinants on the dividend per share (DPS) rates to understand the different impacts mentioned above without confusion and misunderstanding.

The issue that the researcher has identified is whether people expect and are willing to invest their money in a corporation, they don't have the proper knowledge and a clear idea about dividend policy and its determinants. Therefore, shareholders are losing their dividend capability in many situations. Previous researchers have disclosed different results about the effect of shareholders' DPS and its determinants ((Miller & Modigliani, 1961), (Al-Malkawi, 2007)). Shareholders were not able to make their investment decisions effectively and accurately due to this confusion.

Investment decisions made by shareholders can be challenging due to conflicting research and a lack of knowledge in this area. Understanding the issues related to dividend policy and its determinants can encourage investment, leading to increased development and investment in Sri Lanka.

Determinants of Dividend policy remain debatable among researchers. Choosing an appropriate dividend policy can be identified as an important decision for business enterprises as the investment policy is affected by the dividend decisions. Although some researchers prove dividend irrelevance theory, (Miller & Modigliani, 1961). Some are saying dividend policy affects the firm value (Baker, Veit, & Powell, Factors Influencing Dividend Policy Decisions of Nasdaq Firms, 2005). Most of the researchers proved the impact of profitability, company risk, and company leverage on dividend per share ((Saputri & Bahri, 2021), (Lintner, 1956)). Moreover, the cause for dividend policy or the factors that affect dividend policy have been documented well and researched in many developed countries ((Miller & Modigliani, 1961), (Lintner, 1956), (Pettit, 1977)). A few empirical examinations have been attempted in developing markets or creating nations, and a very limited number of research work is available on this issue (Mehta, 2012).

Most literature and research are based on developed countries, and few are conducted regarding developing nations. Determinants of dividend policy vary from developed to developing countries. It is difficult to find out the dividend policy determinants and their influence because the condition of developed countries varies from developing countries.

Moreover, this study collaborated on various kinds of conclusions about the relationship between dividend policy and determinants of dividend policy. Some researchers point out that business size and profitability hold a significant positive influence on its dividend policy and a firm’s financial leverage is negatively related to the dividend policy of the entity significantly ((Al-Malkawi, 2007), (Kowalewski, Stetsyuk, & Talavera, 2007)). The researcher also argued that investment opportunities, lagged dividends, and large shareholders have a positive impact on dividend policy and a negative impact on dividend policy cash flow, debt, growth opportunities, firm size, and firm risk (Lestari, 2018). Further, the Leverage ratio, size of the company, profitability are significantly affecting to the dividend policy (Labhane & Mahakud, 2016). Profitability, liquidity, size of the firm, and inflation were found to have a significant negative impact on dividend policy (Brahmaiah & Srinivasan, 2021).

It is noticed that a limited number of empirical studies have been researched in developing countries and very limited research have been conducted on the issue and different view about this relationship which dividend policy and its determinants (Al-Malkawi, 2007). Sri Lanka is a developing country and there is a requirement to review the determinants which impact the dividend policy. Furthermore, there is no sufficient idea about the dividend policy and its determinants of listed companies in the

Colombo Stock Exchange in the Sri Lankan context ((Nirujah & Ludsana, 2014), (Baker, Dewasiri, Banda, & Azeez, 2019)). According to the above reasons, the research problem of this study is to explore "what is the impact of determinants on corporate dividend policy?" A special reference to listed food beverage and tobacco companies on Colombo Stock Exchange (CSE) in Sri Lanka?".

1.3. Research Questions

The study aims to answer the following research questions:

1. Is there an impact from the profitability of the company on its dividend policy?
2. Is there an impact from the leverage of the company on its dividend policy?
3. Is there an impact from the firm risk of the company on its dividend policy?
4. Is there an impact from the size of the company on its dividend policy?

1.4. Research Objectives

The study is designed to achieve the following general and specific objectives:

General Objective:

To identify whether there is an impact from the determinants on the corporate dividend policy of food, beverage, and tobacco companies listed on the Colombo Stock Exchange.

Specific Objectives:

- To identify whether there is an impact from the profitability of the company on its dividend policy.
- To identify whether there is an impact from the leverage of the company on its dividend policy.
- To identify whether there is an impact from the firm risk of the company on its dividend policy.

- To identify whether there is an impact from the size of the company on its dividend policy.

2. Methodology

2.1. Research Design

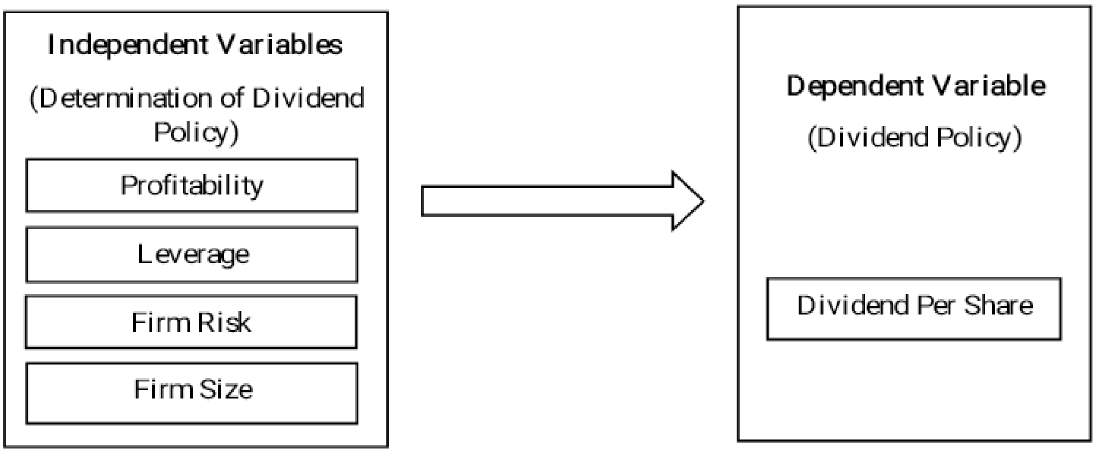
The research design is the plan used to find answers to a research problem. It involves collecting and analyzing numerical data from selected food, beverage, and tobacco companies listed in the Colombo Stock Exchange of Sri Lanka. The purpose of this study is to determine the impact of determinants on the corporate dividend policy of these companies. The data will be collected from annual reports and will be in numerical form.

2.2. Conceptual Framework

The framework of this study is constructed based on previous literature reviews. The following conceptual diagram presents the conceptual framework of this study and shows the independent variables and dependent variables of this study.

The study examines the determinants affecting the dividend policy of food, beverage & tobacco companies listed in the Colombo Stock Exchange of Sri Lanka. The conceptual framework is used to explain the basic concepts and their impact.

Figure 1: Conceptual Framework



Source: ((Saputri & Bahri, 2021), (Nirujah & Ludsana, 2014))

2.3. Variables and Measurements

This study uses four independent variables profitability, firm risk, leverage, and firm size. The dependent variable in this study is dividend policy. It will be measured by using dividend yield and calculated as the dividend per share by the market price per share (Lestari, 2018). In this study, profitability will be measured by the return on equity (ROE) and calculated as the net income by the market total equity (Brahmaiah & Srinivasan, 2021). Firm risk (PE) will be measured by the price-earnings ratio and calculated as the price of a share by the earnings per share (Brahmaiah & Srinivasan, 2021), Leverage ratio (DE) will be measured by the debt-equity ratio and calculated as the ratio of total debt to total equity (Ahmed & Javid, 2009). Firm Size (MCAP) will be measured as the natural log of market capitalization (Al-Malkawi, 2007).

- **Profitability**

Measured by Return on Equity (ROE), calculated as net income divided by total shareholders' equity (Brahmaiah & Srinivasan, 2021). Empirical research has shown that profitability is a significant factor in determining dividend payout policy. However, results have been mixed. According to the pecking order theory, firms prefer to rely on internal reserves or retained earnings, resulting in lower dividend payments and higher retained earnings. As a result, profitable firms tend to pay out fewer dividends. (Abor & Amidu, 2006) have concluded that the profitability is extremely negative and significantly related to the dividend payout. Similarly, (Kania, 2005) have found that the higher the return on equity, the larger is the firm’s retained earnings for reinvestment or the lesser is the dividend payout. (Al-Malkawi, 2007), (Al-Twaijry, 2007) and (Li & Lie, 2006) have continued that firms are more possible to raise their dividends if they are large and profitable. Profitability can be calculated as follow,

$$Return\ on\ Equity\ (ROE) = \frac{Profit\ After\ tax\ (Net\ Income)}{Shareholders'Equity}$$

- **Leverage**

Leverage, Measured by the Debt-to-Equity Ratio (D/E), calculated as total liabilities divided by shareholders' equity (Bogna, 2015). The empirical evidence about the influence of leverage on dividend payout policy is denied. (Al-Malkawi, 2007) established that the business’s financial leverage is strongly and inversely related to its dividend policy, while (Kania, WHAT FACTORS MOTIVATE THE CORPORATE DIVIDEND DECISION?, 2005) have found a significant positive association, bringing out the fact that the firms have higher debt funds to pay off dividends. Leverage can be calculated as follow,

$$Debt\ to\ Equity\ Ratio\ (D/E)\ = \frac{Total\ Liabilities}{Shareholders'Equity}$$

- **Firm Risk**

The price-earnings ratio (P/E) indirectly integrates the supposed risk of a given company's future earnings. A high price-earnings ratio (P/E) proposes that stockholders are expectant greater earnings growth in the future related to companies with a lower price earnings ratio (Fama & French, 2001). High price-earnings may be associated with lower risk and high payout ratios, whereas low price earnings can be attributed to high risk and lower payout ratios. (Abor & Amidu, 2006) originate that there is a significant negative impact on dividend payout policy. Firm Risk can be calculated as follow,

$$Price\ Earnings\ Ratio\ (P/E) = \frac{Market\ Price\ per\ Share}{Earning\ per\ Share}$$

- **Firm Size**

Firm size, measured by the natural logarithm of total assets (Ln Total Assets) to normalize the scale differences among companies (Al-Malkawi, 2007). (Aivazian, Booth, & Cleary, 2003), (Al-Twaijry, 2007) and (Al-Kuwari, 2009) show that large size business enterprises may declare higher dividends and smaller size companies declare fewer dividends. Firm Size can be calculated as follow,

$$Firm\ Size\ = Ln\ (Total\ Assets)$$

2.4. Operationalization

Even though there are so many determinants of dividend policy in firms listed in Sri Lanka, this study mainly focuses on measuring the impact on dividend policy determinants. In this study dividend policy as dependent variable and four independent variables which are the dividend policy determinants. Variable operationalization is as follows.

Table 3: Operationalization of Variables

Variables	Indicators	Measurement	Source
Dependent Variable: Dividend Policy	Dividend Per Share (DPS)	$\frac{Cash\ dividend}{Outstanding\ Common\ Stock}$	(Lestari, 2018)
Independent Variable: Profitability	Return on Equity (ROE)	$\frac{Profit\ after\ Tax(Net\ Income)}{Total\ Shareholders'\ Equity}$	(Brahmaiah & Srinivasan, 2021)
Leverage	Debt to Equity Ratio (D/E)	$\frac{Total\ Liabilities}{Total\ shareholders'\ Equity}$	(Bogna, 2015)
Firm risk	Price Earnings Ratio (P/E)	$\frac{MPS}{EPS}$	(Brahmaiah & Srinivasan, 2021)
Firm size	Total Assets (MCAP)	$Firm\ Size = Ln\ (Total\ Assets)$ (Natural log of total assets)	(Bogna, 2015)

Source: ((Bogna, 2015) , (Nirujah & Ludsana, 2014))

2.5. Formulation of Hypotheses

Hypothesis testing refers to confirming theories based on sample evidence. This branch of data is also known as statistical extrapolation (towardsdatascience.com, 2019). According to the literature review, there should be an impact of determinates of dividend policy. There will be four hypotheses. That is the null hypothesis (H_0) and the alternative hypothesis (H_1). In this study following hypotheses are derived grounded on the research questions and objectives. The researcher predictable to following hypotheses is tested.

The statement of the predicted impact of two or more variables. Hypotheses may be null hypothesis and research hypotheses. The hypotheses are guidelines for the research to deliver its activities. Based on hypotheses research will build up or growing.

H_{01} - There is no impact of Profitability on Dividend Per Share
H_{a1} - There is an impact of Profitability on Dividend Per Share

H_{02} - There is no impact of Leverage on Dividend Per Share
H_{a2} - There is an impact of Leverage on Dividend Per Share

H_{03} - There is no impact of Firm Risk on Dividend Per Share
H_{a3} - There is an impact of Firm Risk on Dividend Per Share

H_{04} - There is no impact of Firm Size on Dividend Per Share
H_{a4} - There is an impact of Firm Size on Dividend Per Share

2.6. Population and Sample Selection

According to Janowicz (1994) generalization about the population from data collected using any sample is based on probability. To be able to generalize the research findings to the population, it is necessary to select samples of sufficient size. A large sample size will in general improve the quality of the research. A large sample size is always better than a small one. Saunders, Lewis, and Thornhill (1996) also point out that the larger the sample size, the lower the likely error in generalizing the population.

Generally, the population of a research study refers to all the individual elements that the researcher can gather data upon. This study would be based on financial data of listed companies in the Sri Lankan context. Thus, the population of this study includes all the 283 companies listed in Colombo Stock Exchange, representing 20 business sectors (CSE, 2021). As the sample of the study, 15 companies from the Food, Beverage & Tobacco sector that have recorded the of the larger market capitalizations have been selected, from the Food, Beverage & Tobacco sector again that have recorded the larger capitalization have better access to capital markets ((Nirujah & Ludsana, 2014); (Holder, Langrehr, & Hexter, 1998)). Relevant data would be analyzed for 10 years from 2011 to 2020. This period was selected because it represents the most recent data available on the CSE website available as of date. As per the 50 companies listed under the sector in Food Beverage & Tobacco. The planned sample includes 15 companies out of this total 50 and it is representing the percentage of total listed companies is 6%.

2.7. Data Collection

Generally, Primary data and secondary data collection methods are used by researchers to conduct their study about a particular area. To achieve this purpose in this study, secondary data will be gathered through company records namely, annual reports of the selected companies from the year 2010/11 to 2019/20. Data gathered include, Net Profit, Total Assets, Preference Dividends, Shareholder's Equity, Number of Equities Share outstanding, Market Price Per Share, Earning Per Share and Cash Dividend, etc.

2.8. Correlation Analysis

Correlation analysis is employed to examine the relationship between the dependent variable (Dividend Payout Ratio) and independent variables (Profitability, Leverage, Firm Risk, and Firm Size). Pearson's coefficient of correlation is used to measure the strength and direction of the linear relationship between these variables. The coefficient can range from -1 to 1, where values closer to 1 indicate a strong positive relationship, values closer to -1 indicate a strong negative relationship, and values around 0 suggest no linear relationship.

2.9. Regression Analysis

Multiple regression analysis is a statistical method that helps understand the relationship between dependent and independent variables. By measuring the impact of independent variables on the dependent variable while holding other independent variables constant, it determines if there is a mathematical relationship between two or more variables. This study employs multiple regression analysis to measure the combined impact of dependent on the independent variables.

$$DPS = \beta 0 + \beta 1\ PR + \beta 2 LEV + \beta 3 FR + \beta 4 FS + \varepsilon$$

Where,

DPS = Dividend Per Share
$\beta 0$ = Coefficients
$\beta 1$ = Profitability
$\beta 2$ = Leverage

β3 = Firm Risk

β4 = Firm Size

ε = Error Term

3. Analysis and Discussion

3.1. Correlation Analysis

Correlation analysis is a statistical technique used to measure the relationship between two variables. This study focused on independent variables such as Profitability, Leverage, Firm Risk, and Firm Size to describe the correlation. Correlation models were used to measure the degree of association between different variables. Correlation can indicate a predictive relationship that can be exploited in practice. Correlation analysis can be used as a tool to analyze the relationship between independent variables and one dependent variable. In this research to find out the relationship between variables, Pearson's co-efficient of correlation has been used. The Coefficient of correlation takes the values from + 1 to – 1 (including plus one to minus one). The correlation coefficient ranges from -1 to 1. A value of 1 means that there is a perfect positive relationship. A value of -1 means that there is a perfect negative relationship. This study consists of four independent variables and one dependent variable. Whether there is a positive or negative correlation between the variables and the significance level is identified here.

In this study, the correlation coefficient analysis has been taken under to find out the relationship between the following two variables.

- Independent variable – Profitability, Leverage, Firm Risk, Firm Size
- Dependent variable – Dividend Policy

The Correlation analysis that implies what kind of relationship between each of these dependent and independent variables.

Table 4: Correlation

		Dividend Per Share	Profitability	Leverage	Firm Risk	Firm Size
Dividend Per Share	Pearson Correlation	1	.251**	.393**	-.066	-.274**
	Sig. (2-tailed)		.002	.000	.422	.001
	N	150	150	150	150	150
Profitability	Pearson Correlation	.251**	1	-.323**	-.003	-.013
	Sig. (2-tailed)	.002		.000	.974	.873

	N	150	150	150	150	150
Leverage	Pearson Correlation	.393**	-.323**	1	-.085	-.108
	Sig. (2-tailed)	.000	.000		.301	.187
	N	150	150	150	150	150
Firm Risk	Pearson Correlation	-.066	-.003	-.085	1	.096
	Sig. (2-tailed)	.422	.974	.301		.244
	N	150	150	150	150	150
Firm Size	Pearson Correlation	-.274**	-.013	-.108	.096	1
	Sig. (2-tailed)	.001	.873	.187	.244	
	N	150	150	150	150	150

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

(Source: Annual Report 2011-2020 with SPSS Analysis)

The correlation coefficient explains the relationship between two variables. It shows changes in one variable because of any change in another variable. Table 3.1 shows the Pearson's correlation coefficient of the relationship between dividend policy and its determinants. The table observes each determinant's relationship. First, there is a positive significant relationship between profitability and leverage and dividend payout at the level of 0.01. Also, Firm size has a significant negative relationship with dividend payout, but the firm risk has an insignificant negative relationship.

The correlation results indicate the following relationships:

Profitability: There is a statistically significant positive correlation between Profitability and Dividend Payout Ratio (r = 0.251, p = 0.002). This suggests that higher profitability is associated with higher dividend payouts, which aligns with previous findings by Al-Malkawi (2007) and Nirujah & Ludsana (2014). Profitable firms are more likely to distribute higher dividends as they have more available earnings. **Leverage**: A statistically significant positive correlation exists between Leverage and Dividend Payout Ratio (r = 0.393, p = 0.000). This finding supports the notion that companies with higher leverage may distribute more dividends to signal confidence to investors, as suggested by Marfo-Yiadom & Agyei (2011).

Firm Size: The correlation analysis shows a significant negative relationship between Firm Size and Dividend Payout Ratio (r = -0.274, p = 0.001). Larger firms tend to pay lower dividends, possibly due to increased agency costs, as discussed by Lestari (2018). **Firm Risk**: The analysis indicates a statistically insignificant and weak negative correlation between Firm Risk and Dividend Payout

Ratio (r = -0.066, p = 0.422). This suggests that firm risk does not significantly influence dividend payout, consistent with findings by Abor & Amidu (2006).

3.2. Regression Analysis

Regression analysis is the statistical method used in this investigation that helps to confidentially examine to determine the impact of the independent variables on the dependent variable. This study utilized multiple linear regression analysis and panel data estimation to control individual-specific effects that may be correlated with other explanatory variables in the relationship between dependent and explanatory variables. Simple linear regression is used when there is only one independent variable, while multiple linear regression is used when there are more independent variables.

This regression analysis was used to investigate the impact of determinants on corporate dividend policy: A special reference to listed food beverage and tobacco companies on the Colombo Stock Exchange (CSE) in Sri Lanka. This analysis describes the impact of the independent variables on the dependent variable. The independent variables will be measured by using Return on Equity (ROE), Price-earnings ratio (P/E), Debt to Equity Ratio and Natural Log of Total Assets also, the dependent variable will be measured by using Dividend Per Share.

The regression equation was,

$DPS = \beta 0 + \beta 1\ PR + \beta 2LEV + \beta 3FR + \beta 4FS + \varepsilon$

3.3. Model Summary

Table 5: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.600[a]	.360	.342	17.25305

a. Predictors: (Constant), Firm size, Profitability, Firm risk, Leverage

Source: Annual Report 2011-2020 with SPSS Analysis

A model summary is an important one, as it gives the measures of how well the overall model fits and how well the predictors predict. The first measure of Table 3.2 is the correlation coefficient (R). This is a measure of how well the predictors predict. Regression analysis of coefficient (R) 0.600 indicates a positive relationship between independent variables and dependent variables (Positive Correlation). The specification of the profitability, firm size, leverage, and firm risk in the model revealed the ability to predict Dividend Per Share.

The proportion of the dependent variable explained by the regression model is called the coefficient of determination denoted by R2. R square is the measure is the goodness of model fit. It is called the unadjusted multiple regression coefficients. The value is expected to lie between zero and one. The R squared increases as the number of explanatory variables increases. The higher the R squared, the greater the percentage of the variation of the endogenous variable that is explained by changes in the independent variables. The closer the R squared is to one, the better the fit. The determination of coefficient (R2) is 0.360 indicating that for the sample 36% of the variation of the dependent variable can be explained by the independent variables. Therefore, about 36% of the Variation in the Dividend Per Share is explained by Profitability, Leverage, Firm risk, and Firm Size. In R2 value of 0.36 which is in the table denotes that 36% of the observed variability in DPS can be explained by the differences in the independent variables. The remaining variance in the DPS is attributed to other variables. The R2 value of 36% indicates that there may be several variables that can have an impact on dividend policy that need to be studied. Hence, this area is indicated as a scope for future research.

Adjusted R squared is the modified R square that adjusts for the number of terms in a model. When there are more independent variables in the regression model, the R square will go up. To adjust that problem, an adjusted R square is applied. Table 3.2 shows the adjusted R square value is 0.342 of variation for DPS in this model table.

The Standard Error of Estimate is a measure used to verify prediction accuracy in regression analysis. It is dependent on sample size. This study's model is well-fitted due to the low standard error value, indicating minimal deviation from actual values. According to the table, the standard error value for DPS is 17.25.

3.4. ANOVA Model

Table 6: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	24254.740	4	6063.685	20.371	.000[b]
	Residual	43161.838	145	297.668		
	Total	67416.577	149			

a. Dependent Variable: DPS

b. Predictors: (Constant), Firm size, Profitability, Firm risk, Leverage

Source: Annual Report 2011-2020 with SPSS Analysis

Analysis of variance (ANOVA) is an analysis tool used in statistics that splits an observed aggregate variability found inside a data set into two parts: systematic factors and random factors. The systematic factors have a statistical influence on the given data set, while the random factors do not. Analysts use the ANOVA test to determine the influence that independent variables have on the dependent variable in a regression study.

The ANOVA analysis in Table 3.3 presents the influence of all the independent variables on the dividend policy of the Listed Food, Beverage, and tobacco sector in CSE. The results presented a p-value of 0.000 which was less than 0.05. This indicated that the model was statistically significant in explaining the impact of the independent variables on the dividend policy of the Listed Food, Beverage, and tobacco sector in CSE.

The F ratio in the ANOVA Table 3.3 tests whether the overall regression model is a good fit for the data. If significant is less than 0.05 the regression model is a good fit for the data. The table shows that the independent variables statistically significantly predict the dependent variable, $F(4,145) = 20.371$, $p=0.000$. That is the regression model is a good fit for the data.

3.5. Coefficient of Determination

Table 7: Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	40.064	12.436		3.222	.002	15.485	64.644
	Profitability	3.250	.556	.411	5.845	.000	2.151	4.349
	Leverage	8.460	1.194	.503	7.083	.000	6.099	10.820
	Firm_risk	-.000	.005	-.002	-.026	.980	-.010	.010
	Firm_size	-5.003	1.568	-.214	-3.191	.002	-8.101	-1.904

a. Dependent Variable: DPS

Source: Annual Report 2011-2020 with SPSS Analysis

The study conducted a multiple regression analysis and from the above regression model, holding (profitability, leverage, firm size, firm risk) constant at zero, dividend policy will be 40.064.

Unstandardized coefficients indicate how much the dependent variable varies with an individual variable when all other independent variables are held constant. Using the "B" values, the interpretation and reporting can be done considering the + or - sign before the "B" as; "for each one-unit increase in "independent variable", there is an increase/decrease in "dependent variable" of "B" times.

Table 4.5 shows that the impact of Profitability on DPS. The Beta value represents each independent variable's contribution to determine the dependent variable. Significant value discloses that the impact of the independent variable on the dependent variable. A 1% profitability will lead to a 3.25 increase in DPS. Profitability had a significant relationship with DPS ($p < 0.05$) at 0.000. And also, it is suggested that there is a positive impact between Profitability and DPS. There is an impact to DPS from Profitability and when Profitability increases DPS also increases. This means that for each one-unit increase in Profitability, there is an increase in DPS of 3.25 times units.

The findings in Table 3.4, show that the impact of Leverage on DPS. A 1% Leverage will lead to an 8.46 increase in DPS. Leverage had a significant relationship with DPS ($p < 0.05$) at 0.000. And also, it is suggested that there is a positive impact between Leverage and DPS. There is an impact to DPS from Leverage and when Leverage increases DPS also increases. This means that for each one-unit increase in Leverage, there is an increase in DPS of 8.46 times units.

Table 3.4 shows that the impact of Firm Risk on DPS. A 1% Firm Risk will lead to a -0.000 decrease in DPS. Firm Risk had no significant relationship with DPS ($p > 0.05$) at 0.98. And also, it is suggested that there is a negative impact between Firm Risk and DPS. There is an impact to DPS from Firm Risk and also when Firm Risk increases DPS also decreases. This means that for each one-unit increase in Firm Risk, there is a decrease in DPS of -0.000 times units.

Table 3.4 shows that the impact of Firm Size on DPS. A 1% Firm Size will lead to a -5.003 decrease in DPS. Firm Size had a significant impact with DPS ($p < 0.05$) at 0.002. And it is suggested that there is a negative impact between Firm Size and DPS. There is an impact to DPS from Firm Size and when Firm Size increases DPS also decreases. This means that for each one-unit increase in Firm Size, there is a decrease in DPS of -5.003 times units.

From the findings in Table 3.4, Profitability, Leverage, Firm Size had a significant relationship with DPS ($p < 0.05$) at a 95% level of confidence. And Firm Risk is not significant.

For the Standardized Beta values, the significance value p must be $p < 0.05$, that is the variable is making a significant unique contribution to the prediction of the dependent variable. If $p > 0.05$, it concludes that the variable is not making a significant unique contribution to the prediction of the dependent variable.

The coefficient indicates the direction of the relationship between independent and dependent variables and explains how each predictor affects the outcome when the effect of all other predictors is held constant. Coefficients describe the mathematical relationship between each independent variable and the dependent variable. From the above results, it is evident that the Profitability, Leverage, Firm Risk, Firm Size have unstandardized coefficients of 3.25, 8.46, -0.000, and -5.003 respectively and the following regression equation can be derived from the available data for predicting the DPS from determinants of Dividend policy. Based on the table and above data, the equation for the regression model is as follows,

$$DPS = \beta 0 + \beta 1\ PR + \beta 2LEV + \beta 4FR + \beta 3FZ + \varepsilon$$

$$DPS = 40.06 + 3.25PR + 8.46LEV - 0.000FR - 5.003FZ + 12.436$$

The study conducted a multiple regression analysis and from the above regression model, holding (profitability, leverage, firm risk, firm size) constant at zero, impact on dividend per share will be 40.06. A 1% profitability will lead to a 3.25 increase in dividend per share, 1% increase in leverage will lead to an 8.46 increase in dividend per share, 1% firm risk will lead to a -0.000 decrease in dividend per share, and 1% firm size will lead to -5.003 decrease in dividend per share. From the findings in Table 4.5, Profitability, leverage, firm size had a significant impact with dividend per share ($p < 0.05$) at a 95% level of confidence. Firm risk had an insignificant impact with dividend per share ($p > 0.05$) at a 95% level of confidence.

Dividend policy of listed Food Beverage & Tobacco sector in CSE, which are measured by the dividend per share (DPS) of firms. Profitability (PR), leverage (LEV), firm risk (FR) and firm size (FS) of the firms are the variables found to be significantly and insignificantly associated with the dividend policy of the listed firms.

3.6. Testing Hypotheses and Results

This study constructed four main hypotheses to identify the impact of determinants of corporate dividend policy; A study on selected food beverage & tobacco listed companies in Colombo Stock Exchange.

Hypothesis 01

H_{01} - There is no impact of Profitability on Dividend per Share

H_{a1} - There is an impact of Profitability on Dividend per Share

From Table 3.4 regression significant value is 0.000 and it is less than 0.05 ($p<0.05$). Therefore, the null hypothesis is rejected and H_{a1} is supported (Accepted). Profitability has an impact on Dividend Per Share.

Hypothesis 02

H_{02} - There is no impact of Leverage on Dividend per Share

H_{a2} - There is an impact of Leverage on Dividend per Share

From Table 3.4 Regression significant value is 0.000 and it is less than 0.05 ($p<0.05$). Therefore, the null hypothesis is rejected and H_{a2} is supported (Accepted). Leverage has an impact on Dividend Per Share.

Hypothesis 03

H_{03} - There is no impact of Firm Risk on Dividend per Share

H_{a3} - There is an impact of Firm Risk on Dividend per Share

From Table 3.4 Regression significant value is 0.980 and it is higher than 0.05 ($p>0.05$). Therefore, the null hypothesis is accepted and H_{a3} is rejected. There is no impact of Firm Risk on Dividend Per Share.

Hypothesis 04

H_{04} - There is no impact of Firm Size on Dividend per Share

H_{a4} - There is an impact of Firm Size on Dividend per Share

From Table 3.4 Regression significant value is 0.002 and it is less than 0.05 ($p<0.05$). Therefore, the null hypothesis is rejected and H_{a4} is (Accepted). Firm Size has an impact on Dividend Per Share.

3.7. Summary of Hypotheses Results

Table 8: Summary of Hypotheses Results

Hypothesis	Result	Decision
H_{a1} - There is an impact of Profitability on Dividend Per Share	Sig = 0.000	supported.
H_{a2} - There is an impact of Leverage on Dividend Per Share	Sig = 0.000	supported.
H_{03} - There is no impact of Firm Risk on Dividend Per Share	Sig =0.980	Rejected.
H_{a4} - There is an impact of Firm Size on Dividend Per Share	Sig = 0.002	supported.

3.8. Discussion

The analysis reveals significant relationships between Dividend Per Share (DPS) and several key financial variables: Profitability: The positive and significant relationship between profitability and DPS ($\beta = 0.411$, $p < 0.001$) suggests that more profitable companies tend to pay higher dividends. This supports the hypothesis that profitability positively impacts dividend policy, consistent with the signaling theory, where firms with higher profits distribute more dividends to signal financial health. Leverage: The strong positive correlation between leverage and DPS ($\beta = 0.503$, $p < 0.001$) indicates that companies with higher debt levels also tend to pay higher dividends. This could be explained by the agency cost theory, where firms with high leverage might use dividends to mitigate potential agency problems by reducing the cash available for management to misuse. Firm Size: The negative association between firm size and DPS ($\beta = -0.214$, $p = 0.002$) is somewhat counterintuitive. Larger firms may prefer to reinvest earnings rather than distribute them as dividends, perhaps due to their access to various growth opportunities or a more conservative dividend policy aimed at long-term stability. Firm Risk: The lack of a significant relationship between firm risk and DPS ($\beta = -0.002$, $p = 0.980$) suggests that firm-specific risk does not play a crucial role in determining dividend payouts.

Previous studies have consistently found that profitability is a significant determinant of dividend payouts. According to Lintner (1956), firms with higher profitability tend to distribute a portion of their earnings as dividends, adhering to the signaling theory, which posits that dividends signal a firm's strong financial position to investors. Fama and French (2001) also supported this view, finding that profitable firms are more likely to pay dividends, as they have surplus cash after covering operational expenses and investment opportunities. These findings align with the current study, where profitability positively impacts Dividend Per Share (DPS) ($\beta = 0.411$, $p < 0.001$).

The relationship between leverage and dividend policy is complex and has been explored in various contexts. Jensen's (1986) agency theory suggests that highly leveraged firms might use dividend payments to reduce free cash flow and mitigate agency conflicts between shareholders and management. Studies like those by Rozeff (1982) and Agrawal and Jayaraman (1994) have found that firms with higher leverage often maintain higher dividend payouts to signal their commitment to reducing agency costs. This is consistent with the current study, which shows a positive and significant relationship between leverage and DPS ($\beta = 0.503$, $p < 0.001$).

The relationship between firm size and dividend policy is less straightforward. Some studies, such as those by Baker and Powell (1999) and La Porta et al. (2000), suggest that larger firms, due to their stable earnings and diversified operations, are more likely to pay dividends. However, other research, including a study by Redding (1997), indicates that larger firms might retain earnings to finance growth opportunities, leading to lower dividend payouts. The current study's finding of a negative relationship between firm size and DPS (β = -0.214, p = 0.002) aligns with the latter perspective, suggesting that larger firms may prioritize reinvestment over dividend distribution.

The impact of firm risk on dividend policy has been debated, with mixed results across different studies. For instance, Holder, Langrehr, and Hexter (1998) found that higher firm risk leads to lower dividend payouts, as riskier firms may prefer to conserve cash. Conversely, findings by Ahmed and Javid (2009) suggest that firm risk does not significantly influence dividend decisions, as firms might focus more on profitability and leverage when determining dividend policies. The current study's result, indicating an insignificant relationship between firm risk and DPS (β = -0.002, p = 0.980), supports this latter view, reinforcing the idea that risk is not a primary driver of dividend decisions. dividend decisions are more influenced by profitability and leverage rather than the inherent risks a firm faces.

(Marfo-Yiadom & Agyei, 2011) have stated that Profitability positively impacts the dividends paid by banks in Ghana. Profitable banks are more likely to pay a dividend as compared to banks that are not profitable. Also, the level of dividends paid by banks is largely impacted by that study's level of profitability. According to (Marfo-Yiadom & Agyei, 2011), A 1% profitability will lead to a 3.26 increase in DPS. Profitability had a significant relationship with DPS ($p < 0.05$) at 0.025. This previous research is supportive of this study. In the empirical research, Kester (1986) originates the negative association between leverage and profitability in the USA and Japan. Hence research findings are inconsistent with these things.

(Marfo-Yiadom & Agyei, 2011) studied the positive impact on leverage and dividend payout policy of the bank. According to recent findings, it is understandable that higher debt can indirectly allow banks to pay more dividends due to increased profitability and reduced agency cost. This contradicts earlier studies which suggested that highly leveraged firms tend to pay lower dividends to pay off future debt obligations. According to (Marfo-Yiadom & Agyei, 2011), supportive of this research, a 1% leverage will lead to a 1.27 increase in DPS. leverage had a significant impact on DPS ($p < 0.05$) at 0.000.

(Lestari, 2018) has stated that the result of this study shows firm risk has no significant impact on dividend policy. This supported by literature, they discovered firm risk has no impact on dividend policy. This means that the amount of dividend payment does not depend on the risk had by the firm. A study also stated no impact on firm risk and dividend policy. A literature study found that firm risk has no significant impact on dividend policy. The result of the p-value is 0.08 > 0.05 therefore it can be said it is insignificant. The result of this study show firm risk has no significant impact on dividend policy.

According to the prior research findings, there is a significant negative relationship between business risk and payout policy. (Jensen, Solberg, & Zorn, 1992)and (Aivazian, Booth, & Cleary, 2003) have stated that firm risk has a significant negative impact on dividend policy. However, research findings were contradicted with these reviews.

However, research conducted by (Lestari, 2018) on the impact of firm size negative impact on the dividend policy manufacture companies listed in Indonesia Stock Exchange (IDX). The result of this study reported firm size has a negative impact on dividend policy. In contrast, a significant positive association between firm size and dividend policy. Large firms generally have various ownership. This increases the agency cost. Then to mitigate the agency problem between principal and agent, the firm needs to pay dividends. This result consistent with the literature found a negative impact on firm size and dividend policy. The result of the coefficient showed the impact of firm size on dividend policy is -1.62. Statistical test showed the p-value is $0.01 < 0.05$.

Also, firm size has a central positive result on dividend policy. In line with the agency cost theory, the larger firms, the higher the dividend statement. The results are consistent with (Al-Malkawi, 2007), (Kowalewski, Stetsyuk, & Talavera, 2007) and (Al-Kuwari, 2009). Hence, these answers are inconsistent with the listed food, beverage, and tobacco sector in the Sri Lankan context.

3.8.1. Regression Analysis

The multiple regression analysis is used to determine the impact of the dependent variable and independent variables on predictions and make other inferences. Multiple regressions are a logical extension of the principles to situations in which there are several predictors the model summary shows the percent of the variability in the dependent variable that can be accounted for by all the predictors together (the interpretation of R-square). R square value of 36%. The independent variables explain only 36% of the variability in DPS. Therefore, the model does not fit the data well. R is the correlation coefficient which showed a positive correlation between the study variables with a magnitude of 0.600. The results of multiple regression analysis indicated that profitability, leverage, and firm size have a significant impact on DPS. The results of multiple regression analysis indicated that firm risk has no impact on DPS.

(Marfo-Yiadom & Agyei, 2011) have stated that Profitability positively impacts the dividends paid by banks in Ghana. Profitable banks are more likely to pay a dividend as compared to banks that are not profitable. Also, the level of dividends paid by banks is largely impacted by that study's level of profitability. According to (Marfo-Yiadom & Agyei, 2011), A 1% profitability will lead to a 3.26 increase in DPS. Profitability had a significant relationship with DPS ($p < 0.05$) at 0.025. This previous research is supportive of this study. In the empirical research, Kester (1986) originates the negative association between leverage and profitability in the USA and Japan. Hence research findings are inconsistent with these things.

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Also, firm size has a central positive result on dividend policy. In line with the agency cost theory, the larger firms, the higher the dividend statement. The results are consistent with (Al-Malkawi, 2007), (Kowalewski, Stetsyuk, & Talavera, 2007) and (Al-Kuwari, 2009). Hence, these answers are inconsistent with the listed food, beverage, and tobacco sector in the Sri Lankan context.

4. Conclusion and Recommendations

The researcher in the study successfully answered the research question, with the discussion always connecting back to the introduction and literature review. The outcome of the study satisfies the research questions developed at the beginning.

4.1. Key Findings

A study was conducted on 15 listed food, beverage, and tobacco companies in the Colombo Stock Exchange to analyze their dividend policy. The study used regression analysis to determine the impact of profitability, leverage, firm risk, and firm size on said policy. Results of the analysis are available. The determination of the coefficient (R2) is 0.36 indicating that for the sample 36% of the variation of the dependent variable can be explained by the independent variables. Therefore, about 36% of the variation in the dividend per share is explained by profitability, leverage, firm risk, and firm size. In this study, the R square is 0.36 which indicates if there is a 100% change in profitability, leverage, firm risk, and firm size, there will be a 36% change in dividend per share of listed food, beverage & tobacco companies.

Therefore, the study found that profitability, leverage, firm risk, and firm size are significantly affected by dividends per share. If the significance is less than 0.05 the regression model is a good fit for the data. The independent variables statistically significantly predict the dependent variable, $F(4,145) = 20.371$, $p = 0.000$. That is the regression model is a good fit for the data.

According to the coefficient value of regression analysis, beta showed the impact of profitability, leverage, firm risk, firm size, and dividend per share as an unstandardized coefficient. The beta coefficient of Profitability ($\beta = 3.25$) and p-value ($p < 0.05$) showed a significant positive impact on the dividend per share. At the same time, the p-value for the beta coefficient of Leverage is 0.000 which is significant. Also, the beta coefficient of dividend per share is 8.46 ($\beta = 8.46$). Therefore, leverage has a significant positive impact on dividends per share. The beta coefficient of firm risk ($\beta = -0.000$). Firm risk had an insignificant relationship with dividend per share ($p > 0.05$) at 0.98. Also, it is suggested that there is a negative impact between firm risk and dividend per share. And the beta coefficient of firm size is -5.003 ($\beta = -5.003$). Therefore, firm size has a significant negative impact on the dividend per share of listed food, beverage, and tobacco companies.

According to the research, profitability and leverage have a positive and significant impact on dividends per share, while firm risk has an insignificant negative impact. Firm size has a significant and negative impact on dividend per share for listed food, beverage, and tobacco companies in the Colombo Stock Exchange during the study period.

The findings of this study highlight the significant impact of profitability, leverage, and firm size on dividend policies, while firm risk appears to have no substantial effect. These results contribute to the ongoing debate on the determinants of dividend policy and suggest that companies prioritize financial stability and profitability when deciding on dividend payouts. Future research could explore these relationships in different contexts or consider additional variables such as market conditions or governance factors to provide a more comprehensive understanding.

According to the research, profitability and leverage have a positive and significant impact on dividends per share, while firm risk has an insignificant negative impact. Firm size has a significant and negative impact on dividend per share for listed food, beverage, and tobacco companies in the Colombo Stock Exchange during the study period.

4.2. Recommendations and Suggestions for Future Researchers

In this study recommended R-squared values of the present research are not strong. The R-squared values in this study are not strong, so future researchers should investigate other variables. The sample only included 6% of the total population and used secondary data from food, beverage, and tobacco companies in the Colombo Stock Exchange. Future research could test the reproducibility of these results in other sectors of the Colombo Stock Exchange and expand the sample to make it more representative.

According to a formal study, firm risk was found to have an insignificant relationship with dividend per share ($p > 0.05$) at 0.98, although it was suggested that there is a negative impact between the two. The study recommends that the food, beverage & tobacco sectors could attract premium interest that boosts their returns even when they enter high-risk ventures. This suggests that these variables do not have a direct impact on dividend payments. In other words, the listed food beverage & tobacco sectors consider the firm size, profitability, and leverage more than the firm risk, when they are making decisions to pay dividends. This suggests that the price-earnings ratio (P/E) ratio implicitly incorporates the risk of a company's future earnings. This suggests that the high price-earnings ratio (P/E) suggests that investors are expecting higher earnings growth in the future compared to companies with a lower price-earnings ratio (P/E). A high price-earnings ratio (P/E) may be associated with low risk and higher payout ratios, whereas a low price-earnings ratio (P/E) with a high risk and lower payout ratio. This result is in line with the agency's theory of dividend policy.

Companies take risks to improve returns on their strategies. These risks, such as credit risk in lending or research and development activities, are different from preventable risks because they are not necessarily negative. Managing strategic risks is crucial to reaping potential rewards. Unlike preventable risks, strategy risks cannot be managed through a rules-based control model. A risk-management system is necessary to reduce the likelihood of risks materializing and improve companies' ability to manage risk events. This system does not stop companies from taking on risky ventures.

The Colombo Stock Exchange is a semi-strong efficient market that incorporates all publicly available information. Future research should consider qualitative and quantitative variables, such as management's intentions for dividend policy. The study only focused on listed companies and used published annual reports for data collection. However, future researchers can use secretarial reports to expand their research. To ensure reliable outcomes, variables other than profitability, leverage, firm size, and firm risk should be used.

This study offers valuable insights for financial decision-makers, shareholders, investors, and lenders regarding dividend policies. By analyzing key determinants of dividends, financial managers can make better decisions that incorporate factors that significantly impact dividend policy. The findings can help Colombo Stock Exchange-listed firms' board of directors consider profitability and firm size when making dividend policy decisions. Investors can also benefit from these findings by using them to understand signals sent to the market by firms. Future research could examine determinants of dividend policy across different industries and the impact of corporate governance on dividend policy using additional control variables.

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Value Relevance of Accounting Information on Stock Price in Plantation Companies in Sri Lanka

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Abstract

Accounting information plays a crucial role in influencing financial decision-making processes and governing activities in the business world. Investors and governments are the primary stakeholders in accounting information. Dependable and precise accounting information will enhance the value for users of accounting information. This study aims to evaluate the significance of accounting information (specifically Earnings per share and Net Asset Value per share) on the stock market prices of registered plantation companies in the Colombo Stock Exchange of Sri Lanka. The study relies on the publicly available financial statements of the plantation companies spanning a period of five years, specifically from 2015 to 2022. Regression analysis was employed to examine the correlation between accounting information and market prices. According to beta coefficients, a Rs.1 increase in EPS raises the market price per share by Rs.0.32 NAVPS and market price per share are also positively correlated. Share prices are negatively correlated with Total Assets, which is surprising. The study found that EPS and NAVPS significantly affect Sri Lankan plantation companies' market price per share (MPS). The MPS benefits greatly from these factors. However, the study shows that total assets (TA) negatively affect MPS. Sri Lankan investors clearly value accounting data when investing. This indicates that investors of Sri Lankan companies place a higher level of importance on accounting information when making investment decisions.

Keywords: *Accounting information, Earnings per share, Net asset value per share, Stock market price, Value relevance*

1. Introduction

Information has become essential for human beings in their day-to-day decision-making and activities. Information plays a major role in the corporate world as well as society. Day by day changes have taken place in the way people produce, store, process, and access information. The availability and need for information continuously increase every moment (Pettersson, 1994). Information can be categorized under a variety of areas and subject matters around the world such as economic, science, accounting, management, social and historical, etc. Out of these, Accounting Information (AI) generates value to the investors as well as the company to make timely and accurate investing decisions(Cheong et al., 2022). Therefore, current research takes an interest in accounting information. Accounting may be seen as a mechanism by which the meaning or influence of events is measured as accurately as possible (William J. Bruns, 1968). According to that, the production and collection of information are one of the key functions of financial markets (Qi et al., 2007). Providing investors with valuable and accurate information to reach profitable investment decisions and regulators is considered to ensure the proper functioning of the stock market (Panagiotis E & Dimitrios, 2010).

According to Nimalathasan and Vijitha (2014), different forms of information may be used in financial statements such as financial information or non-financial information and accounting information or non-accounting information. The compatibility of financial statements enhances the present return to reflect potential earnings, improving the informativeness of each user's financial statements. It produces companies that map economic activities contained in the financial statements and they are used by interested tenants towards their rational choices (Choi et al., 2019). The term “Value relevance” means financial statements’ informativeness (Lam et al., 2013). Value relevance is interpreted as the capacity to gather or summarize information from financial statements that influence share prices and are objectively evaluated in terms of statistics correlation across market and accounting values (Hellström, 2006). Financial information generates value relevance to the parties who seek the information.

Considering the present situation, the accounting environment shows rapid change through delivering accounting information and accounting processes. Most companies use new technology by automating accounting processes. These computerized systems can generate financial statements and reports by processing the input data. At the same time, firms use this to generate annual reports to external parties. In every listed company the annual report and financial statements are the main communication method with the investors and the external parties. Investors and external parties gather financial information through these statements. Financial intelligence thus plays a major act in the effective running of capital markets via the work of financial and information counterparties (Chalmers et al., 2010). The present development of information technology accounting information reaches the end-users super-fast than the past manual systems. This affects the rapid development of the equity market around the world. More investors are attracted to the share market with the development of communication technologies.

A key goal of accounting information is to convey investors and creditors with relevant facts, there has been considerable analysis into the correlations among share prices and accounting indicators (Pirie & Smith, 2008). Under the accounting information financial ratios creates informativeness to determine the stock price. Past researchers have established value significance of accounting information dramatically increase in recent years by observing over the duration of their series of investigations on banking and insurance, plantation, manufacturing, and other topics, they gathered a range of financial data such as earnings per share, return on equity ratio, book value per share, and so on. (Ahmadi & Bouri, 2018). As a result of the above statements accounting information makes an impact on price changes in share market price. At the same time out of several industries, this study focuses on the plantation industry because in Sri Lanka the plantation companies act as the largest export owner, where coconut, tea, and rubber have become the main agricultural export commodities (Rajakaruna et al., 2016).

Research Problem

According to Nidhi and Kamini (2007), the variation of share prices is not autonomous in nature and both inherent and extrinsic forces have been developed to affect stock price fluctuations. Accounting information plays an important role here. According to prior researches on operating earnings, the book value of shares, EPS, NAVPS, dividend, and net profit have been identified as the elements influencing share price (Collins, 1967). According to Seetharaman and Raj (2011), EPS plays a significant impact in investor's decisions and the stock market price. Accordingly, these studies emphasize the connection between accounting information on the share price. The relation among share price and a number of independent accounting variables is explored by meaning significance analysis (Alfraih, 2016). Based on that this study implies the impact of accounting information on the market price of shares.

There are several studies in China and Malaysia in the manufacturing and service sectors regarding the impact on the stock price from accounting information (Ahmadi & Bouri, 2018; Lam et al., 2013). Accounting information enclosed in the documented financial statements of banking institutions enrolled under the Colombo Stock Exchange for share market decisions in Sri Lanka is still being considered by investors (Perera & Thrikawala, 2010). Considering those in the Sri Lankan context there is a dearth of past research about the impact of accounting information on share price targeting the plantation industry because most of them are based on the banking sector and manufacturing sector etc. This makes a gap in the available and the present study make an effort to fill that gap.

In order to analyze whether accounting information such as earnings per share, net asset value per share influences stock price, there are primarily two questions. These are related to the research variables.

- Does Earnings per share (EPS) impact on stock price?
- Does Net asset value per share (NAVPS) impact on stock price?

The objectives of the study are mainly focused on finding a better solution for the research questions at the end.

- To examine the impact of EPS on stock market price.
- To examine the impact of NAVPS on stock market price.

2. Literature Review

2.1 Accounting Information

Accounting should keep track of business transaction and non-transaction records as a database in order to disclose the information to the organization's stakeholders so that they can draw conclusions. Currently, millions of investors gather information from company documents on a daily basis. Investors, borrowers, and a variety of other groups are the main recipients of financial records (Chalu, 2019). Every successful decision is supported by reliable, valuable facts about the business. As a result, we recognize that accounting plays a vital part in generating accounting information.

Every business tries to make the most of its limited resources, including human resources, in order to deliver a profitable product or service. The firm has the ability to create a profit, and both internal and external parties are willing to invest their resources in the firm, allowing the firm to grow and generate a substantial profit in the coming years (Park & Chai, 2021). They evaluate financial accounting information from other similar firms to make investing decisions. As a result, accounting data is critical for decision-making at all times (Gardent & Reeves, 2010).

Accounting has two key functions: one measure operating activities and the other measures non-operation activities. The second one is to relay the facts about such operations to all external and internal stakeholders so that appropriate decisions can be made. Investors make choices based on the share price in order to benefit from purchasing or selling the company's shares (Kijewska, 2018).

According to Beaver (1968), the primary goal of accounting information is to assist interested parties in making decisions. The price mechanism is one major function in the economy. Because of fluctuating economic activity, pricing rises and falls. As a result, the stock market price is continually fluctuating. Akbari (2013) mentioned, the stock market is expanding and is recognized as one of the most significant mechanisms in the growth of the economic system, with its importance growing by the day. According to that accounting information helps to make financial decisions in the stock market.

2.2 Established Theoretical Perspectives

There is no lack of theories on the financial markets because of the rapid change. In reality, there is no widely acknowledged body of study that explains why prices fluctuate on a daily basis (Ruhani et al., 2018). After World War II, the conventional approach to financial theories underwent a significant transformation into the modern world. Formal economic theories that draw from a variety of theoretical frameworks have been used to understand financial markets (Archer & Dambrosio, 1969).

There are several theories that discuss the value relevance of accounting information on share market price. In Theory of Capital Structure, Modigliani and Miller (1958) proposed that dividend distribution enhanced the firm's value to its owners, while the other recognized that dividend distribution discouraged the company from investing in profitable initiatives. Markowitz (1952) and Tobin (1958) describe returns expected by resource providers are calculated by the risk-free rate plus the forecasted market risk premium modified by the beta coefficient in the Capital Asset Pricing Model. According to the Efficient Markets Hypothesis (EMH), the market price of stock includes all existing information and knowledge about that share. In EMH Classical, behavioral, and efficient capital market theories are three primary types of theories for understanding stock market performance in the literature of economics and finance (Cho et al., 1984). Classical economic theory describes the demand and supply determine the share market prices in the capital market activities. Among the theories to analyzing stock behavior, the efficient capital market theory has risen to the top. An efficient capital market, adhere to Fama (1970), is "a market wherein the prices always completely mirror available accounting information." The efficient markets hypothesis (EMH), also known as the Random Walk Theory, states that present stock market prices accurately represent all available accounting information such as EPS, NAVPS, dividend payout (Ruhani et al., 2018). The efficient markets theory of asset prices is one of the first and most stunning uses of the theory of rational expectations. According to the rational expectations hypothesis, the actors in an economy will behave in a way that is consistent with what may be rationally expected in the future according to the available information (Sargent, 1960). The researcher uses both these theories to come up with the conclusion for this research.

2.3 Value Relevance of Accounting Information

Past literature has shown inconsistencies of accounting information's important for investors to take their stock market decisions. The number of studies implies that the value relevance of accounting information increases every day to the future (Francis & Schipper, 1999). The most significant technique to learn about overseas corporations is to look at their financial statements in their annual reports. At the same time researches indicate that the accounting theory and practices did not change with the development of the economy and technology (Meyer, 2007). That impacts the relevance of accounting information. However, past literature implies accounting information has become a significance of normalization of the society which has not lost its relevance (Iyoha & Oyerinde, 2010).

Ohlson (1995) designed a visual representation of the link between firm value and accounting information. According to the researcher, the value of an organization may be defined as the book value of profit and the significance of the information. *The Ohlson model* is widely regarded as the most significant advancement in capital stock market research.

Several studies have taken place regarding the value relevance of accounting information in various sectors around the world. A study compares Japan, China, and Korea about the comparative value relevance of several accounting information disclosed in listed manufacturing entities in the stock market over a 10-year period (Kwon, 2018). According to this comparison, the researcher found that Chinese enterprises have a negative impact on the value relevance of accounting information on net asset value and positive with accounting earnings and operating income.

Furthermore, Khanagha (2011) study observes the significant validity of accounting information in current and previous periods using a local database and design templates of global financial reporting standards implementation using various approaches for a sample of UAE firms. The findings reflect the portfolio and general disclosure and highlight the importance of financial information in UAE capital markets.

In the Australian context, research can be found about the value relevance of accounting information with the adoption of IFRS. It measured accounting information accuracy using the relationship between accounting the combined importance of equity and earnings book value. The outcome reveals that equity and earnings book value shifts less with the application of IFRS but earnings become more value relevant in this situation (Chalmers et al., 2010). Abayadeera (2010) shows how value-relevant information can lower an organization's earnings while increasing its book value. He also discovered, through their study, that important elements such as book value and earnings had just a little impact on share price determination in Australia's high-tech sectors.

The relationship among accounting information and stock price per share has been discovered by Ball and Brown (1968) in their research. At the same time, this study revealed the significance of the association between stock prices and accounting data analysis in financial statements. Mostafa (2016) explores the value relevance of accounting information using book values, earnings, and cash flow from operating activities. They ultimately come up with the result that cash flow from operations does not create value relevance, but earnings and book value does. Out of these three variables, earnings have significant value relevance on stock price more than the others.

2.4 Earnings Per Share (EPS)

Earnings per share (EPS) is a representation of how much money a business makes per share is divided by the shareholders based on the order in which the shares are purchased. According to Islam et al. (2014), The majority of investors base their investment decisions on the EPS. As a result, when determining the stock value, EPS is recognized as the most important element in valuation. This is because it measures the net income earned per share of total stock in the company, earnings per share is also known as net income per share (Nalurita, 2019). Earnings per share (EPS) is a statistic that shows how economically stable a company is from the standpoint of its shareholders. As a result, earnings per share of a bigger company may be stronger and bigger compared to profits per share of a smaller company. Based on the timeframe in consideration, EPS can be further differentiated. Profitability could be projected using previous earnings, current earnings, and estimated future earnings. EPS is the most frequent method of assessing a company's profitability, it's important to remember that data obtained may be manipulated, accounting modifications, and restatements (Nalurita, 2019).

2.5 Net Asset Value Per Share (NAVPS)

The NAVPS is calculated by dividing a company's total net asset value by the total number of outstanding shares. In this scenario, the assets may comprise the market value of a fund's investments, cash and cash equivalents, accumulated revenue, and debtors, while the liabilities comprise the sum of long-term and short-term obligations, as well as accumulated expenses like utility costs and staff pay. According to Glickman (2014), the existing stock price is frequently used to compare NAV per share. It trades at a discount to NAV if NAV is lower than the stock value.

2.6 Market Price per Share (MPS)

The market price per share is the latest value at which an individual share of a company's stock was traded. According to Nidhi and Kamini (2007), the average price of the share throughout the period of the year is called MPS. Across the trading day, supply and demand forces drive stock rates up and down. The market capitalization of a business is calculated using the average price per share.

2.7 Relationship between EPS and NAVPS

Perera and Thrikawala (2010) conducted research regarding the relationship among accounting information and market price per share. This is based on the listed commercial banks under the CSE between five-year periods. The main components used as accounting information are EPS, return on equity, and dividends published on financial statements. According to the ultimate result, there is a value relevance and a relationship between AI and Market Price Per Share (MPS).

EPS takes a significant place among the investors for financial decision-making and analysis processes. The impact of EPS on the stock market price of the banking industry in Malaysia for nineteen years was tested by Seetharaman and Raj (2011). Results found that EPS is acting as a performance measurement tool for business and at the same time it generates a very strong relationship between listed banks' market price per share in Malaysia and share market price.

Miah (2012) examines the magnitude of the relationship between stock price and two important accounting factors, including such as EPS and NAVPS, in order to assess the usefulness of accounting information. According to that, there is just a 25.47 percent association between increases in EPS and changes in share price in the businesses studied. Furthermore, there is a negative association between movements in NAVPS and changes in share price. The connection between EPS and NAVPS is just 1.9 percent. In Bangladesh, accounting information is not adequately expressed on share prices, and investors cannot use accounting information to make investment decisions. It concludes that changes in accounting factors have little effect on the valuation of a company's stock. Other qualitative considerations, on the other hand, play a significant role in this regard.

Okoro et al. (2020) examine the link between financial information and the stock valuation of publicly traded companies in Nigeria. From 2008 to 2017, past data was gathered from the financial statements of 23 industrial companies. The study variables clarified 79% of the difference in the market valuation of the quoted firms. The beta coefficient of the variables has a positive impact on the stock valuation of the quoted companies. The study states that there is a major association among accounting information and market valuation of the listed companies based on the regression analysis. Primarily focused on the Ohlson model, (Keong, 2010) examines the relationship among share price and net book value, earnings per share, and dividends per share. Aside from accounting indicators, this analysis looks at accounting information that has a linear structure. This result from the residual income model, in particular the Ohlson model, provides a valuable context for investigating methodological correlations among share prices and accounting information.

King and Langli (1998) go through a study to examine the connection between share prices with NAVPS and EPS accounting variables in Germany, Norway, and the United Kingdom. NAVPS and EPS were strongly linked to actual market values in all three countries, according to their findings. Variables in Germany have the lowest correlation with stock markets, while variables in the United Kingdom have the highest, while variables in Norway are in the middle. In Germany and Norway, NAVPS demonstrate more than earnings, but in the UK, they clarify less. Hemadivya and Rama Devi

(2013) made a study using the regression method about the impact of EPS on the stock market price per share using several sectors in India. Their conclusion was there is no significant impact of EPS on MPS, and it only affects 10% of the market. This is different from the other studies of the value relevance of accounting information on stock market price.

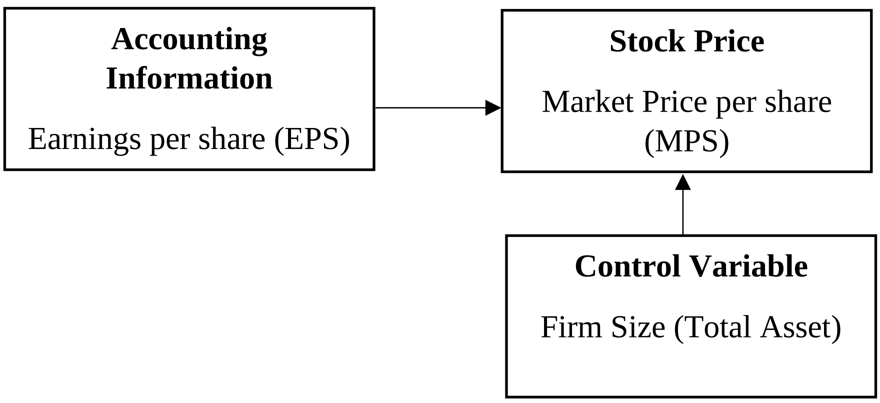
Investigation on Ghanaian equity market done by Ogeh Fiador (2013) using regression analysis model, found that NAVPS creates vale relevance on stock market price and it creates a negative relationship with the price per share. Pradhan and Dahal (2016) made research regarding factors affecting the Nepalese commercial banks using NAVPS, EPS, DPS, and PE ratios. Here NAVPS act as the independent variable along with the others. They finally concluded that NAVPS, EPS, DPS, and profit earnings ratio is a very weak effect in determining the stock market price.

3. Methodology

The study utilizes regression analysis conducted using SPSS software to examine data obtained from the annual reports of 18 plantation companies listed on the Colombo Stock Exchange (CSE) from 2015 to 2022. The study aims to clarify the correlation between accounting indicators and market prices per share by utilizing measurements such as earnings per share (EPS) and net asset value per share (NAVPS). The inclusion of plantation companies from the Food Beverage & Tobacco sector is a deliberate and calculated decision, made to fill a void in current research that mostly concentrates on the manufacturing and banking sectors (Ahmadi & Bouri, 2018; Badu & Appiah, 2018; Choi et al., 2019; Seetharaman & Raj, 2011). The research highlights the importance of accounting information, which is primarily obtained from secondary data sources such as annual reports. It supports the findings of Nimalathasan and Vijitha (2014), emphasizing its relevance for decision-makers and researchers in comprehending market dynamics.

3.1 Conceptual Framework

Figure 1: Conceptual Framework



The above-mentioned variables will be used for the data analysis of the plantation companies to come up with the result about the relevance of accounting information on the market price of the share. The regression analysis technique is used for the data analyzing process of the research (Akbari, 2013). This technique helps to archive the ultimate goal of the researcher. The researcher intends to use the regression method for data analysis and it will be done by using a statistical package for the social sciences (SPSS) software. Accordingly, the regression model of the study can be demonstrated as below,

$$MPS = \alpha + \beta 1EPS + \beta 2NAVPS + \beta 3TA + \varepsilon i$$

MPS = Stock Price, α = Intercept, EPS = Earnings per share, NAVPS = Net asset value per share, TA = Total Asset (Firm size), $\beta 1$, $\beta 2$, $\beta 3$ = Slope of variables, εi = Random error

In order to achieve the research objectives, the researcher developed the following hypothesis for the objectives of the study.

Hypothesis 01

H0: There is no impact of EPS on MPS when controlled for the effect of firm size.

H1: There is an impact of EPS on MPS when controlled for the effect of firm size.

Hypothesis 02

H0: There is no impact of NAVPS on MPS when controlled for the effect of firm size.

H1: There is an impact of NAVPS on MPS when controlled for the effect of firm size.

4. Data Analysis and Discussion

4.1 Descriptive Statistics

Table 1: Descriptive Statistics Data

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
EPS	152	-52.78	23.09	-1.83	11.47
NAVPS	152	-83.33	128.58	39.00	44.97
TA	152	6.35	6.96	6.68	0.13
MPS	152	2.90	93.00	27.40	22.09
Valid N (listwise)	152				

Source: Survey Result (SPSS)

From 2015 to 2022, Table 1 displays the mean value (M), minimum value (Min), maximum value (Max), and standard deviation (SD) of EPS, NAVPS, TA, and MPS. According to the standard deviation, NAVPS shows a 44.97 (SD = 44.97) value and as a result, NAVPS deviates significantly from the mean value. At the same time, EPS represents 11.47 (SD = 11.47) of standard deviation values. EPS, NAVPS, and MPS have a high standard deviation which means individual investors who are willing to invest in plantation companies can refer to these descriptive results to take an idea about risk and return (SD = 11.47, SD = 44.97, SD = 22.09). According to that, the standard deviation helps to measure the risk profile of the index which is very significant for future investment decisions. TA presents the least standard deviation since the least deviation belongs to TA (SD = 0.13). At the same time, a standard deviation is a valuable tool in investing and trading techniques since it can be used to calculate market and stock volatility. The mean value of EPS shows a minus value which the reader can understand the investment in plantation companies within these five years not averagely profitable (M = -1.83, SD = 11.47). According to Islam et al. (2014), this could be the reason for micro and macro-economic factors such as interest rates, trade activities, government policies, and weather conditions. The movement of independent variables can be seen in the minimum and maximum parameters. The minimum level of EPS and NAVPS shoes a minus value but MPS shows a positive value which means per share value becomes positive because it is driven by demand (Min = -52.78, Min = -83.33, Min = 2.90). The normal distribution of measured data was investigated in this research. The mean and standard deviation variables influence the normal distribution curve. The model identified by the researcher is normally distributed, with a bell-shaped distribution curve because this characteristic of the data set must be archived before run the regression analysis.

4.2 Regression Analysis

The influence of accounting information on the share market price of Plantation Companies listed on the CSE was investigated using regression analysis in this research.

Table 2: Model Summary

Model Summary[b]					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.843[a]	0.711	0.697	6.89095	1.628

Predictors (Constant): EPS, NAVPS, TA

Source: Survey Result 2015-2022

The influence of the independent variable on the dependent variable is interpreted in this model summary table. R-value indicates the power of the influence which can be identified as lower value to the lower impact and higher value to the higher impact and also the accuracy of the forecast of the dependent variable (Dhakal, 2018). According to table 2, it indicates a higher R-value of 0.843 (R = 0.843) which represents the correlation of accounting information and share market price. The degree of variation in the dependent variable that can be determined from the independent variables is recognized as the R-Square and is also called the coefficient of determination (Dhakal, 2018). In here R square indicates the impact of accounting information on share market price per share as 0.711 (R = 0.711) which means independent variables explain 71.1% of the variation in the dependent variable. At the same time, it can be assumed that the stock market price of plantation companies in Sri Lanka are influenced by accounting information. Further, 29% of the variation in the share prices of plantation companies are due to factors that were not considered by the present study. In the above table, the adjusted R square displays the amount of variance explained only by independent factors that have an impact on the dependent variable and it is 69.7%. This also suggests that accounting information has a significant influence on determining the share prices of plantation companies in Sri Lanka. Based on the above results, the researcher can conclude there is a significant impact from accounting information on the share market price of plantation companies in Sri Lanka according to this model summary.

Table 3: Coefficient Analysis

Variable	B	*t* -Value	*p*-Value	VIF
(Constant)	128.057***	3.218	0.002	
NAVPS	0.294***	10.173	0.000	1.101
EPS	0.322***	3.194	0.002	1.097
TA	-17.922***	-3.001	0.004	1.015
F - Value	50.120			
Sig	.000[b]			

a. Dependent Variable: MPS

*** represent significant levels at 0.01

Source: Survey Result 2015-2022

According to table 3, when considering the F statistics Overall significant level of the regression model is a solid fit for the data. Here the *p* - value is smaller than 0.05 (p = .000), accounting information has a dominant influence on the stock price at a 1% significant level. As a result, the entire regression model is significant.

The beta results represent how each variable influences the outcome of the dependent variable. According to this research data, the regression beta coefficients should be evaluated because Beta coefficients can be either positive or negative. In table 4.3, the beta coefficient of EPS is 0.322 (β = .322) and it is statistically significant (p =.002) and shows a positive relationship, which means the market price per share will rise by Rs.0.32 for every Rs.1 increase in the EPS in plantation companies Sri Lanka. Islam et al. (2014) mentioned that if a company maintain a good EPS, the customers and investors may have greater impression regarding the company and it will generate higher demand and sale for its shares which result to increase the MPS. According to Miah (2012), there is a positive association between EPS adjustments and share price fluctuations in a sample of 105 companies which are including the banking sector, oil, food, engineering, textile sectors, etc. This study shows similar results to the researcher. NAVPS shows 0.294 (β = .294) of beta value which is a positive relationship with the market price per share of plantation companies and it is significant (p =.000). According to Glickman (2014), there is a positive relationship between NAVPS and market price per share because investors always seek higher NAVPS prior to their investing and it will generate higher demand for shares which will cause higher MPS. The effective market hypothesis also describes that available all accounting information such as EPS, NAVPS and etc. impacts the stock market price and the performance (Cho et al., 1984). Even if the EPS and the NAVPS represent a positive relationship the TA (Log of TA) represents a significance negative relationship with the market price per share and it is -17.922 (β = -17.922). Mothlagh et al. (2016) mentioned, there is a negative impact on total assets and the market value of shares which can be a cause of the rational thinking of the investor and the share split which means most of the companies with higher asset value split their existing shares to new shares and it will decrease the MPS. According to the results of this research rational expectation will drive the investor's decisions based on financial information and market demand with a positive and negative relationship (Sargent, 1960).

VIF value discovers multicollinearity in regression analysis and determines how much a regression coefficient's variance is exaggerated as a result of the model. According to table 4.3, all independent variables present VIF value of less than 5, which means that there are no multicollinearity issues in the model. Finally, the researcher can conclude the regression results according to the combination of several indicators in table 4.3 as follows. There is a significant relationship between EPS and a share market price (p =.002). NAVPS value significant at 0.000 (p =.000). R, R square, f- value, and VIF value interpret the overall model is significant and fits for the study from the above 4.2 and 4.3 tables. According to that, the researcher can interpret the final conclusion as there is a strong positive impact from EPS and NAVPS to the MPS of plantation companies in Sri Lanka while TA shows a negative significant impact which means that there is a significant value relevance of accounting information on share market price in plantation companies in Sri Lanka.

5. Key Findings

The influence of EPS, NAVPS, and TA on the share market price of plantation businesses was investigated using regression analysis. Here the model that the researcher took for this study is strong because R square represents the impact of other factors which were not considered for the study as 28.99%.

The link between EPS, NAVPS, and share market price was shown by the beta value of the coefficient value of regression analysis. The beta value and the significance value of EPS are shown as 0.322 and 0.002 (β =.322, p =.002) which means that there is a positive statistical significance impact (p =.002) from EPS to Market price per share on plantation companies in Sri Lanka. As well as the NAVPS is a significant determinant of MPS (β =.294, p =.000). Firm Size (Log of Total Asset) represents a negative significant association with MPS (β = -17.922, p =.004).

According to the above-mentioned factors, the results of the study support the researcher’s objectives and hypothesis. H0 of both hypotheses shows that there is no impact from EPS, NAVPS, and Log TA to MPS but according to the regression results the H0 is rejected, and the final result can be interpreted as there is an impact from EPS, NAVPS on the stock price when controlled for TA.

6. Conclusion

EPS and NAVPS exhibit a strong positive relationship with market price, indicating that companies with higher profitability and asset backing are more attractive to investors. For Sri Lankan plantation companies, improving these financial metrics can enhance market valuation and investor confidence.

However, Total Assets (TA) show a negative impact on the market price per share, suggesting that larger companies may face challenges related to asset utilization and efficiency. In the Sri Lankan context, this could be due to factors like outdated practices or underutilization of agricultural assets, making these companies less appealing despite their size.

Investors in the Sri Lankan plantation sector can use EPS and NAVPS as key indicators to guide their investment decisions, focusing on companies that demonstrate both profitability and strong asset management. Companies, in turn, should work on optimizing these metrics to attract investment and improve long-term growth prospects. Overall, the study highlights the crucial role of accounting information in shaping share market prices and influencing investor behavior in Sri Lanka's plantation sector.

7. Implications

This study highlights the critical role of financial metrics, specifically Earnings Per Share (EPS) and Net Asset Value Per Share (NAVPS), in guiding investment decisions in the Sri Lankan plantation sector. Investors should not rely solely on Market Price Per Share (MPS), as it can be influenced by market sentiment and external factors, potentially obscuring a company's true financial performance. Given the volatile nature of the plantation sector—often affected by fluctuations in global commodity prices and domestic agricultural challenges—EPS and NAVPS provide more reliable indicators of a company’s profitability and asset valuation.

Moreover, investors must consider non-financial factors such as climatic conditions and sustainability practices. Sri Lanka's plantation industry, particularly in tea, rubber, and coconut, is highly sensitive to environmental factors. For instance, climate change poses significant risks, including altered rainfall patterns and increased susceptibility to pests and diseases. Thus, investors should evaluate a company's adaptability to these conditions, including its use of sustainable agricultural practices, which have gained traction in response to both market demands and regulatory pressures.

In addition to EPS and NAVPS, future research should explore the impact of other financial metrics, such as Return on Equity (ROE) and Return on Assets (ROA), which provide insights into a company's efficiency and profitability relative to shareholder equity and total assets. Understanding these ratios can help investors gauge how effectively a company is managing its resources to generate returns.

Furthermore, macroeconomic factors such as exchange rate volatility, interest rates, and inflation are pivotal in shaping investment decisions within the Sri Lankan financial sector. For example, the depreciation of the Sri Lankan Rupee can significantly affect the cost of imported materials for plantation companies, impacting their operational costs and ultimately their profitability.

Comparative studies between Sri Lanka's plantation sector and those of other emerging economies, such as Indonesia and India, can provide valuable insights into best practices and potential areas for improvement. Additionally, examining the practices of developed markets like the USA and Australia, known for their advanced agricultural technologies and sustainable practices, could inform strategies for enhancing productivity and competitiveness in the Sri Lankan plantation sector.

In conclusion, a multifaceted approach that integrates both financial and non-financial information, alongside macroeconomic considerations, is essential for investors seeking sustainable investment opportunities in the Sri Lankan plantation industry. By adopting this comprehensive evaluation framework, stakeholders can make more informed decisions that contribute to the sector's resilience and long-term growth.

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International Journal of Contemporary Business Research
Volume 3, Issue 1_2024

Influence of Micro-Influencers on Niche Market Trends Among Gen Z in Sri Lanka

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Abstract

This study explores the influence of micro-influencers on niche market trends and consumer behavior among Generation Z (Gen Z) in Sri Lanka. Utilizing qualitative research methods, the study examines the characteristics of micro-influencers—such as credibility, relatability, and authenticity—that resonate with Gen Z consumers. The research is grounded in Social Influence Theory, Source Credibility Theory, and Diffusion of Innovations Theory, providing a comprehensive understanding of how micro-influencers shape purchasing decisions. Findings indicate that Gen Z consumers place high value on the authenticity and personal engagement of micro-influencers, often trusting them more than traditional celebrities. Micro-influencers are particularly effective in introducing and popularizing niche products, leveraging their close-knit follower relationships to drive consumer interest. However, the study also highlights challenges such as influencer fatigue and skepticism towards heavily sponsored content. The implications suggest that businesses should focus on fostering long-term, authentic collaborations with micro-influencers who align with their brand values to maximize marketing effectiveness. Future research is recommended to further explore the long-term impact of micro-influencer marketing on consumer behavior.

Keywords: *Consumer behavior, Gen Z, Micro-influencers, Niche market trends, Social influence*

1. Introduction

The proliferation of social media has fundamentally transformed the marketing landscape, particularly through the rise of influencers who actively shape consumer behavior and trends. Among these influencers, micro-influencers have gained substantial attention, especially within niche markets (Rachmad, 2024). Defined by their smaller yet highly engaged follower base, micro-influencers possess significant power in influencing the purchasing decisions and preferences of their audience (Gupta and Mahajan, 2019). This study investigates the influence of micro-influencers on niche market trends among Generation Z (Gen Z) in Sri Lanka, a demographic known for its digital proficiency and distinct consumer behavior.

Gen Z, comprising individuals born between the mid-1990s and early 2010s, represents a significant segment of the consumer market with unique characteristics (Erwin et al, 2023). This cohort is characterized by high levels of connectivity, technological savviness, and a strong emphasis on authenticity and relatability in interactions with brands and influencers (Erwin et al, 2023). In the Sri Lankan context, micro-influencers have emerged as particularly influential figures for Gen Z, often perceived as more relatable and trustworthy than traditional celebrities (Wijerathna and Wijesundara, 2022). Despite the global interest in micro-influencers, there is a notable gap in research specifically addressing their impact on niche market trends among Gen Z consumers in Sri Lanka. Most existing studies focus on Western contexts, overlooking the unique cultural, social, and economic landscape of Sri Lanka, which presents distinct consumer behaviors (Samaradiwakara, 2023; Wijerathna and Wijesundara, 2022; Guruge, 2018). This research problem highlights the need to explore how micro-influencers in Sri Lanka influence the purchasing decisions and market trends of Gen Z, offering insights that are both regionally relevant and academically significant.

This qualitative study aims to explore the characteristics of micro-influencers that resonate with Gen Z consumers in Sri Lanka, focusing on traits such as credibility, relatability, and authenticity. It examines how these influencers facilitate the discovery and adoption of niche market trends, particularly by introducing new products and engaging with their audience. Additionally, the study assesses the role of engagement strategies in building consumer trust and influencing purchasing decisions, while also investigating the impact of perceived authenticity and transparency on the effectiveness of micro-influencer marketing among Gen Z. These objectives are designed to provide in-depth insights into the dynamics between micro-influencers and Gen Z in Sri Lanka, offering valuable guidance for businesses and marketers.

The theoretical foundation of this research is anchored in several key theories. Social Influence Theory elucidates how individuals' behaviors, opinions, and emotions are shaped by others, making it crucial to understanding the impact of micro-influencers on consumer behavior. Source Credibility

Theory posits that the effectiveness of a message largely depends on the credibility of its source, which, in this context, refers to the perceived trustworthiness and expertise of micro-influencers. Additionally, Diffusion of Innovations Theory provides insights into how new ideas and products spread through cultures, helping to understand how micro-influencers contribute to the adoption of new trends among Gen Z.

2. Literature Review

2.1 Micro-Influencers

Micro-influencers are typically defined by their follower count, which ranges between 1,000 and 100,000. Unlike macro-influencers or celebrities, micro-influencers are often perceived as more relatable and approachable (Ebulueme and Vijayakumar, 2024). Their content tends to be niche-specific, focusing on particular interests such as fashion, beauty, fitness, or technology (Ebulueme and Vijayakumar, 2024). This relatability and specificity resonate well with Gen Z, who value personalized and authentic interactions over broad and impersonal endorsements (Leite et al, 2024). Abreu (2019) discuss how the perceived credibility and transparency of micro-influencers enhance their impact on consumer engagement. The study indicates that micro-influencers' genuine engagement with their audience fosters a higher level of trust and loyalty, which is crucial for effective marketing.

Micro-influencers significantly impact niche market trends through their ability to introduce and popularize new products and ideas (Cahyani, 2023). Their recommendations and endorsements often lead to increased consumer interest and adoption of niche products. Studies have shown that micro-influencers' endorsements can lead to higher engagement rates and conversion rates compared to traditional advertising methods. Prasanthi et al (2024) examines the extent of influence micro-influencers have on niche markets, emphasizing their role in shaping consumer behavior. The research highlights that micro-influencers' intimate knowledge of their niche allows them to create highly targeted content that resonates deeply with their audience, driving both awareness and sales.

2.2 Effectiveness of Micro-Influencer Marketing

The effectiveness of micro-influencer marketing strategies lies in their ability to create personalized and relatable content that resonates with their audience (Linda, 2024). Micro-influencers often employ storytelling techniques and authentic experiences to promote products, which enhances consumer engagement and drives purchase decisions (Shad and Egon, 2024). Studies have indicated that micro-influencer marketing can lead to higher levels of consumer trust and loyalty compared to traditional marketing approaches (Wijerathna and Wijesundara, 2022). Shen (2021) explores the impact of micro-influencers on consumer engagement, focusing on the persuasive power of authentic content. The study reveals that the personal narratives and honest product reviews shared by micro-influencers significantly influence consumer attitudes and behaviors.

2.3 Micro-Influencer Strategies and Techniques

Micro-influencers employ various strategies and techniques to engage their audience and promote products (Gan et al, 2019). One effective strategy is storytelling, where influencers share personal narratives and experiences related to the products they endorse. This approach not only makes the content more engaging but also enhances the perceived authenticity and credibility of the influencer (Smith & Zook, 2016). Another technique is the use of user-generated content, where influencers encourage their followers to share their own experiences with the products. This creates a sense of community and fosters a more interactive and participatory form of engagement (Kaplan & Haenlein, 2010). Additionally, micro-influencers often leverage social media platforms to conduct live sessions, Q&A sessions, and interactive polls, which further enhance their engagement with their audience (Marwick, 2015).

2.4 Impact on Consumer Behavior

The impact of micro-influencers on consumer behavior is multifaceted and significant. Their ability to create personalized and relatable content resonates deeply with their audience, leading to higher levels of engagement and trust (Freberg et al., 2020). This, in turn, influences various aspects of consumer behavior, including brand awareness, attitude towards the brand, purchase intention, and actual purchase behavior (Casaló et al., 2020). Studies have shown that consumers are more likely to trust and be influenced by recommendations from micro-influencers compared to traditional advertisements or endorsements from celebrities (Hwang & Zhang, 2020). This is particularly true for Gen Z consumers, who value authenticity and personalized interactions over traditional marketing approaches (Djafarova & Trofimenko, 2020).

2.5 Challenges and Future Directions

Despite the effectiveness of micro-influencer marketing, there are several challenges that need to be addressed. One major challenge is the potential for influencer fatigue, where consumers become overwhelmed by the sheer volume of influencer content and become less responsive to it (Matthes et al, 2020). Another challenge is the issue of authenticity, as the commercialization of influencer content can sometimes undermine the perceived genuineness of the endorsements (Kapitan et al, 2022). Additionally, the dynamic and ever-evolving nature of social media platforms requires influencers to constantly adapt their strategies and techniques to remain relevant and effective (Singha, 2024). Future research should focus on exploring new and innovative ways to enhance the effectiveness of micro-influencer marketing, as well as examining the long-term impact of these strategies on consumer behavior.

2.6 Theoretical Applications

Social Influence Theory provides a foundation for understanding how micro-influencers impact consumer behavior by influencing the behaviors, attitudes, and opinions of others. This theory posits that individuals are influenced through mechanisms like conformity, identification, and internalization, where they align their behaviors with the expectations of their social group or adopt behaviors that resonate with their own values and beliefs (Friedkin, 1998). In the context of micro-influencers, this influence is particularly strong when followers perceive the influencer as credible or similar to themselves.

Source Credibility Theory further deepens our understanding of this influence by focusing on the role of trust and expertise (Hsieh and Li, 2020). According to this theory, the effectiveness of communication is largely determined by the perceived credibility of the source, which hinges on trustworthiness, expertise, and attractiveness (Hsieh and Li, 2020). Micro-influencers often excel in these areas due to their authentic engagement and transparency with their audience. Their trustworthiness is enhanced by their honesty and the way they share personal experiences, while their expertise is demonstrated through their knowledge in specific niche areas. Attractiveness, in this context, refers to the influencer's perceived similarity to their audience, which fosters relatability and connection (Gavrilova and Shuleska, 2023).

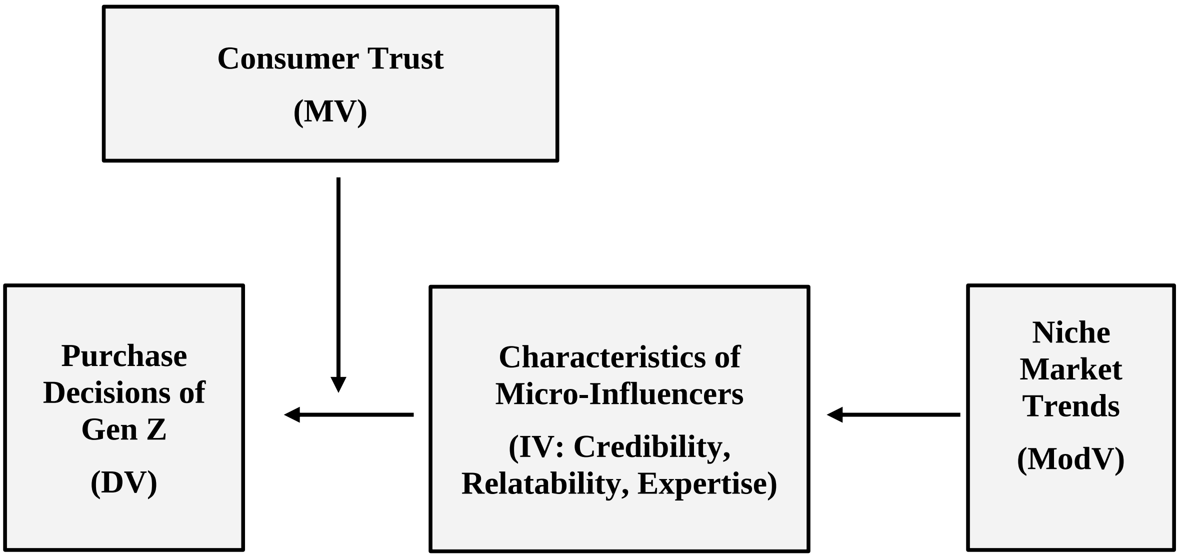
Diffusion of Innovations Theory complements these insights by explaining how new ideas, practices, or products spread within a social system (Luna, 2015). This theory highlights the role of micro-influencers as opinion leaders who introduce and advocate for new products, thereby facilitating their adoption. Their close-knit relationships with followers enable them to effectively communicate the benefits and usage of new products, playing a pivotal role in the diffusion process (Luna, 2015).

Integrating these theories forms the theoretical framework for this research, where each theory plays a distinct role in explaining the dynamics of micro-influencer marketing among Gen Z consumers. Social Influence Theory explains how micro-influencers, perceived as relatable and trustworthy, exert significant influence over their followers. Source Credibility Theory underscores the importance of credibility, relatability, and expertise in building consumer trust, which in turn impacts purchasing decisions. Diffusion of Innovations Theory provides insight into how micro-influencers help spread new trends and products, emphasizing their role as key players in niche market trends.

In this framework, the characteristics of micro-influencers—credibility, relatability, and expertise—serve as the independent variables that influence consumer trust, which acts as a mediating variable. This trust impacts the dependent variable, which is the purchase decisions of Gen Z consumers.

Finally, niche market trends act as a moderating variable, shaping how effectively these characteristics of micro-influencers influence consumer behavior. This integrated approach offers a comprehensive understanding of the broader process through which micro-influencers contribute to the adoption and spread of new products and ideas among Gen Z in Sri Lanka.

Figure 6: Conceptual Framework



3. Methodology

This study adopted a qualitative research design to explore the characteristics of micro-influencers that resonate with Gen Z consumers in Sri Lanka, focusing on traits such as credibility, relatability, and authenticity. Additionally, the study examined how these influencers facilitate the discovery and adoption of niche market trends, particularly by introducing new products and engaging with their audience. To align with these objectives, the research also assessed the role of engagement strategies in building consumer trust and influencing purchasing decisions, while investigating the impact of perceived authenticity and transparency on the effectiveness of micro-influencer marketing among Gen Z.

The population for this study consisted of Generation Z consumers enrolled in undergraduate programs at Edith Cowan University Sri Lanka, totalling 1,150 students. To determine the sample size for this qualitative study, a purposive sampling method was employed. The sample size was calculated using the formula for qualitative research, which generally recommends a sample size of 10-20% of the population for in-depth studies. Given the study's objectives, a sample size of approximately 115 to 150 students was deemed sufficient to achieve data saturation and capture diverse perspectives across different programs. Data collection involved conducting semi-structured interviews and focus group discussions. These methods were chosen for their flexibility and ability to elicit detailed, context-rich information that aligns with the study's focus on subjective experiences and perceptions. The semi-structured interviews were designed to gather insights into participants' experiences with micro-influencers, focusing on how these influencers impact their purchasing decisions and shape niche market trends. Focus group discussions provided an additional layer of depth, allowing for the exploration of shared experiences and collective perceptions among Gen Z consumers. Interviews and focus group discussions were audio-recorded and transcribed verbatim to ensure accuracy and reliability in data analysis. Thematic analysis was then utilized to analyze the collected data. This method involved identifying, analyzing, and reporting patterns (themes) within the data, which helped to understand the key themes and patterns related to the influence of micro-influencers on Gen Z consumers. The results were systematically presented in tables and discussed in relation to the research objectives and theoretical framework, providing a coherent narrative of the findings and offering valuable insights for businesses and marketers aiming to engage effectively with Gen Z in Sri Lanka.

4. Results

Table 1: Perception of Micro-Influencer Authenticity

Theme	Codes	Frequency	Interview Evidence	Thematic Analysis
Authenticity of Micro-Influencers	Authentic content	20	"I feel like they are honest when they talk about their personal experiences."	Consumers believe micro-influencers are authentic, particularly when they share personal stories and experiences. This authenticity is key in building trust among Gen Z.
Credibility of Product Endorsements	Questionable relatability	15	"Sometimes I wonder if they really use the products they promote because it doesn't seem to fit their lifestyle."	While micro-influencers are generally perceived as authentic, the relatability of the products they endorse is sometimes questioned, affecting their overall credibility.
Trust in Micro-Influencers	High trust levels	18	"Even though I sometimes question their endorsements, I still trust them more than celebrities."	Despite concerns about relatability, the majority of consumers maintain trust in micro-influencers, valuing their perceived honesty over traditional celebrities.

Table 2: Impact on Consumer Behavior and Market Trends

Theme	Codes	Frequency	Interview Evidence	Thematic Analysis
Influence on Market Trends	Trend-setting	22	"I follow them because they always seem to be ahead with new trends and products."	Micro-influencers are seen as trendsetters within niche markets, influencing consumer behavior and keeping their audience updated on the latest trends.
Product Discovery	Niche product promotion	16	"I found out about some cool local brands through micro-influencers that I wouldn't have known otherwise."	Micro-influencers play a crucial role in introducing niche and local products to their followers, driving awareness and interest in these markets.
Purchase Intentions	Following market trends	20	"I buy products they recommend because I want to stay updated with what's trending."	Consumers follow micro-influencers' recommendations to stay current with market trends, which often translates into purchasing behavior.

Table 3: Engagement Strategies and Consumer Trust

Theme	Codes	Frequency	Interview Evidence	Thematic Analysis
Engagement Platforms	TikTok, Instagram Reels, YouTube Shorts	25	"I mostly engage with their content on TikTok and Instagram Reels, sometimes YouTube Shorts."	Engagement with micro-influencers primarily occurs on platforms like TikTok, Instagram, and YouTube, where short, engaging content is most effective.
Impact of Sponsored Content	Sponsored content concerns	14	"Sometimes their posts feel too commercial, which makes me doubt their recommendations."	Heavily sponsored content can diminish trust, as consumers feel that such endorsements may be less genuine and more commercially driven.
Fluctuation in Trust	Trust fluctuations due to sponsorships	18	"When I see too many sponsored posts, I start to question their sincerity."	Trust in micro-influencers can fluctuate depending on the perceived authenticity of their content, especially when it is heavily sponsored by brands.

Table 4: Challenges and Future Trends in Micro-Influencer Marketing

Theme	Codes	Frequency	Interview Evidence	Thematic Analysis
Challenges with Content Overload	Influencer fatigue	10	"There are just too many influencers and it gets overwhelming sometimes."	The oversaturation of influencer content can lead to influencer fatigue, where consumers become less responsive to their content.
Perception of Commercialization	Authenticity concerns	12	"The more commercialized they get, the less I trust their recommendations."	The increasing commercialization of influencer content is a concern for consumers, potentially undermining the perceived authenticity of micro-influencers.
Future Trends	Evolving influencer roles	15	"I think micro-influencers will have to adapt by being more selective with what they endorse."	Consumers anticipate that micro-influencers will need to evolve by maintaining authenticity and being more selective in their endorsements to retain trust.

Table 5: Credibility of Micro-Influencers

Theme	Codes	Frequency	Interview Evidence	Thematic Analysis
Evaluation of Credibility	Consistency in content	15	"I always check if what they say matches with their other posts. If it's consistent, I trust them more."	Consumers evaluate the credibility of micro-influencers by checking the consistency of their content, which helps in building or eroding trust.
Influence of Authenticity on Credibility	Authentic engagement	18	"When they talk openly about their experiences, I feel like they're being honest, which makes them credible."	Authentic engagement and open communication about personal experiences are key factors that enhance the perceived credibility of micro-influencers.
Impact of Sponsorship on Credibility	Sponsorship skepticism	12	"When I see a lot of sponsored posts, I start to doubt if they really believe in the products they're promoting."	The credibility of micro-influencers can be undermined by frequent sponsored content, leading to skepticism about their true endorsement of the products.
Trust-Building Strategies	Transparency in endorsements	17	"I appreciate it when they clearly state what's sponsored and what's not. It makes them more trustworthy."	Transparency about sponsorships and endorsements is crucial for maintaining credibility and building trust among followers.

Table 6: Relatability of Micro-Influencers

Theme	Codes	Frequency	Interview Evidence	Thematic Analysis
Perceived Relatability	Similarity to followers	20	"They seem just like us, not like big celebrities, which makes me relate to them more."	Micro-influencers are often perceived as more relatable than traditional celebrities due to their perceived similarity and approachability.
Impact of Relatability on Engagement	High engagement due to relatability	18	"I engage more with their content because it feels like advice from a friend rather than an ad."	Relatability enhances engagement, as followers feel a personal connection to micro-influencers, leading to more interactive and meaningful interactions.
Relatability Challenges	Lifestyle differences	14	"Sometimes their lifestyle seems a bit too different from mine, which makes it harder to relate."	Despite their general relatability, some micro-influencers' lifestyles may differ significantly from their followers', challenging the sense of connection.
Role of Relatability in Product Endorsement	Influence of lifestyle alignment	16	"When their lifestyle matches mine, I'm more likely to buy what they recommend because I can see myself using it."	The relatability of a micro-influencer's lifestyle with that of their followers is crucial in determining the influence of their product endorsements.

Table 7: Thematic Analysis

Theme	Codes	Freq-uency	Summary of Findings
Authenticity	Authentic content	20	Micro-influencers are perceived as authentic when they share personal stories and experiences. This authenticity is crucial in building trust among Gen Z consumers.
Credibility	Consistency in content	15	Consumers evaluate credibility by checking content consistency across posts. Transparency about sponsorships also plays a key role in maintaining credibility.
	Authentic engagement	18	Authentic engagement, where influencers openly discuss their experiences, significantly enhances credibility.
	Sponsorship skepticism	12	Frequent sponsored content can lead to skepticism and may undermine the perceived credibility of micro-influencers.

	Transparency in endorsements	17	Clear disclosure of sponsorships is essential for maintaining credibility and trustworthiness.
Relatability	Similarity to followers	20	Micro-influencers are seen as more relatable than traditional celebrities due to their perceived similarity and approachability, enhancing their influence on Gen Z.
	High engagement due to relatability	18	Relatability drives higher engagement, as followers feel a personal connection with micro-influencers, making interactions more meaningful.
	Lifestyle differences	14	When micro-influencers' lifestyles differ significantly from their followers, it can challenge the sense of relatability and reduce their influence.
	Influence of lifestyle alignment	16	The alignment of a micro-influencer's lifestyle with that of their followers increases the likelihood of followers adopting recommended products, as they can better envision integrating these products into their own lives.
Engagement Strategies	TikTok, Instagram Reels, YouTube Shorts	25	Engagement with micro-influencers primarily occurs on platforms like TikTok, Instagram, and YouTube, where short, engaging content is most effective.
	Sponsored content concerns	14	Heavily sponsored content can be seen as overly commercial, leading to fluctuating trust among followers.
	Trust fluctuations due to sponsorships	18	Trust can fluctuate depending on the perceived authenticity of sponsored content, with too much commercial content potentially eroding trust.

Table 7 (cont.): Thematic Analysis

Influence on Consumer Behavior	Trend-setting	22	Micro-influencers are recognized as trendsetters, significantly influencing niche market trends and keeping Gen Z followers updated on new products and trends.
	Niche product promotion	16	Micro-influencers play a critical role in promoting niche products and local brands, which might otherwise remain unnoticed by the wider consumer base.
	Following market trends	20	Consumers follow micro-influencers not only for product recommendations but also to stay current with market trends, which influences their purchasing behavior.
Challenges and Future Trends	Influencer fatigue	10	The oversaturation of influencer content can lead to fatigue among followers, making them less responsive to influencer posts.
	Authenticity concerns	12	Increasing commercialization of influencer content raises concerns about authenticity, which could undermine the long-term effectiveness of micro-influencer marketing.
	Evolving influencer roles	15	Consumers anticipate that micro-influencers will need to adapt by maintaining authenticity and being more selective in their endorsements to retain trust and relevance in the future.

5. Discussion

The findings of this study reveal that micro-influencers play a significant role in shaping the purchasing decisions and market trends of Generation Z (Gen Z) consumers in Sri Lanka. This impact is largely mediated by the perceived credibility, relatability, and authenticity of the micro-influencers, which align closely with the core principles of Social Influence Theory (Bull, 2020), Source Credibility Theory (Hsieh and Li, 2020), and Diffusion of Innovations Theory (Luna, 2015). These theoretical frameworks provide a comprehensive understanding of the mechanisms through which micro-influencers affect consumer behavior.

Social Influence Theory elucidates how individuals are influenced by the behaviors, attitudes, and opinions of others, especially those they perceive as similar or credible (Lorenz et all ,2021). The study's findings indicate that micro-influencers, through their personalized and relatable content, effectively create a sense of community among their followers. This connection is crucial for fostering a strong influence on consumer behavior, as it enhances the likelihood of followers adopting the trends and products endorsed by the influencers. For instance, participants mentioned that they follow micro-influencers because they perceive them as trendsetters (frequency: 22), with one respondent stating, "I follow them because they always seem to be ahead with new trends and products". This aligns with the concept that social interactions and perceived similarity significantly influence attitudes and behaviors, as discussed in the literature on social influence (Rodprayoon, 2020).

Source Credibility Theory further explains the importance of trustworthiness, expertise, and attractiveness in the effectiveness of communication from micro-influencers (Lorenz , 2021. The study found that Gen Z consumers place high importance on the authenticity of micro-influencers, often preferring them over traditional celebrities due to their perceived honesty and transparency. This preference is rooted in the belief that micro-influencers offer more genuine recommendations, which are seen as less commercially driven (Chen et all,2024). Interview evidence supports this, with one participant highlighting, "I trust them because they provide honest reviews" (frequency: 18). However, the study also highlighted that the credibility of micro-influencers could be compromised by frequent sponsored content, leading to skepticism among followers. One participant expressed this concern by saying, "When I see too many sponsored posts, I start to question their sincerity" (frequency: 18). This skepticism aligns with findings from previous studies that emphasize the role of perceived credibility in enhancing the effectiveness of influencer marketing (Freberg et al., 2011; Antheunis, 2020).

Diffusion of Innovations Theory provides insights into how new ideas and products spread through social networks, with micro-influencers acting as opinion leaders who facilitate this process (Okong'o et all,2024). The study demonstrates that micro-influencers significantly impact niche market trends by introducing and popularizing new products, particularly those that align with eco-friendly and local brand initiatives. Participants emphasized that they rely on micro-influencers to stay updated with market trends (frequency: 20), with one respondent noting, "I buy products they recommend because I want to stay updated with what's trending". This finding is consistent with the literature, which suggests that opinion leaders play a critical role in the adoption of new innovations (Zeng et al., 2009).

The thematic analysis of the data also reveals the challenges associated with micro-influencer marketing. While micro-influencers are generally trusted and valued for their authenticity, the increasing commercialization of influencer content poses a threat to their perceived genuineness (Verbeet et all, 2022). This commercialization can lead to influencer fatigue, where consumers become overwhelmed by the volume of content and less responsive to influencer messages. One participant stated, "There are just too many influencers and it gets overwhelming sometimes" (frequency: 10). This finding highlights the importance of balancing authenticity with commercial interests to maintain the trust of followers. Previous studies have also identified the potential for influencer fatigue and the impact of commercialization on authenticity (Herrando & Martín-De Hoyos, 2022; Shen, 2021).

In terms of practical implications, the study provides valuable guidance for businesses and marketers targeting Gen Z consumers in Sri Lanka. Emphasizing authenticity and credibility in influencer collaborations can enhance the effectiveness of marketing campaigns. By focusing on building long-term relationships with micro-influencers who align with their brand values, businesses can sustain the credibility and influence of these influencers over time (Okonkwoet all , 2023). For example, participants noted the importance of transparency in endorsements, with one stating, "I appreciate it when they clearly state what’s sponsored and what’s not. It makes them more trustworthy" (frequency: 17). This supports the idea that transparency is crucial for maintaining trust and credibility in influencer marketing (Liu et al., 2021).

Moreover, leveraging the niche interests of micro-influencers and encouraging interactive engagement through platforms like TikTok, Instagram, and YouTube can drive higher levels of consumer trust and loyalty. The study found that engagement primarily occurs on these platforms (frequency: 25), with respondents mentioning, "I mostly engage with their content on TikTok and Instagram Reels, sometimes YouTube Shorts". These findings suggest that businesses should prioritize these platforms when designing micro-influencer marketing strategies.

The study's findings also suggest that certain content types, such as storytelling posts, tutorial videos, and user-generated content, are particularly effective in driving consumer interest and purchase decisions. These content types not only showcase the influencer's expertise but also resonate deeply with the audience, reinforcing the influencer's credibility and influence. One participant explained, "I enjoy their tutorial videos because they show how to use products" (frequency: 14). This preference for authentic, relatable content is echoed in the literature, which highlights the importance of storytelling and engagement in effective influencer marketing (Shen, 2021).

While the study provides significant insights into the influence of micro-influencers on Gen Z consumers in Sri Lanka, it is not without limitations. The qualitative research design and relatively small sample size may limit the generalizability of the findings. Future research could benefit from a mixed-methods approach, incorporating quantitative surveys and larger sample sizes to validate and expand upon the current findings. Additionally, exploring the perspectives of micro-influencers themselves could provide a deeper understanding of the strategies and challenges they face in engaging with their audience.

6. Recommendations

Based on the findings of this study, several strategic recommendations can be made for businesses and marketers aiming to effectively engage with Gen Z consumers in Sri Lanka through micro-influencers. Firstly, it is crucial for businesses to prioritize authenticity and relatability in their collaborations with micro-influencers. This can be achieved by selecting influencers who align with the brand's values and by encouraging them to share genuine, personal experiences with the products. Gen Z consumers highly value authentic interactions, and they are more likely to trust influencers who provide honest insights rather than overly polished or commercialized content.

Adding more, leveraging niche interests is essential. Micro-influencers who specialize in specific areas, such as eco-friendly products, local brands, or unique fashion styles, tend to have a more engaged follower base. Collaborating with these influencers can lead to higher conversion rates as their audience is already interested in the specific niche. Thirdly, fostering long-term relationships with micro-influencers can enhance brand credibility and trustworthiness. By building sustained partnerships, brands can transform influencers into genuine advocates, resulting in more consistent and impactful marketing outcomes.

Moreover, it is recommended that brands encourage interactive engagement between micro-influencers and their audience. This can be done through interactive content such as Q&A sessions, live streams, and engaging polls. Such interactions not only strengthen the connection between influencers and followers but also create a sense of community. Fifthly, utilizing diverse content formats like tutorial videos, product reviews, and storytelling posts can effectively showcase the influencer’s expertise and genuine interest in the products, driving consumer interest and purchase decisions. Lastly, businesses should regularly monitor and adapt their strategies based on feedback and performance metrics to ensure that their marketing efforts remain relevant and resonate with the target audience.

7. Conclusion

This study provides a detailed analysis of the influence of micro-influencers on niche market trends and consumer behavior among Gen Z in Sri Lanka. Drawing on the frameworks of Social Influence Theory, Source Credibility Theory, and Diffusion of Innovations Theory, the research highlights the significant role micro-influencers play in shaping purchasing decisions through their credibility, relatability, expertise, and authenticity.

The findings reveal that Gen Z consumers place a high value on the authenticity and relatability of micro-influencers, often preferring them over traditional celebrities due to their personal and honest content. Micro-influencers are particularly effective in introducing and popularizing new products within niche markets, leveraging their close relationships with followers to drive consumer interest and engagement. Trustworthiness and genuine engagement are critical factors in building consumer trust, which in turn influences purchase decisions.

The practical implications of this study suggest that businesses should emphasize authenticity, niche focus, long-term relationships, and interactive engagement in their micro-influencer marketing strategies. Aligning with micro-influencers who resonate with their target audience can enhance marketing effectiveness and foster deeper connections with Gen Z consumers.

While the study offers valuable insights, it also points out the need for further research, particularly with larger sample sizes and mixed-method approaches, to validate and expand upon these findings. Exploring the perspectives of micro-influencers themselves and examining the long-term impact of influencer marketing on consumer behavior would also be beneficial. Overall, this research underscores the growing importance of micro-influencers in the digital marketing landscape and their potential to drive meaningful consumer engagement and market trends.

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