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CONTENTS

Diverse Value Chains, Pricing Strategies, and Price Information Sources of Selected Dried Fish Varieties in Sri Lanka

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Abstract

The dried fish industry is a diverse and dynamic sub-sector nurturing upon the fisheries sector yet mostly invisible and poorly documented. Hence, this study aims to identify the diverse value chains, roles, and main functions, different pricing strategies, and price information sources of sprats, skipjack tuna, and smoothbelly sardinella, which are the most consumed dried fish varieties in Sri Lanka irrespective of the income levels. Fifty dried fish processors were selected through a simple random sampling technique. Dried fish wholesalers (n=20) retailers (n=20), input suppliers (n=5), and dried fish consumers (n=40) were selected through convenient and snowball sampling techniques. The study was conducted in the Matara, Puttalam, and Jaffna districts representing major dried fish-producing towns from three provinces. Descriptive and inferential data analysis methods were applied such as Friedman test. Value chain (I) is the major chain for skipjack tuna and sprats indicating 37% and 30% respectively. Value chain (VI) is the major chain for smoothbelly sardinella indicating 38% out of total value chain. Cost plus (P<0.05, x̄>3.55) and competition (P<0.00, x̄>4.12) based pricing were the main pricing strategies adopted by each value chain actor. Price information is shared among each other through personal contacts intra region (P<0.05, x̄> 4.85) and inter region (P<0.05, x̄> 4.85). Therefore, cost plus and competitive based pricing strategies should be structured nationally.

Keywords: *Dried fish, Pricing strategies, Price information, Roles and Functions, Value chain*

Introduction

The value chain is a collection of actions that adds value to a product at every step of the process, from sourcing to manufacture, distribution, and final consumption (Mandal, 2021; Kaplinsky & Morris, 2001). In its most basic form, a value chain is condensed to fundamental operations such as production, value additions, wholesaling, and retailing, etc. with vertical links (Hossain et al., 2015) The range of goods and services transform and transfer along the value chain towards the final consumer adding values at each stage of the chain (Rosales et al., 2017). Value chain comprises with complete range of actions such as manufacturing, sorting, grading, packing, distribution to end users, and final disposal (Kaplinsky and Morris, 2000). A series of physical and technological differentiation activities are in the value chain, and these are the foundation for developing a valuable consumer product (Mandal, 2021). A constructive flow of information and knowledge is crucial for an effective value chain (Hasini et al., 2020). Besides, trust and bargaining power are essential together with actor interactions and collaboration (Wickrama et al., 2021). Product-related data from upper-stream actors must trickle down to the lower-stream value chain and vice versa (Thu et al., 2021).

In the realm of literature, the Sri Lankan dried fish industry can be analyzed through the lens of various value chains and distinct stages. Gestsson (2010) developed a comprehensive value chain for yellowfin tuna fisheries in Sri Lanka over four distinct steps; supply, primary distributors, secondary distributors, and retail/ export/ processing, which further divides into two sub-value chains: local market value chain and the export market value chain (Gestsson, 2010). The wholesaler and/or commission agent serves as a middleman bridging the assembly market and retail market. Wholesalers buy dried fish from assemblers and resell it to shops, keep sales outlets open and occasionally help assemblers or fishers with financial aid (Amin, 2012). In certain cases, the wholesaler offers food, gasoline, and fishing nets to input suppliers (Hasini et al., 2020). For an 8–10 percent fee, the commission agent sells it on behalf of the assembler, avoiding any inventory, sale, or spoiling risks (Amin, 2012). Retailers buy dried fish from auction markets, and distributors and wholesalers resell it to customers. They bring value to the system by acquiring big quantities from wholesalers and offering a broad selection of tiny portions for the convenience of consumers purchasing modest amounts for their families (Hasini et al., 2020). Some traders transport the dried fish to consumers' homes for their convenience, and they are frequently served on a long-term basis. With the exception of supermarkets dried fish is generally sold as whole, sliced, and packed foams (Gestsson, 2010).

Price determination is always a function of manufacturing costs and a desired degree of markup (Barua et al., 2021) for many consumer goods. Pricing is the amount of money charged for the products, but there is much more to it than that (Adenegan and Bolarinwa, 2010). Indicators of how much value the brand, product, and customers are baked into pricing for the benefit of potential customers (Chen et al., 2019). It's one of the first factors that can influence a customer's decision to purchase the product (Chang and Su,

2022). Pricing strategies refer to the methods and approaches used by businesses to set the prices of their products or services. These strategies consider various factors, such as costs, competition, customer behavior, market conditions, and overall business objectives (Kim, 2018; Nurhaliza, 2022). There are numerous pricing strategies available, but some of the strategies are more popular (Chen et al., 2019; Mafimisebi, 2011). Cost plus pricing, competition-based pricing, dynamic pricing, discount pricing, and geographic pricing are identified as the widely used pricing strategies in the dried fish industry (Nurhaliza, 2022).

The determination of prices by this optimal markup amount is referred to as cost-plus pricing, markup pricing, or maximum cost pricing (Chen et al., 2019). There are some "rules of thumb" about the pricing cost-plus pricing (Barua et al., 2021). However, there is a fine line between the desired discount, production costs, and the price for the consumer (Murray and Little, 2000). A method known as competitive pricing involves setting a product's price in line with those of competitors (Nurhaliza, 2022).

Dynamic pricing

Dynamic pricing is referred to as surge pricing, demand pricing, or time-based pricing, (Kayikci et al., 2021). This strategy is a business approach where sellers modify the price considering the market demand. Dynamics prices are used as a response to price shocks (Harque et al., 2015). From an economic perspective, dynamic pricing makes a potential tactic hence much more productive than static pricing strategy. Food waste could be minimized by 54% in developing countries by adopting a dynamic pricing strategy (Faith, 2118).

Discount pricing

Discount pricing applies to a variety of marketing techniques where the price of a good or service is reduced to attract customers, sell excess stock, or increase sales (Steenhuis et al., 2011).

Geographical pricing

Geographical pricing is the practice of charging a different price for identical goods and services depending on where the buyer is located (Kayikci et al., 2021). Geographical pricing is the widely used pricing method in the dried fish industry. Studies have been conducted in Bangladesh (Shamsuddoha, 2007), India (Khileri et al., 2015) and Sri Lanka (Murray and Little, 2000; Koralagama et al., 2021) clearly stating the price variation among different dried fish markets, especially due to the transportation cost, culture, and consumer preference.

Purchasing power goes in hand with the price and thereby the demand. For example: if the price offered is too high, it has an effect on the drop-in consumer purchasing power (Farque et al., 2012).

Hence, the types of value chains, number of actors, their roles, pricing mechanisms, and information sources are highly diversified based on the geographical areas, marketing systems, intermediaries (Nurhaliza, 2022), market types, product types (Mandal, 2021) and many more. Further, the efficient pricing information is not transmitted to the producers and traders through the marketing channel as a result of processors' lack of specialization to competitive advantage

(Kayikci et al., 2022). Also, the information on value chains and pricing mechanisms is not properly structured creating complicated marketing strategies. Therefore, potential profit gains from the trade are not achieved (Mafimisebi, 2011; Bhuyan et al., 2013).

Determinations of relevant value chain types, roles, and functions of value chain actors are not identified clearly in most of the value chains in developing countries. Also, pricing strategies and information-receiving methods related to value chains are a gap to console between processors, wholesalers, retailers, consumers, and policymakers (Sambuo et al., 2021). Further, studies on the impact of different value chain actor's roles and functions on price determination are very lacking in most industries (Koralagama et al., 2021). The frequent and unpredictable prices and demand changes affect the industry performance (Thu et al., 2021), and functions of processors and consumers (Hatali and Soosaimanickam, 2018), making both ends marginalized.

Furthermore, research on dried fish value chains and pricing mechanisms is lacking because the industry is mostly invisible due to the dominating fisheries sector. Moreover, the dried fish industry is mostly operated as cottage-level industries with women's engagement. Hence, poor attention has been paid to this sector. Nevertheless, details on existing dried fish value chains, pricing strategies, and pricing mechanisms are of paramount importance to assess the industry. It would enable to draw the attention of policymakers with evidence-based information for the betterment of the industry. On the other hand, production can be enhanced and

streamlined with accurate pricing, market information, and perfect information (Hatali and Soosaimanickam, 2018). Such a situation would enlarge the efficiency along the value chains (Adenegan and Bolarinwa, 2010). Therefore, this study aims to identify the diverse value chains, roles, and main functions of value chain actors, different pricing strategies, and market price information-gathering techniques of each actor. Three popular dried fish varieties (skipjack tuna, sprats, and smooth belly sardinella) were selected for value chain analysis. The next section elaborates on the method adopted followed by results and discussion. Finally, the paper concludes with important inferences for future studies and policy inputs. Through skipjack tuna, sprats, and smooth belly sardinella dried fish value chains in Sri Lanka.

Methods

Double-spotted queenfish (*Scomberoides lysan*), skipjack tuna (*Katsuwonus pelamis*), smooth-belly sardinella (*Amblygaster clupeoides*), seer fish (*Scomberomorus commersoni*), and giant catfish (*Arlus thalassinus*) are the main marine dried fish varieties produced in Sri Lanka (MFARD 2020; DCS 2021). These dried fish varieties are mainly produced in five major districts in Sri Lanka Trincomalee, Mannar, Jaffna, Puttalama, and Matara. Consumption patterns of these dried fish varieties are different based on the type- small and large pelagic varieties (DCS 2021). Accordingly, Skipjack tuna (113.15g), double-spotted queenfish (74.82g), and shark (84.19g) are the highest-consuming large pelagic varieties whereas sprats (487g), smooth-belly

sardinella (76.41g), gold-striped sardinella (43.69g) and trenched sardinella (22.85g) are the highly consuming small pelagic varieties (DCS 2021).

Major 03 districts and major 03 dried fish varieties in Sri Lanka were selected to conduct the research representing the highest dried fish production district as Jaffna, Puttalam, and Matara and highest consumption dried fish varieties as small pelagic sprats, smoothbely sardinella and large pelagic skipjack tuna. This study followed a mixed methodological approach which effectively combined both qualitative and quantitative data. A pre-tested structured questionnaire was distributed among selected processors, wholesalers, retailers, other selected intermediaries, and consumers in each district to collect sprat data from Jaffna, smoothbelly sardinella from Puttalam, and skipjack tuna from Matara districts representing the highest production dried fish varieties in each district of Sri Lanka (Koralagama et al., 2021). Fifty dried fish processors were selected from each district through a simple random sampling technique by using the dried fish processors' name list available at each fisheries association and divisional fisheries office. Twenty dried fish wholesalers, twenty dried fish retailers, 05 input suppliers, and forty dried fish consumers were selected from each district by using snowball and convenient sampling techniques. The questionnaire was based upon the socio-demographic aspects; of different dried fish value chain actors, their roles and functions through the value chain, different pricing strategies used by each value chain actor, and different factors influencing the price determination of dried fish. Each factor was mainly selected by using past published research materials. Secondary data were obtained through the Ministry of Fisheries and Aquatic Resource Development (MFARD), National Aquatic Resource Development Authority (NARA), National Aquaculture Development Authority (NAQDA), Central Bank reports and other published materials.

Analysis of data was done in a few steps. First, the key economic agents, their roles, and main functions were identified. The survey which was conducted at the research site was utilized for that purpose. Then, the basic configuration of the chain was mapped. It showed the alignment of key economic agents along the chain. The percentage of value chains was simply calculated by identifying the engagements of each consecutive value chain actor together. Then pricing strategies and price information determining sources were analyzed through observed value chains by using collected primary data. Further, other descriptive and inferential data analysis methods were applied as the Friedman test by using SPSS 21 versions to identify the significant impact of results. Data has been presented both qualitatively and quantitatively for better understanding.

Results

Skipjack tuna dried fish value chain

Results revealed different value chains for skipjack tuna dried fish in the Matara district (figure 01). Major 05 value chain actor's levels are identified in the skipjack tuna dried as input supplier, processor, wholesaler, retailer, and consumer. Furthermore, there are different dried fish wholesalers in the value chain playing different roles as

collectors and distributors within the Matara district and outside the Matara district. There are two major parts of the value chain the geographical location inside the value chain and outside value chain. Dries fish distribute for the very shortest distance through the inside value chain than the outside value chain. The distances for dried fish distribution from processors to consumers are longer in the outside value chain than inside the value chain.

Based on the interaction of value chain actors, there are main 05 dried fish value chains for skipjack tuna. (I) Input supplier, processor, wholesaler (inside), retailer to consumer, (II) Input supplier, processor, retailer to consumer (III) Input supplier, processor, wholesaler (inside) to consumer (IV) Input supplier, processor, wholesaler I, wholesaler ii, wholesaler iii, retailer to consumer and (V) Input supplier, processor to consumer are identified as the major five dried fish value chain. Value chain I is identified as the major value chain indicating 37% while II, III, IV, and V are indicated 17%, 20%, 08%, and 15% respectively out of the total observed skipjack tuna dried fish value chains in the area. Interaction between processors and consumers is very low in the value chain to others. Processors closely interact with consumers in value chain V rather than other value chains.

Furthermore, there are 3% of non-major skipjack tuna dried fish value chains in the Matara district. Processors, wholesalers (inside), wholesalers (outside), collectors, distributors, secondary processors, retailers, and consumers interact in different ways to distribute dried fish from processors until final consumption by adding values.

Smoothbelly sardinella dried fish value chain

Figure 02 indicates the different value chains for smoothbelly sardinella dried for Puttalam District. There are major 05 value chain actor levels in the smoothbelly sardinella dried fish input supplier, processor, wholesaler, retailer, and consumer.

Furthermore, there are different dried fish wholesalers as distributors (inside/outside) and collectors in the value chain. Specific characteristic is identified in this value chain indicating two market types regional wholesale market and regional retail market. These two market types function together to deliver smoothbely sardinella dried fish from processor to consumer. The highest number of wholesalers function their activities within the wholesale market as well as highest number of retailers do their value addition and transaction activity within the regional retail market. Furthermore, there are different types of value chains that deliver smoothbely sardinella dried fish for inside customers as well as outside customers of the Puttalam district. The distances for dried fish distribution from processors to consumers are much longer in the outside value chain than inside the value chain.

Based on the interaction of value chain actors, there are main 05 dried fish value chains for smoothbelly sardinella. (VI) Input supplier, processor, regional wholesaler, distributors, collectors (outside), distributors (outside), retailer to consumer, (VII) Input supplier, processor, regional wholesaler, retailer to consumer (VIII) Input supplier, processor, regional retailer to consumer (IX) Input supplier, processor to consumer and (X) Input supplier,

processor, distributor, collectors (outside), distributors (outside), retailer to consumer are identified as the major five dried fish value chain. Value chain I is identified as 48%, II as 22%, III as 20%, IV as 05%, and V as 03% out of the total smoothbelly sardinella dried fish value chain in Puttalam districts. Interaction between processors and consumers is very low in the value chain I than others. Processors closely interact with consumers in value chain V than other value chains.

Furthermore, there are 02% of non-major smoothbelly sardinella dried fish value chains in the Puttalam district. Processors, wholesalers I, collectors, distributors, secondary processors, retailers, consumers, and dried fish-related companies interact in different ways to distribute dried fish from processors until final consumption by adding values.

Sprats dried fish value chains

Results revealed that different value chains for Jaffna district sprats dried fish as shown in figure 03. Major 05 value chain actor's levels are identified here as mentioned in the previous two chains. Furthermore, there are different dried fish wholesalers in the value chain as collectors and distributors inside distributors and outside distributors in the Jaffna district. There are two major parts of the value chain on the geographical location inside value chain and outside value chain as mentioned in the skipjack tuna value chain. Actors in the outside value chain, distribute their dried fish products from the Jaffna district to the outside area while in the inside value chain within the Jaffna district. The inside value chain is identified as the shortest value chain compared to the outside one. The distances for dried fish distribution

from processors to consumers are longer in the outside value chain than inside value chain.

Based on the interaction of value chain actors, there are main 05 dried fish value chains for sprats. (I) Input supplier, processor, wholesaler (inside), retailer to consumer, (II) Input supplier, processor, retailer to consumer (III) Input supplier, processor, wholesaler (inside) to consumer (IV) Input supplier, processor, wholesaler I, wholesaler ii, wholesaler iii, retailer to consumer and (V) Input supplier, processor to consumer are identified as the major five dried fish value chain. Value chain I is identified as 30%, II as 20%, III as 15%, IV as 05%, and V as 25% out of total observed sprats value chains in the Jaffna districts.

Furthermore, there are 05% of non-major sprats dried fish value chains in Matara district. Processors, wholesalers (inside), wholesalers (outside), collectors, distributors, secondary processors, retailers, and consumers interact in different ways to distribute dried fish from processors until final consumption by adding values.

Roles and functions of value chain actors

The dried fish value chain is aligned across five key stages; Input supply, production, wholesaling, retailing, and consumption. Table 03 summarizes the key stages, actors, and their roles along with their primary functions within the value chain. All the actors are responsible for facilitating the delivery of small and large pelagic dried fish from processing to final consumers. The strategic positioning of each actor along the value chains is determined by their roles and functions. The roles of local wholesalers are conclusive and

more powerful within the value chain. Input suppliers mainly engage in the dried fish value chain by supplying raw fish, salt, necessary equipment, financial support, and instructions on new methods, technology, etc. Processors mainly engage with producing dried fish and produce value-added products. Wholesalers purchase dried fish from producers. They collect, store, and distribute the purchase of dried fish for retailers and consumers. Retailers mainly purchase dried fish from wholesalers and sell it to consumers. Sorting, grading, and packing are the common characteristics for each actor of all three dried fish value chains. See Appendix A (Table A1) for more information.

Pricing strategies

Table 01 indicates the different pricing strategies of skipjack tuna, sprats, and smoothbelly sardinella dried fish at processors, wholesalers, and retailers. Sprats and skipjack tuna dried fish processors and wholesalers use a competition-based pricing strategy as the main pricing mechanism while smoothbelly sardinella processors and wholesalers use cost-plus pricing as the main pricing mechanism. Retailers of observed three dried fish varieties mainly use a cost-plus pricing strategy as the main pricing mechanism while determining the product price. According to the results of the Friedman test, each pricing mechanisms significantly affect the price determination of processors, wholesalers, and retailers of observed dried fish varieties.

Sources of price information gathering

Table 02 indicates the daily price information gathering sources of

skipjack tuna, sprats, and smoothbelly sardinella dried fish at the processor, wholesaler, and retailer levels. Skipjack tuna dried fish processors used information from another trader in the region as the highest price determination factor. Skipjack tuna wholesalers and retailers use information from other traders outside the region as the most price-determining technique.

Sprats processors, wholesalers, and retailers use information from other traders outside the region as the most price determination technique. Furthermore, smoothbelly sardinella processors use information from another trader inside the region as the most price determination technique while smoothbelly sardinella wholesalers and retailers use information from another trader outside the region as the most important price-determination technique. Other price determination techniques such as weekly price bulletin, central bank reports, mass media, etc. are used by all the processors, wholesalers, and retailers of observed dried fish varieties as the least important price determination technique. According to the results of the Friedman test, each technique significantly affects the price determination of processors, wholesalers, and retailers of observed dried fish varieties.

Discussion

Input supply, production, wholesaling, retailing, and consuming are the five essential stages of the dried fish value chain that are aligned in the three districts under observation. Also, there are five main types of value chains for all observed varieties, and these chains differ based on the percentage distribution, the types of dried fish, and

the geographic location. The primary value chain in the districts of Jaffna and Matara is mostly used to distribute dried fish in the area over short distances. However, the major value chain in the Puttalam district is mostly utilized to transport dried fish outside of the area across great distances.

The results of Hashini et al., 2020 on the small pelagic fish value chain, Hossain et al., 2015 on the dried fish value chain in Bangladesh, and Mandal, 2021 on the value chain analysis of dry fish marketing in the coastal belt of Bangladesh indicate diversification of value chain on geographical areas, marketing systems, intermediaries, market types and product types that aligned with this study findings. Further, it indicates different stages of value chains, actors, and different types of value chains in Bangladesh and the Sri Lankan dried fish industry.

Each actor's strategic placement along the value chains is determined by their roles and functions. Inside market wholesalers play decisive and more potent roles throughout the value chain. In the Matara and Jaffna districts, skipjack tuna and sprats were shown the same value chain types. There are specific regional wholesalers and retailers, and small and medium-sized businesses play a significant role as secondary processors producing value-added goods in the Puttalam district. Shamusuddoha, 2007 study of Supply and value chain analysis in the marketing of marine dried fish in Bangladesh and Rosales et al., 2017 on value chain analysis and small-scale fisheries management indicate the different roles, functions, and responsibilities of value chain actors which tallied with this study findings.

Cost-plus pricing methods and competition-based prices were identified as the major pricing strategies which used by dried fish value chain actors for all observed dried fish verities. According to the study by Nurhaliza, 2022, on pricing methods in determining the selling price of dried lomek products and Faith, 2018 on the study of a review of the effect of pricing strategies on the purchase of consumer goods the usage of different pricing strategies when determining product price which tallied with these findings.

Most of the dried fish value chain actors mainly use information from traders in the region and other traders outside the region to identify the current market price of dried fish. According to the Chang and Su, 2022 and Adenegan and Bolarinwa, 2010 indicate the impact of different sources when determining price of products as well as Sambuo, 2021 indicates different techniques when using fish price confirmations as mentioned in this study.

Conclusion

This study aims to identify diverse value chains, roles and main functions of value chain actors, different pricing strategies, and market price information sources of dried fish value chains especially on skipjack tuna, sprats, and smoothbelly sardinella. The findings indicate four distinct value chains at different levels of complexity. Accordingly, value chain (I) starts with the input supplier, processor, wholesaler (inside), retailer, and consumer. This is the main type of value chain for skipjack tuna and sprats, 37% and 30% respectively. Value chain (VI) also begins with the input supplier, processor, regional wholesaler, distributors, collectors (outside), distributors (outside), retailer

and consumer. This value chain is common for smoothbelly sardinella (38%). A competition-based pricing strategy is practiced by the Sprats and skipjacktuna dried fish processors and wholesalers.

In contrast, a cost-plus-based strategy is used by smoothbelly sardinella processors and wholesalers. Generally, retailers use the cost plus pricing method for all three value chains. Skipjack tuna and Smoothbelly sardinella dried fish processors obtain information through companions within the region. However, wholesalers and retailers access to information from traders outside the region. Sprats value chain actors mainly gather price information from traders outside the region.

The strategic positioning of each actor along the value chain is determined by their roles and functions. Skipjack tuna and sprats exhibit similar value chain types in the Matara and Jaffna districts. In contrast, a distinctive feature was observed with respect to smoothbelly sardinella than the other two varieties. A specific regional wholesaler and regional retailer markets were observed in Puttalam district. Besides, small and medium-scale companies play a major role as secondary processors with value-added products. Predominantly value chains in Jaffna and Matara district value chains are shorter within proximity within the region. However, the Predominant value chain in the Puttalam district is mainly used to distribute dried fish within long distances out of the region.

Therefore, national pricing strategies and policies should be implemented by focusing on cost-plus pricing and competition based pricing for observed dried fish varieties. Awareness of other observed pricing strategies should be improved among selected dried fish value chain actors through national plan. Formal price information gathering methods should be implemented to determine reasonable price for the observed dried fish products through selected dried fish value chains. Necessary policies should be implemented to share the market power among value chain actors fairly.

Author Contributions

Acknowledgments

Figures and Tables

Figure 1 Skipjack tuna dried fish value chain in Matara
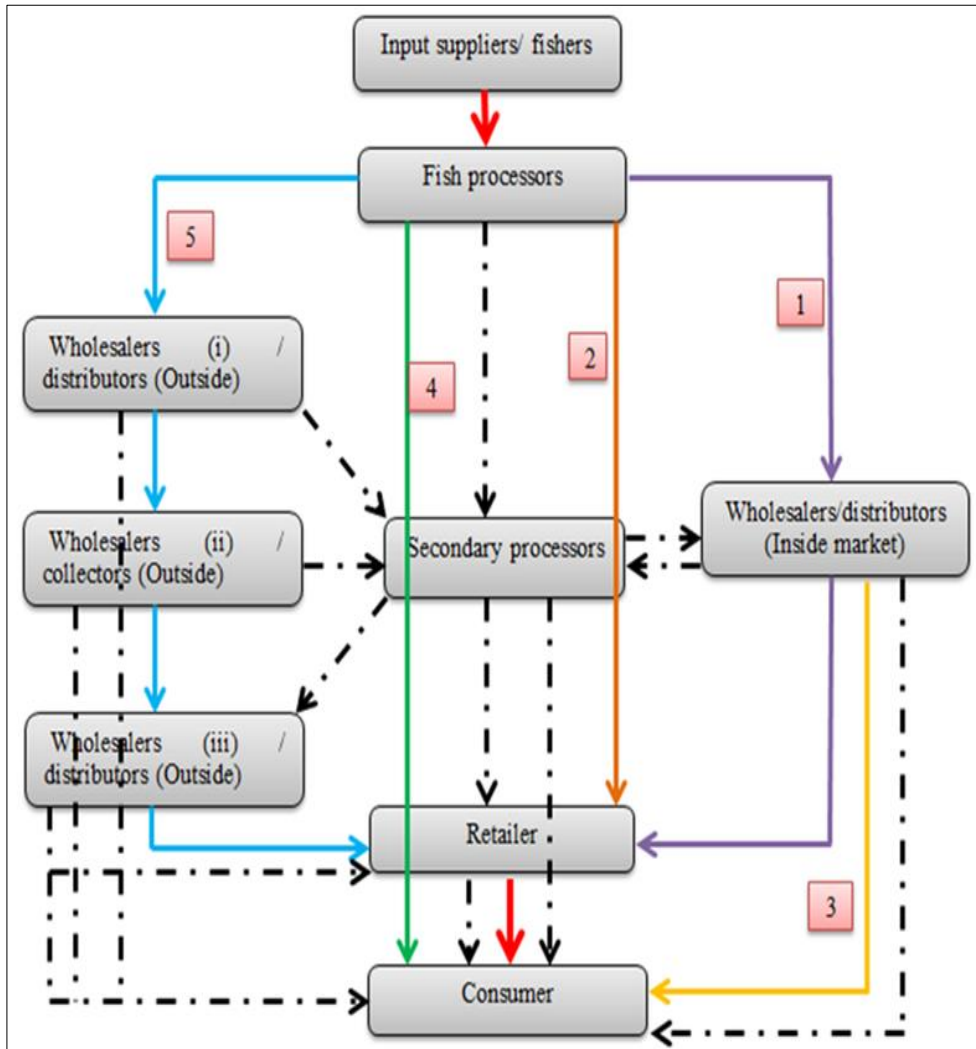
Source: Survey data

Figure 2: Smoothbelly sardinella dried fish value chain in Puttalam
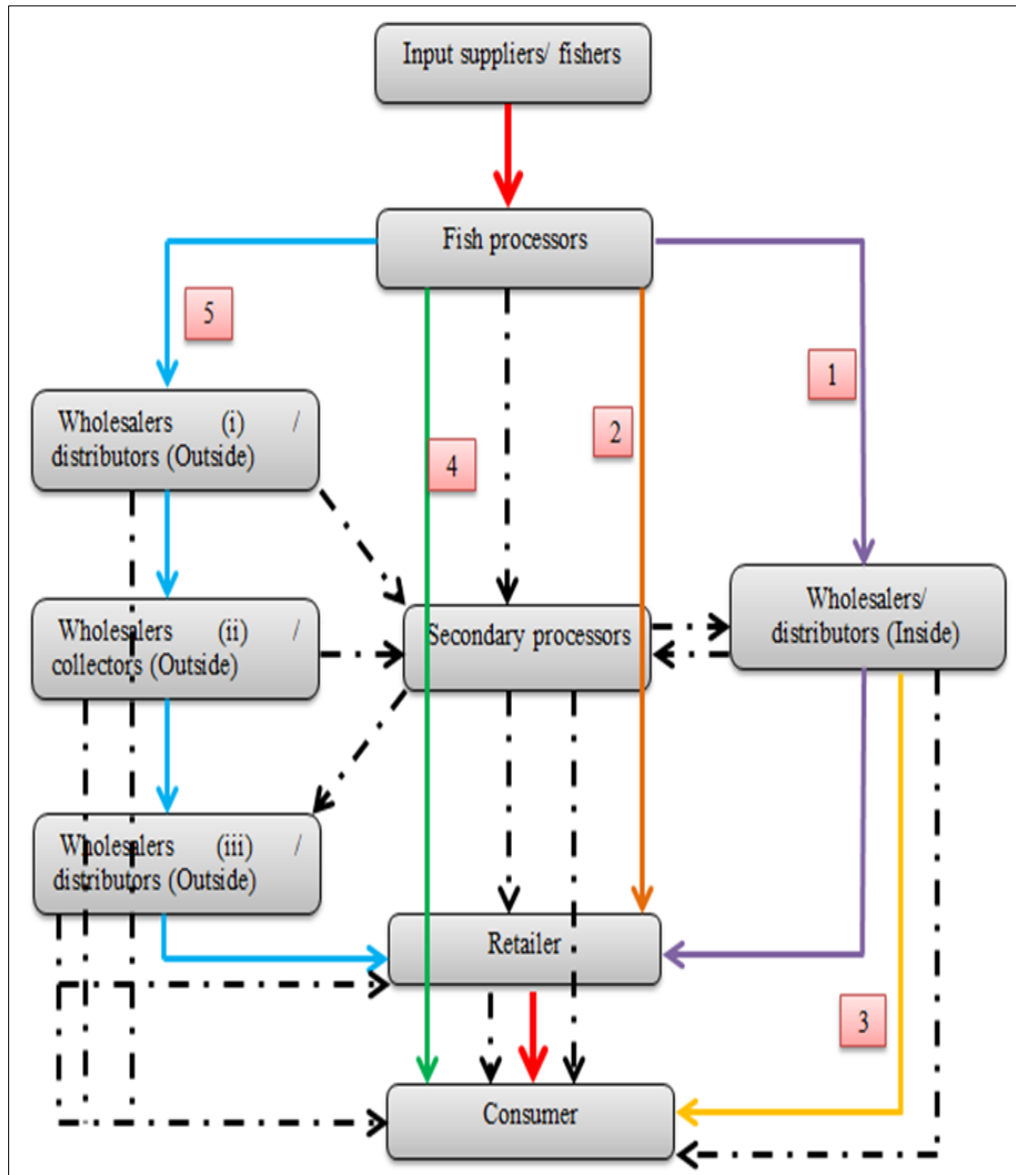
Source: Survey data

Table 1: Different pricing mechanisms used by dried fish value chain actors

Methods	Dried fish	Processors		Wholesalers		Retailers	
		Mean	P	Mean	P	Mean	P
Cost plus pricing	Skipjack tuna	4.12	0.00	4.45	0.01	4.78	0.00
	Sprats	3.98	0.00	3.55	0.00	4.48	0.03
	Smoothbelly sardinella	4.75	0.01	3.72	0.05	4.12	0.00
Competition based pricing	Skipjack tuna	4.32	0.00	4.82	0.00	4.75	0.00
	Sprats	4.82	0.00	4.55	0.00	4.08	0.05
	Smoothbelly sardinella	4.68	0.04	4.08	0.00	3.89	0.00
Dynamic pricing	Skipjack tuna	3.52	0.00	2.89	0.01	3.12	0.00
	Sprats	3.12	0.05	3.25	0.02	3.28	0.05
	Smoothbelly sardinella	2.98	0.00	2.87	0.00	3.81	0.00
Discount pricing	Skipjack tuna	2.89	0.01	3.14	0.00	2.58	0.05
	Sprats	2.51	0.00	3.54	0.01	2.98	0.05
	Smoothbelly sardinella	2.68	0.00	2.18	0.00	2.54	0.01
Geographic pricing	Skipjack tuna	1.15	0.05	1.00	0.00	1.04	0.00
	Sprats	1.46	0.01	1.18	0.00	1.05	0.00
	Smoothbelly sardinella	1.24	0.00	1.06	0.00	1.08	0.02
Other	Skipjack tuna	1.10	0.01	1.15	0.00	1.20	0.00
	Sprats	1.23	0.05	1.12	0.01	1.19	0.00
	Smoothbelly sardinella	1.05	0.01	1.00	0.05	1.18	0.05

Source: Survey data, Significant level 0.05, two tailed

Table 2: Current market price information gathering sources of each dried fish value chain actors

Methods	Dried fish	Processors		Wholesalers		Retailers	
		Mean	P	Mean	P	Mean	P
From dried fish association	Skipjack tuna	3.45	0.01	3.19	0.00	3.18	0.01
	Sprats	3.48	0.00	2.95	0.05	3.72	0.00
	Smoothbelly sardinella	4.15	0.05	3.98	0.00	2.89	0.05
Another trader in the region	Skipjack tuna	5.75	0.00	5.17	0.00	4.98	0.00
	Sprats	4.98	0.00	5.82	0.01	4.98	0.00
	Smoothbelly sardinella	5.65	0.00	4.95	0.00	4.85	0.05
Another trader outside the region	Skipjack tuna	4.85	0.01	5.55	0.02	5.48	0.00
	Sprats	5.72	0.00	4.92	0.00	5.68	0.01
	Smoothbelly sardinella	5.12	0.00	5.92	0.04	5.74	0.00
Colombo or other market	Skipjack tuna	4.12	0.02	3.89	0.00	3.58	0.01
	Sprats	4.35	0.00	4.55	0.01	3.98	0.00
	Smoothbelly sardinella	4.26	0.01	4.12	0.00	3.18	0.00
Social media	Skipjack tuna	3.58	0.00	3.98	0.00	3.97	0.00
	Sprats	2.95	0.05	3.55	0.05	2.99	0.02
	Smoothbelly sardinella	3.48	0.00	2.98	0.00	3.78	0.00
Other	Skipjack tuna	1.25	0.00	1.00	0.00	1.14	0.00
	Sprats	1.56	0.02	1.08	0.02	1.15	0.01
	Smoothbelly sardinella	1.34	0.04	1.16	0.00	1.18	0.00

Source: Survey data, Significant level 0.05, two-tailed

Table 3: Roles and function of value chain actors

Key stage	Agent	Roles	Main function
Input supply	Input suppliers	Fishers	Supplying raw fish/ Sorting fish/ Grading fish
		Salt supplier	Supplying salt/ Grading salt/Packing
		Other equipment supplier	Supplying necessary equipment
		Instructors	Advisory services/Training program/Arrange subsidies/ Business registration/Link government and actors
Producing	Producers	Processors	Preparing dried fish/ Produce value-added products/by-products/ Sorting/ Grading/ Packing/ Selling/ Storage
		Secondary processors	Purchasing dried fish from processor or wholesaler/ Produce value-added products
Wholesaling	Inside wholesalers (In southern province)	Wholesalers (Inside)	Purchase dried fish mainly from produces/ Distribution/ Resell/ Sort and grading
	Regional wholesalers	Wholesalers	Purchase dried fish mainly from produces/ Distribution/ Resell/ Sort and grading
	Outside wholesalers (Outside of southern province)	Wholesalers i (Distributors/ transporters)	Purchase dried fish mainly from producer/ Distribution/ Resell
		Wholesalers ii (Collectors at central market)	Purchase dried fish mainly from distributors/ Collecting/ Resell/ Sorting and grading/ Storage

		Wholesalers iii (Distributors/ transporters)	Purchase dried fish from collectors/ Distribution/ Resell/ Sorting and grading
Retailing	Retailers	-Local sellers (Roadside/mobile sellers) -Supermarket -Other shops	Purchasing dried fish mainly from wholesalers/ Selling/ Packing
	Regional retailers	-Regional retailers in Puttalam	Purchasing dried fish mainly from wholesalers/ Selling/ Packing
Consumption	Consumer	-Local consumers -Hotels and restaurants	Preparation and consumption

Source: Survey data

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Impact of Bank-Specific and Macroeconomic Factors on the Net Interest Margin of Financial Institutions in Sri Lanka

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Abstract

Banks and other deposit-taking financial institutions play a crucial role in any country's economy. The Interest Spread and Net Interest Margin (NIM) in Sri Lankan financial institutions are considerably higher than in other regional countries, indicating high intermediation costs. This paper aims to identify the primary factors contributing to maintaining a higher margin in the sector. Credit risk, liquidity risk, firm size, operational expenses, and earning ability were considered as bank-specific explanatory variables, while interest rate, inflation rate, and economic growth rate were used as macroeconomic explanatory variables. The selected sample comprised seven Licensed Commercial Banks (LCBs), three Licensed Specialized Banks (LSBs), and five Licensed Finance Companies (LFCs) based on their total assets. Data were collected from published secondary sources over a period of 10 years (2009-2019). The data for 2020, 2021, and 2022 were omitted due to the negative impact of COVID-19 and the economic crisis in the country. Multiple regressions with a fixed-effect model were employed to identify significant variables. The results reveal that firm size, credit risk, interest rate, and economic growth are significant across the entire sample. However, firm size emerges as the only industry-specific significant variable in Licensed Finance Companies (LFCs).

Keywords: *Financial institutions, Sri Lanka, Net Interest Margin*

Introduction

Banks and other deposit-taking financial institutions play a pivotal role in the Sri Lankan economy. These institutions have more than 70 % assets of the finance system at the end of 2019 (CBSL, 2019). Licensed Commercial Banks (LCBs), Licensed Specialized Banks (LSBs), and Licensed Finance Companies (LFCs) are the three main categories of financial intermediaries in Sri Lanka. One of the key roles of the financial system is to work as an efficient intermediator between savers and investors (Teshome et al., 2018). An efficient financial system is required for a country's sustainable economic growth (Misra & Aspal, 2013). Interest Spread and the Net Interest Margin (NIM) can be used to measure the efficiency of the financial intermediaries. Interest Spread is the difference between the rates paid on deposits and the interest rates charged on loans (Ram & Mesfin, 2019). The Net Interest Margin (NIM) is the difference between banks' actual interest revenues and actual interest expenses as a ratio to the banks' total assets (Zhou & Wong, 2008). Researchers have used both measurements to measure the efficiency of the financial system.

Financial institutions in Sri Lanka currently maintain a higher interest margin compared to other neighboring countries, as evident in Table 1. This reflects the high intermediation costs incurred by the sector. Therefore, it is worthwhile to investigate the most significant causes of this sector's inefficiency. The primary objective of this study is to identify the significant

bases behind this phenomenon, focusing on both bank-specific and macroeconomic variables. Another objective is to assess whether there are differences between Licensed Commercial Banks (LCBs) and Licensed Finance Companies (LFCs) in these determinants.

Interest Spread is the most accurate measure of efficiency in the financial sector, requiring average lending and deposit rates (De Siva et al., 2020). However, obtaining accurate and reliable data poses a key challenge for researchers. Consequently, many studies focus on Net Interest Margin (NIM) (Puspitarai et al., 2021). Metrics like Return on Assets (ROA), Return on Equity (ROE), Net Interest Income, and Net Interest Margin are crucial ratios used to assess financial institutions' performance. Among these, Net Interest Margin is particularly effective in measuring institutional efficiency and aiding managerial decisions. Aligned with previous research studies, this study employed NIM as a proxy to measure bank efficiency (Dissanayake and Kethmi, 2021).

In literature, scholars have identified certain factors that determine a bank's net interest margin. Among them, credit risk is one of the most powerful factors. There is the possibility of a financial loss if a borrower fails to meet contractual obligations (CBSL, 2019). Tarus, Chekolb, & Mutwoic (2012) have found it significantly positive with the NIM. Another study in Mainland China by Zhou & Wong (2008) found that credit risk can be measured by the total loan to total assets ratio and has a positive

relationship with the NIM. The reason for this relationship is that the firm has additional capital and attempts to invest its assets more riskily. They expect higher margins.

Bennaceur and Goaied (2008) have found that firm size and the NIM have a positive and significant association. Ram & Mesfin (2019) and Obeid & Adeinat (2017) reveal that bank size is positive and statistically significant with the NIM. However, Kengatharan (2018) and Zhou & Wong (2008) find that size negatively impacts firms' profitability. It proves that large banks can face the interest rate risk more than others with control liabilities.

According to Suravimala (2006), "firms need the additional high cost of funds other than the deposit to grant loan and advances". Therefore, it has a negative relationship with the NIM. Liquidity assets express conversation assets or security into cash without impacting the market price during critical economic conditions. Consequently, firms need to maintain a satisfactory level of liquidity to meet their obligation. Similar work has also been pursued by Ram & Mesfin (2019), who have found that the liquidity position of Ethiopian commercial banks has a significant negative relationship with the NIM. These results are also supported by Bashir (2021). However, Saksonova (2014) finds no significant relationship between liquidity and the NIM in the Serbian Banking Industry.

Bashir (2018) finds that leverage negatively impacts the NIM in Pakistan commercial banks. However, Suravimala (2006) finds that leverage has no significant impact on the NIM. Earning is a good indicator to emphasize the financial health of the organization. It expresses the ability to generate revenue from its lending services. Ram & Mesfin (2019) use the earning ability to find the relationship with the NIM, subsequently identifying that earning ability is significantly undesirable with the NIM. However, a limited number of studies use this variable to determine the relationship with the NIM.

Horvath (2009), using the data from the financial statements of 25 commercial banks, identifies the determinants of interest rate margins of Czech banks. He uses capital adequacy as a variable and discovers a negative relationship between interest margins. According to this study, higher capital adequacy of a bank depends on lower interest margins, while lower margins depend on price stability. However, Ram & Mesfin (2019) find that capital adequacy positively relates to the NIM.

The ratio of operating expenses to total assets is used to determine relevant facts about variations in financial institutes' costs over the financial system's assets. The studies by Zhou & Wong (2008) and Bennaceur & Goaied (2008) also reveal a positive relationship with the operating expenses to total assets ratio. Both studies use this ratio to measure the organization's operational expenses. Increasing the total amount of operating cost will also seek a broader margin to cover it. But Tarus, Chekolb, & Mutwoic (2012) find that operational expenses have no significant relationship with the NIM

in Kenya.

Real GDP is another appropriate variable associated with the NIM. It encourages the demand for institution loans and advances and affects the interest margin. Udom et al. (2016) investigated the interest margin in Nigeria. They find that real GDP positively correlates with interest margin. Jagirani & Zaidi (2017) and Ram & Mesfin (2019) have used real GDP growth as a macroeconomic variable. Their study results show that economic growth positively correlates with the NIM. However, Azeez & Gamage (2013) find that GDP negatively correlates with the NIM.

Inflation is another crucial macroeconomic variable since it measures the general price level. High inflation influences the surge of the NIM. Thus, it would be a positive determinant to increase the NIM value. Azeez & Gamage (2013) have found inflation is significantly positive with the NIM. However, Jagirani & Zaidi (2017) and Obeid & Adeinat (2017) find a significant negative relationship between Inflation and the NIM. The treasury bill rate changes can impact any financial organization's cost, profit, and liquidity. Hence, the 12-month treasury bill rate is used as a proxy to measure interest rates. Suravimala (2006) finds it has a significant relationship with the NIM.

Azeez & Gamage (2013) conducted a study using Ho and Saunders' dealership model to uncover the impact of bank-specific, industry-specific, and macroeconomic variables on the net interest margin of Sri Lankan commercial banks from 1999 to 2011. The results support the identification of factors such as staff cost, capital cost, market power, inflation, and treasury bills, which have a positive impact, while factors like management quality, statutory reserve requirements, and GDP growth have a negative impact.

Kengatharan and Sivalingam (2018) examine the capital structure pattern of Sri Lankan commercial banks and its influence on the net interest margin of commercial banks in Sri Lanka. The study reveals that Sri Lanka has a low-leverage capital structure pattern.

Kumari (2014) explores the determinants of net interest margin in Sri Lanka using reports from domestic banks between 2003 and 2011. The study identifies determinants such as operating cost, credit risk, risk aversion, non-interest income, and capital adequacy requirements. Additionally, the study recognizes some non-significant factors, including market rivalry, other regulations on banks, risks arising from the volatility of market prices, and macroeconomic variables.

Seelanatha & Ihalanayake (2019) investigate how the Sri Lankan economy is affected during wartime and post-wartime through a longitudinal graphical analysis. They find that the civil war has a positive impact on the economy by reducing the net interest margin.

Previous research has predominantly focused on exploring the determinants of net interest margin in the commercial banking sector in Sri

Lanka. There is a noticeable gap in the existing literature concerning how determinants for Licensed Specialized Banks (LSBs) and Licensed Finance Companies (LFCs) impact net interest margin (NIM) in Sri Lanka. This gap requires further investigation, considering that both banking and non-banking industry-specific determinants play a role in influencing NIM in the country. Additionally, understanding how macroeconomic variables such as GDP growth rate and inflation affect NIM for both banking and non-banking financial institutions operating in Sri Lanka is crucial.

A more comprehensive understanding of this concept is essential as financial structures in developing countries have consistently demonstrated significantly higher intermediation spreading on average than those in developed countries. Therefore, this study aims to address this research gap to a certain extent.

Methods

The population of this study is 26 LCBs, 6 LSBs, and 38 LFCs in Sri Lanka. The sample is selected through an analysis of their asset ratios and the availability of the data. Therefore, 7 licensed commercial banks, 3 Licensed specialized banks, and 5 finance companies from 2009 to 2019 were considered. The data for 2020, 2021, and 2022 were omitted due to the negative impact of COVID-19 and the economic crisis in the country. A descriptive research design was utilized to examine the macroeconomic and industry-specific factors that affected the NIM in Sri Lankan financial institutions between

2009 and 2019. Mainly, annual data were taken from each financial institution's annual reports. Macroeconomic information was also extracted from the Central Bank of Sri Lanka's annual reports and quarterly publications.

Figure 1 depicts the conceptual framework developed based on previous literature. The dependent variable is the net interest margin (NIM), calculated as total interest income minus total interest expenses. It serves as a proxy for measuring the efficiency of the sector, assuming that efficient institutions maintain relatively lower margins than inefficient ones.
This inefficiency ultimately results in a higher interest spread.

Bank-specific explanatory variables include Credit Risk *(CR)*, Firm Size *(SIZE)*, Liquidity Risk *(LIQR),* Earning Ability *(EA)*, and Operational Expenses *(OE)*. These variables were incorporated into a regression model to examine their relationships. Additionally, macroeconomic variables such as Economic Growth Rate *(EG)*, Inflation Rate *(INF)*, and Interest Rate *(IR)* were utilized in the model. The operationalization of the variables and the expected sign is shown in Table 2.

Based on the conceptual framework, this study tests the following hypothesis.

H_1: There is a positive significant relationship between credit risk and the NIM
H_2: There is a negative significant relationship between firm size and the

NIM

H₃: There is a positive significant relationship between liquidity risk and the NIM

H₄: There is a negative significant relationship between earning ability and the NIM

H₅: There is a positive significant relationship between operational expenses and the NIM

H₆: There is a significant relationship between economic growth and the NIM

H₇: There is a significant relationship between the inflation rate and the NIM

H₈: There is a significant relationship between Interest Rate and the NIM

The panel dataset comprised a total of 165 observations, covering 15 institutes over the span of 11 years. STATA version 16 was employed for data analysis. Generally, fixed effects models are suitable when aiming to estimate the average effect of a variable within a group. Consequently, this study utilized a fixed effects model to estimate the coefficients of the variables.

The primary model encompassed both Licensed Commercial Banks (LCBs), Licensed Specialized Banks (LSBs), and Licensed Finance Companies (LFCs). To address the second objective of the study, the primary model was bifurcated into two segments: one for LCBs & LSBs and the other for LFCs. This division aimed to comprehend the nature of the influence of determinants on net interest margins in each institution.

The equation for the Primary model

$$NIM = \alpha_0 + \alpha_1 CR + \alpha_2 EA + \alpha_3 LIQR + \alpha_4 OE + \alpha_5 SIZE + \alpha_6 INF + \alpha_7 EG + \alpha_8 IR + \varepsilon i$$

The equation for the LCB & LSB model

$$NIM = \beta_{A0} + \beta_{A1} CR + \beta_{A2} EA + \beta_{A3} LIQR + \beta_{A4} OE + \beta_{A5} SIZE + \beta_{A6} INF + \beta_{A7} EG + \beta_{A8} IR + \varepsilon i$$

The equation for the LFCs model

$$NIM = \beta_{B0} + \beta_{B1} CR + \beta_{B2} EA + \beta_{B3} LIQR + \beta_{B4} OE + \beta_{B5} SIZE + \beta_{B6} INF + \beta_{B7} EG + \beta_{B8} IR + \varepsilon i$$

Results

Regression analysis was done by stepwise process and was tested with the relevant hypothesis. P values of each variable were used as evidence to reject the null hypothesis and include the explanatory variable in the model.

When analyzing the primary model, the results showed a significant negative relationship between credit risk and the NIM. The total loans to total assets ratio was used as a proxy for credit risk. The expected relationship between credit risk and NIM was positive. Nevertheless, credit risk was a negative sign. Its coefficient and p-value were -0.158 and 0.013, respectively. The negative sign indicated that credit distribution failures like bad debts caused to decrease in the firm's income (Syaifuddin et al., 2018). The same relationship was present in LCBs and

LSBs but not in LFCs.

Firm size and the NIM, too, had a significant negative relationship when the Primary model was considered. The coefficient of SIZE was -0.262, and the p-value was 0.000054. As expected, the negative sign derived that a larger scale of operations was linked with a low-interest margin. This outcome was supported by Zhou & Wong (2008). Based on the results, a 1% increase in firm size would decrease the NIM by 26.2. The same relationship was present in LFCs but not in LCBs & LSBs. A significant association between Liquidity assets and the NIM could be observed when we considered the LCBs & LSBs model but not in the primary and LFC models. No significant relationship was observed between earning ability and the NIM in the above models. A significant association between operational expenses and the NIM could be seen when we considered model LCBs & LSBs but not in the primary and LFC models.

Economic growth, Interest rate, and inflation were considered macroeconomic variables. Economic growth and inflation rate significantly positively correlated with the expected coefficient sign. Moreover, the study found that the only insignificant macroeconomic variable was the Interest rate (Table 3.). The variable Economic Growth had a 0.366 coefficient value and 2.4164×10^{-9} p-value. This implied that a 1% increase in economic growth would have a 36.6% increase in the NIM. This finding is similar to the results of Jagirani & Zaidi (2017), Azeez & Gamage (2013), and Ram & Mesfin

(2019). Furthermore, inflation significantly impacted the NIM with a coefficient of 0.443 and p-value of 2.1454×10^{-12}. These results agree with the existing studies by Tarus, Chekolb, & Mutwoic (2012) and Azeez & Gamage (2013). The results are inconsistent with Jagirani & Zaidi (2017) and Obeid & Adeinat (2017), but there may be several reasons. Azeez & Gamage (2013) reveal that firms expand the gap between lending and borrowing rates during frequent increases in inflation.

Table 4 shows the fitted model summary statistics. R Square value for the fitted model was 0.586. Hence, the fitted model could explain 58.6 percent of the total variation for NIM values. R Square values for the fitted model LCBs & LSBs and LFCs were 0.581 and 0.730, respectively. Hence, 58.1 and 73 percent of the total variation for NIM values could be explained by the fitted models.

Discussion

Net interest margin is a good indicator to measure the effectiveness of monetary policy mechanisms, the profitability of the financial system, and financial sector development. This study investigated the determinants of the NIM in financial institutes in Sri Lanka from 2010 to 2019. The independent variables were analyzed as industry-specific and macroeconomic variables to illustrate the relationship between the independent variables and the dependent variable. The primary regression model included both LCBs & LSBs and LFCs. Two secondary regression models were deployed

using the primary model to investigate the impact of the NIM in LCBs & LSBs, and LFCs separately. This study showed that only the inflation rate and economic growth significantly positively affected the NIM across all financial institutions. Other variables do not offer a significant positive impact for all models simultaneously.

Moreover, operational expenses and liquidity assets had a significant positive relationship with the NIM in the LCBs & LSBs sectors. However, Credit risk showed a significant negative relationship with the NIM among the entire financial institutions and LCBs & LSBs but not in LFCs. This study further indicated that firm size was insignificant for LCBs & LSBs. However, in LFCs, firm size was the only industry-specific variable negatively impacting the NIM. All other industry-specific variables were insignificant in this sector.

The main objective of this study is to identify the root causes for maintaining a higher interest spread and net interest margin in Sri Lankan financial institutions. The results reveal that operational expenses are a key variable shaping interest spread, emphasizing the need for financial institutions to focus on minimizing these expenses. Another significant aspect is the impact of liquidity risk on margin in Licensed Commercial Banks (LCBs), suggesting a need to address liquidity risk associated with their operations.

Additionally, the macroeconomic environment of the country does not favor bringing down the higher margin

maintained. Accelerated economic growth leads to increased demand for financial resources by borrowers, pushing the sector to maintain a higher margin. Therefore, it is crucial to expand the financial sector to meet the financial requirements of borrowers. The impact of determinants is not the same across all types of financial institutions. Notably, size plays a key role in shaping the margin in Licensed Finance Companies (LFCs), potentially due to their smaller market segment. Larger institutions have the capacity to reduce the margin, whereas many LFCs in Sri Lanka are relatively small in terms of total assets.

Conclusion

This study investigated the determinants of the NIM of financial institutes in Sri Lanka using macroeconomic and industry-specific factors. The large NIM demonstrates a degree of stability for a financial system. Hence, it will discourage potential depositors from depositing their money in banks, non-banks, and other financial institutes. Therefore, policymakers should bring down the financial institution's interest rate spread. The study's results recommend that policymakers be more sensitive to the real GDP growth rate and the inflation rate of Sri Lanka because these factors significantly positively impact the NIM among all financial institutions.

Furthermore, all managers of financial institutions should be responsible for minimizing the risk of credit or non-performing loans, which would directly decrease the interest income of financial institutions. It badly

affects the financial sector's profitability. Expanding the market share of financial institutes would be an advantage in maintaining a constant NIM value. A clear understanding of the behavior of these variables is helpful for policymakers. The primary causes for higher NIM and spread are credit risk and high operations costs in commercial banks. Therefore, it is urgent to improve the operation efficiency and minimize the overhead cost, especially in state-owned large-scale banks. Another plausible solution is promoting the underdeveloped financial market with different financial sources, such as the bond market. Further to bankers' perspective, they should maintain a systematic approach to assessing the creditworthiness of their customers.

Figures and Tables

Figure 1: Research framework
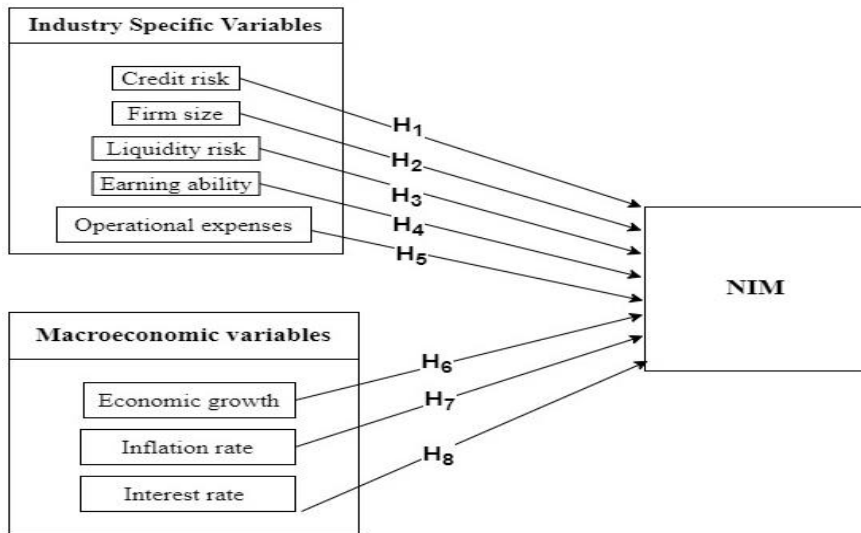
(By author constructed 2024)

Table 1: Net interest margin in selected Asian countries

Country	2013	2014	2015	2016	2017	2018	2019
Sri Lanka	4.85	4.19	4.02	4.08	4.49	4.33	4.41
India	3.01	2.85	2.89	2.84	3.01	3.11	3.07
Pakistan	3.87	4.51	4.28	3.72	3.27	3.17	3.22
Bangladesh	3.99	3.92	2.02	2.43	2.43	2.55	2.52
Vietnam	3.10	2.53	2.93	2.99	3.62	3.60	3.44
Myanmar	0.06	1.60	1.60	1.60	2.91	2.81	2.89

Source: Economic Research - St. Louis Fed (2022)

Table 2: Operationalization of variables and expected sign

Variable Type	Variable	Measurement	Notation	Expected Sign
Dependent Variable	Net Interest Margin	Interest Income – Interest expenses to average assets	NIM	
Independent Variable	Credit Risk	Total loan to total assets ratio	CR	Positive
	Firm Size	Natural logarithm of assets	SIZE	Negative
	Liquidity Risk	Total loan to total deposit ratio	LIQA	Positive
	Earning Ability	Interest income to total income ratio	EA	Negative
	Operational Expenses	Operating expenses to total assets ratio	OE	Positive
	Economic Growth	Real GDP growth rate	EG	Positive / Negative
	Inflation Rate	Annual inflation rate	INF	Positive / Negative
	Interest Rate	12 months treasury bill rate	IR	Positive / Negative

Table 3: Coefficient values for fitted model

Model	Primary Model		LCBs & LSBs Model		LFCs Model	
	Coefficient	P Value	Coefficient	P Value	Coefficient	P Value
Constant	0.443	0.000		0.000	-	0.000
CR	-0.395	0.000	-0.209	0.005	-	-
EA	-	-	-	-	-	-
LIQR	-	-	0.153	0.030	-	-
OE	-	-	0.279	0.000	-	-
SIZE	-0.064	0.000	-	-	-0.322	0.002
INF	0.125	-	0.457	0.000	0.503	0.000

EG			0.082	0.013	0.365	0.000	0.249	0.020
Model Summary	R		0.765			0.762		0.854
	R Square		0.586			0.581		0.730
	Durbin-Watson		0.284			0.522		0.742

Table 4: Hypothesis test results (Significance at 0.05)

No	Hypotheses	Results		
		Primary (A)	LCBs & LSBs (B)	LFCs (C)
H₁	There is a relationship between credit risk and the NIM	Accepted	Accepted	Rejected
H₂	There is a relationship between firm size and the NIM	Accepted	Rejected	Accepted
H₃	There is a relationship between liquidity risk and the NIM	Rejected	Accepted	Rejected
H₄	There is a relationship between earning ability and the NIM	Rejected	Rejected	Rejected
H₅	There is a relationship between operational expenses and the NIM	Rejected	Accepted	Rejected
H₆	There is a relationship between economic growth and the NIM	Accepted	Accepted	Accepted
H₇	There is a relationship between the inflation rate and the NIM	Accepted	Accepted	Accepted
H₈	There is a relationship between Interest Rate and the NIM	Rejected	Rejected	Rejected

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Entrepreneurs' Intention to Use Crowdfunding: Towards a Conceptual Framework of Technology Acceptance and Entrepreneurial Intention

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Abstract

Despite the popularity of crowdfunding throughout the World, there is a limited amount of academic research conducted to study user acceptance of crowdfunding, especially among entrepreneurs. This paper aims to propose a conceptual model for assessing entrepreneurs' intention to use crowdfunding. To achieve the objective, the study searched and reviewed current literature on crowdfunding user acceptance in the Emerald and Lens.org databases. Initially, 128 articles were found, and the review was conducted with 37 articles selected according to the inclusion and exclusion criteria. Accordingly, this study proposes a conceptual model with the integration of the Unified Theory of Acceptance and Use of Technology (UTAUT) with the entrepreneurial intention model. The integration describes three main factors that affect user acceptance, such as technological factors, environmental factors, and individual factors. This paper tried to create a linkage with variables proposed in the model by providing propositions based on the literature. Future studies are needed to test the propositions in field research.

Keywords: *Crowding, Entrepreneur, Entrepreneur Crowdfunding Acceptance, Technology Acceptance*

Introduction

Crowdfunding as a subcategory of widespread concept crowdsourcing, is a method of fundraising via an online platform to achieve a common goal where a pool of individuals contributes in small amounts. The growth of financial technology, 'fintech,' is one of the reasons for the revolution of new web-based fundraising platforms that go beyond the existing financial institutions through their involvement in creating economic value and providing value-added services for start-ups (Yang & Lee, 2019). The growth and development of Internet technologies help pave the way for revolutionary, innovative ways of conducting business, making investments, and finding seed capital to launch new ventures. As a result, the alternative finance sector is reflected in these alternate approaches for financing new businesses. Additionally, it emphasizes that these financing models may have a greater capacity to promote gender equality, empower economically marginalized and disenfranchised populations, enhance capital market efficiency and access, spur innovation and creativity, and promote economic and regional development (Zeigler et al., 2018).

Alternative financing tools including crowdfunding are one of the solutions for the financing problems in small businesses. Most of the time novice entrepreneurial firms suffer from financial constraints that may affect their growth and survival (Fourati, 2017). Accessing traditional sources of capital such as bank lending, venture capital, and retained earnings is difficult for small and micro businesses and as a result, many small businesses are not adequately funded. Crowdfunding is advantageous for start-up businesses because it provides a variety of financial and non-financial benefits such as assisting with funding challenges, offering value-added involvement, easing access to further capital, and providing awareness (Yang & Lee, 2019). However, societies like emerging markets have some problems adapting to crowdfunding due to a lack of payment systems and a lack of established models and best practices (Raymond, 2015). Moreover, the process of adoption of new technologies into new markets is a rather complex task.

Consequently, one of the major concerns of the implementation of alternative solutions is the user acceptance of such systems. Therefore, before studying the implementation of innovative solutions for financing problems, it is timely to investigate the user acceptance behaviors of target participants. Although concerns about IT adoption are thought to affect the global corporate environment due to its dynamic and comprehensive nature (Taherdoost, 2018), there aren't many studies about the popularity of crowdfunding in various situations. Regardless of the nation in which it operates, acceptance of crowdfunding has obstacles such as legal limitations, technological problems, and lack of understanding (Gunawardana, 2020). Additionally, the cognitive factors that affect the decision to accept crowdfunding are an area of study that is not adequately touched by scholars.

Furthermore, due to the novelty of digital manifestation, which entails dangers, Shneor & Munim (2019) have argued that investors consider prior concerns before they decide to contribute to crowdfunding. On both sides of the crowdfunding process participants typically make this argument. Entrepreneurs as well as investors are struggling with the concept's novelty, which could influence how they feel about using the tool.

The crowdfunding literature does not provide clear evidence about the behavioral aspect of participants in the crowdfunding process, particularly entrepreneurs or project creators (Islam & Khan 2019; Jaziri & Miralam 2019; Troise & Tani, 2020; Salim, Kassim & Thaker, 2021). Since crowdfunding relies on information technology for its operations, its adoption can be explained as an information system acceptability. As a result, there is evidence in the literature that user behavior in crowdfunding has been described using technology acceptance theories. Scholars have persuaded to use different general technology acceptance models to explain user behavior in crowdfunding, such as the Technology Acceptance Model-TAM (Lacan & Desmet, 2017; Thaker et al., 2017; Guirado et al., 2018; Jaziri & Miralam, 2019; Kazaure, et al., 2020; Salim et al., 2021; Djimesah, et al., 2022), UTAUT (Kim & Jeon, 2017; Islam and Khan, 2021; Moon & Hwang, 2018; Pangaribuan & Wulandari, 2018, Wulandini et al., 2022), TPB (Shneor & Munim, 2019; Tennakoon & Siriwardana, 2021; Shneor et al., 2021) with different

modifications.

However, the user intention especially, the entrepreneur's intention to use Crowdfunding for their fundraising purpose, is an area to study distinctively to general technology acceptance. As such, Troise & Tani (2020) reported that entrepreneurial characteristics (i.e., entrepreneurial alertness and self-efficacy) and entrepreneurial motivation affect the adoption behavior of entrepreneurs. Most of the studies (Lacan & Desmet, 2017; Thaker et al., 2017; Guirado et al., 2018; Jaziri & Miralam, 2019; Kazaure, et al., 2020; Salim et al., 2021; Djimesah, et al., 2022; Kim & Jeon, 2017; Islam and Khan, 2021; Moon & Hwang, 2018; Pangaribuan & Wulandari, 2018, Wulandini et al., 2022) focused on technological factors and environmental factors as determinants of crowdfunding acceptance of entrepreneurs. Jaziri & Miralam (2019) also claim that individual factors such as personal traits and characteristics of entrepreneurs should be considered as determinants of acceptance of Crowdfunding. Further, an entrepreneur's motivation is essential in determining their intention to accept new technology (Troice & Tani, 2020). When measuring technology acceptability, the research disregards each person's level of comfort with technology (Ainin et al. 2017).

Accordingly, this study aims to develop an intention model that reveals the impact factors that trigger entrepreneurs to use crowdfunding for their respective project funding integrating the technology acceptance

model and entrepreneurial intention. Through desk research on technology acceptance models and their application, it will consider technological considerations, environmental factors, and individual variables to justify the goal of embracing crowdfunding. As crowdfunding literature is still in the quest to examine social or economic factors that influence crowdfunding choice (McKenny et al., 2017), studies are required to understand this phenomenon, especially focusing on each participant. Hence, this study provides insights into studying the behavior of entrepreneurs in crowdfunding usage. The rest of the paper will provide a theoretical explanation of technology acceptance related to crowdfunding followed by proposed models and propositions.

Crowdfunding

Crowdfunding is a subcategory of crowdsourcing which is the process of outsourcing tasks to many individuals (Hemer, 2011). Crowdsourcing includes various forms of strategies used for obtaining solutions to develop corporate activities as ideas and feedback, from dispersed individuals (Belleflamme, Lambert, & Schwienbacher, 2014). The fundamental goal of crowdfunding is to collect money from a large number of people. Both crowdsourcing and crowdfunding use crowds to request resources (human or financial) from outside the company in exchange for monetary or non-monetary recompense (McKenny et al. 2017). In the literature, crowdfunding has been referred to by a variety of names, including crowd-investing and

crowdfunding (Tomczak & Brem, 2013). According to the idiom "many a little makes a mickle," the phrase "crowdfunding" refers to the process of raising a lot of money through a collection of modest donations (Gierczak et al. 2016). The concept of crowdfunding is different from several historical events where individuals contributed financially or physically together for a shared cause. Instead, it involves asking the audience for financial resources using an online platform (Lacan & Desmet, 2017). As a result, it enables entrepreneurs or fundraisers to use online resources like social media and cutting-edge internet payment systems to raise money from a diverse online audience (Gerber & Hui, 2013). The fusion of social media technology and project-based fundraising is made possible by a relatively recent occurrence (Li et al. 2018).

On the one hand, it is identified as a process of customer involvement in investing activities of business by providing capital (Ordanini et al. 2011) and giving feedback. Thus, crowdfunding will be a tool for attracting public attention, which ultimately provides validation for entrepreneurs' products before they bring them to the market (Schwienbacher & Larralde, 2010). In the early stages of a venture, crowdfunding can be used as a marketing tool in addition to fundraising tools, especially in industries where projects seek to create ecosystems of complementary products (Mollick, 2014). Thus, for innovative entrepreneurs, crowdfunding provides tremendous potential for success through a range

of non-financial aspects. They include helping as a distribution channel, assisting with a pre-market test, quicker time to reach the market, helping to solve subsequent problems, and assisting with disruptive innovations (Lehner, Grabmann, & Ennsgraber, 2015). Further, Wald, Holmesland, & Efrat (2019) have identified the benefits of crowdfunding as inward benefits and outward benefits, including investors' contribution to entrepreneurs in terms of providing a personal experience and public exposure opportunities.

Crowdfunding typologies can be identified in the literature based on several factors such as the type of reward offered, using the platform, how funds are transferred to fundraisers, etc. Depending on how the fundraisers use the site, there are two basic forms of crowdfunding direct and indirect. When a fundraiser utilizes their fundraising platform to make a direct appeal to a particular audience to raise money, this is known as direct crowdfunding (Tomczak & Brem, 2013). In contrast, indirect crowdfunding refers to a broad request for funds sent to an unidentified crowd through an intermediary platform. Another categorization of crowdfunding can be identified based on the nature of the reward such as donations, active investments, and passive investments (Lambert & Schweienbacher, 2010) (c.f. Hossain & Oparaocha, 2016). Kappel (2009) has also classified crowdfunding based on the reward offered to the investors as ex-post-facto crowdfunding and ex-ante crowdfunding. In Ex post facto crowdfunding, financial support is

provided in exchange for a product. Thus, ex post facto crowdfunding refers to financing the production of existing products where the final product has been produced in advance of receiving funds (Tomczak & Brem, 2013). Accordingly, the investor will receive a product for a free or discounted price as a return on their investment. In contrast, ex-ante crowdfunding offers a new product that we expect to produce. Accordingly, financial support is provided with mutually desired outcomes.

Integration of literature is a common phenomenon in conceptual papers in contrast to providing data for empirical analysis (Gilson & Goldberg, 2015). This paper aims to develop a conceptual framework for studying the behavior of crowdfunding users, especially focusing on project creators or entrepreneurs. According to Jaakkola (2020), there are four types of conceptual paper types such as theory synthesis, theory adaptation, typology, and model. Hence, the current study tries to identify the problems of existing technology acceptance theories in explaining the crowdfunding-accepting behavior of entrepreneurs and proposes a conceptual model that comes from a theory adaptation conceptual paper.

It utilized research sourced from databases, such as Emerald, and Lens.org. The study's foundations included research on crowdfunding acceptance, the technology acceptance models in crowdfunding acceptance, and entrepreneurial intention related to crowdfunding acceptance.

Additionally, the language of the paper (English), and availability of the full text were taken into consideration as inclusion criteria, and studies that did not have the full text, as well as a doctorate, master's level academic works, and articles, did not include behavioral variables were omitted.

Entrepreneurs' acceptance of crowdfunding and technological acceptance models in crowdfunding were the main keywords chosen in the automatic search stage. Initially, it was able to identify 128 research through the automated step and 84 research publications were examined using the inclusion and exclusion criteria after the duplicate studies were eliminated. Each study's abstract, methodology, and conclusion were reviewed. As a result, an additional 47 research were taken out of the selected study database because they didn't offer any useful information for the review. For this analysis, a total of 37 studies were regarded as primary studies. Figure 1 depicts the conceptual framework created for this study based on the literature review.

Accordingly, a new theoretical lens will be proposed by adding entrepreneurial intention to link individual desire and self-efficacy in the UTAUT model as a technology acceptance model. In the current study, crowdfunding user acceptance literature was reviewed, and identified the need for an integrated model for explaining crowdfunding acceptance with technology acceptance and proposed entrepreneurial intention model to combine as a conceptual framework.

Theoretical foundations; crowdfunding user acceptance

Previous research has used different models to explain technology acceptance and technology adoption across multiple disciplines (Straub, 2009). Table 1 shows a summary of studies that studied crowdfunding acceptance and intentions. These models explain how IT and other related technologies are adopted and used at the organizational and individual levels. Thus, they answered the questions as to why an individual accepts a particular technology. Such technology acceptance models describe how users typically utilize or accept technologies or systems. At the individual level, the Theory of Reasoned Action (TRA- Fishbein & Ajzen, 1975) and Theory of Planned Behaviour (TPB- Ajzen, 1991) were the most widely used models to characterize the intention. In his assessment of technology acceptance models and theories from 2017, Taherdoost (2017) identified several TRA's shortcomings, including the failure to take into account the influence of cognitive reflection, habit, and moral considerations.

More recently, researchers studying the field of crowdfunding started researching the acceptance behavior of users related to the crowdfunding process. Crowdfunding is a technology-based innovation for funding problems that offers the opportunity for entrepreneurs to bring their innovative ideas to the entire online population to request funds for implementation. Accordingly, the acceptance of such information-based

solutions can be explained through the technology acceptance models, which are generally used for analyzing the behavior of users in the process of technology acceptance and use. Although technology adoption is a recent study topic that has been explored in a variety of contexts, there aren't many studies that specifically address crowdfunding (Jaziri & Miralam, 2019).

With a sample of Chinese start-ups, Yang & Lee (2019) have proposed procedures to examine the enablers and inhibitors of crowdfunding adoption. They attempted to explain the adoption intention of business owners toward embracing crowdfunding by utilizing the Status quo bias theory, Two-factor theory, and Innovation diffusion theory. They discovered that adoption intention is greatly improved by relative advantage, compatibility, visibility, and result demonstrability. Furthermore, start-ups' intentions to adopt are greatly hampered by complexity, operational expense, and reputational risk. Later, researchers were persuaded to use a variety of general technology acceptance models, including UTAUT (Kim & Jeon, 2017; Islam & Khan, 2019; Moon & Hwang, 2018; Pangaribuan), TAM (Lacan & Desmet, 2017), Thaker et al., Guirado et al., Jaziri & Miralam, 2019, and TAM (Lacan & Desmet, 2017), to explain user behavior of crowdfunding.

Lacan and Desmet (2017), Li et al. (2018), Guirado et al. (2018), and Moon & Hwang (2018), among others, are mainly interested in investors and their plans to use crowdfunding while assessing the literature linked to the adoption of crowdfunding. Researchers have looked at investors' and project creators' intentions to use crowdfunding (Kim & Jeon, 2017; Thaker et al., 2018), while Yang & Lee (2019), Thaker (2018), Pangaribuan & Wulandari (2018), Islam & Khan (2019), and Jaziri & Miralam (2019) focused on entrepreneurs' behavioral intentions to accept crowdfunding. Most academics agree that using integrated or modified models of technology acceptance—rather than using an original model—is preferable (Li et al. 2018; Kim & Jeon 2017; Guirado et al. 2018; Moon & Hwang 2018; Islam & Khan 2019; Jaziri & Miralam 2019). However, these studies have focused on technological factors, environmental factors, and individual perception-related factors (indeed perceived risk and trust) as crucial factors related to acceptance of crowdfunding. However, these studies have not been concerned about different factors such as their desire and self-efficacy as essential factors that influence the decision to accept crowdfunding as a funding source, especially for entrepreneurs.

Entrepreneurs may make their decisions based on their desire and their self-assessment of their skills to adapt to a specific technology. None of the studies have focused on these aspects, and it is vital to consider them since acceptance or rejection of a particular technique might be influenced by such individual factors. The limitations of technology acceptance models are the cause of this, as most adoption theories created

in the field of information systems research only consider technological, environmental, and organizational aspects (Moghavvemi & Salleh, 2014). When determining technology adoption, the studies disregarded individual perceptions (Ainin et al. 2017). Even if new technology is simple to use and beneficial for improved performance, at times it may not be widely adopted. The individual views of new technologies may be the cause for this.

According to this viewpoint, technology acceptance models by themselves do not accurately represent how people are motivated to adopt technology. Most technology acceptance theories fail to take into account this crucial motivational process for embracing a certain technology (Bagozzi, 1992). Technology acceptance predictors function in the formulation of intention, according to the motivational process. It is one of the many aspects that determine an individual's decision to use new technology. They did not explain how the predictors act in the formation of intention. It shows that mediating elements are required to establish a connection between the predictors of technology acceptance models and the intention of the entrepreneur to adopt the technology.

Similarly, Ndubisi et al. (2014) argued that it is necessary to change technology acceptance models to create a model that accurately captures the distinctive characteristics of entrepreneurs. To close the gap, entrepreneurial intention models might be used. The justification for

adopting entrepreneurial intention is to include attitudes as a crucial individual-level predictor of intention in the model of technological uptake. Therefore, the requirement for a comprehensive model that accounts for both IT adoption and the various elements that influence acceptance may be appropriate in this context. Even though the technology is functional and user-friendly, the target market may not be as drawn to it due to its incapacity to capture consumers' attention. Intention-based models could therefore be used to close the gap between technological considerations and personal perceptions of technology acceptance. As a result, the integration of entrepreneurial intention models was investigated to explain self-efficacy and attitudes, which are not described in the UTAUT model.

Proposed model and propositions

The proposed model thus anticipates incorporating environmental elements, technological factors, and individual factors in forecasting behaviors considering the reasoning. It is anticipated that the UTAUT model's drawbacks will be avoided by integrating entrepreneurial intention. For instance, the initial UTAUT model created by Venkatesh et al. (2003), does not represent self-efficacy. According to Moghavvemi, Salleh, & Abessi (2013), self-efficacy is a measure of people's confidence in their abilities to use new technology and has a higher likelihood of influencing those people's intentions to accept and use innovation. Moghavvemi, Phoong, & Lee (2017) in their study for refining the

Technology Adoption Decision and Use Behaviour model (Moghavvemi et al. 2013), have argued that at the beginning of IT adoption of entrepreneurs, they will consider whether it is attractive to them rather than its usefulness and ease of use. After they feel that a particular new task or action is appealing, then they will consider whether they have the skills and capability to perform the job or activity (Krueger & Brazeal, 1994). Accordingly, figure 1 shows the relationships presented by the above prepositions.

Performance expectancy, effort expectancy, social influence, facilitating conditions, and perceived desirability.

Performance expectancy illustrates how people perceive the benefits they would derive from utilizing a specific technology (Venkatesh et al. 2003). The UTAUT model, which defines the behavioral intention of technology usage, explains the association between behavioral intention and crowdfunding as the first element. Crowdfunding literature also provides evidence for this relationship. For instance, Lacan & Desmet (2017) found that user intention is influenced by perceived usefulness or benefits in the context of crowdfunding sites. In addition, while Moon & Hwang (2018) found that performance expectancy was not a statistically significant motivator of user intention, Kim & Jeon (2017) and Li et al. (2018) discovered that it was in the case of investors. Entrepreneurs may decide to use crowdfunding if they believe it would improve the performance of their businesses. As a result, there may

be a favorable correlation between behavioral intention and performance expectancy.

According to Krueger and Brazeal (1994), people will only decide if they can perform the task or activity if they find the suggested new task or mission appealing. A technological development's appeal may be influenced by elements that can be used, such as social perception, acceptance, and enabling circumstances, in addition to its technical advantages. Attitudes towards the desirability of a particular system may be created through the expectations of gains. It consequently has an impact on sentiments of desirability. According to Schlaegel & Koenig (2014), perceived desirability functions as a motivating element that changes favorable opinions into the intention to start a business. The association between perceived utility and perceived desirability in the context of using social networking sites was further supported by Alayis & Abdelwahed (2018). It demonstrates how people are drawn to utilizing or adopting technology when they perceive its utility. In a similar vein, favorable sentiments regarding crowdfunding that have been fostered by performance expectations may make it desirable to use it as a means of raising money. Therefore, a rise in a technology's performance expectancy should have a beneficial impact on people's motivation to engage in certain behaviors. Therefore, perceived desirability would serve as the aspect that aids in converting a positive attitude into an intention. Therefore:

Proposition 1a: The relationship between performance expectancy and intention to use crowdfunding will be mediated by perceived desirability.

According to Venkatesh et al. (2003), effort expectancy represents how simple the system is to operate. It also conveys the perceived ease of employing a novel information system or technological advancement in the model. Effort expectancy in the context of crowdfunding is the perceived ease, understandability of instructions, and clarity for using crowdfunding. According to earlier research (Kim & Jeon, 2017; Moon & Hwang, 2018), effort expectancy and user intention are positively correlated. Users are attracted to using a system that is simple to use because simple systems require less effort to use. As a result, just as performance expectations have an impact on perceived desirability, they also have an impact on personal attractiveness. The same line of reasoning can be used to argue that effort expectancy has an impact on perceived desirability. When a certain device, method, or creative solution is simple to use, people are more likely to find it appealing. Additionally, ease of use is undoubtedly related to self-efficacy, where an individual believes that he or she feels that usage of a particular system is easy (Schlaegel & Koenig, 2014). Accordingly, perceived attractiveness is affected by the characteristic of effort expectancy. In the context of crowdfunding, when an entrepreneur feels at ease using crowdfunding compared with other sources of financing. And when they think that there is much information available as instructions for using the

platform for their fund generation projects, they may be attracted to use crowdfunding. Therefore,

Proposition 1b: The relationship between effort expectancy and intention to use crowdfunding is mediated by perceived desirability.

In the UTAUT model, social influence is also an explanatory variable that influences how likely people are to accept a certain technology. People frequently consider how individuals who are very important to them may see their actions on an individual level. According to Venkatesh et al. (2003), social influence refers to a person's opinion of how important it is for others to think that they should utilize the new system. A new technology or system will be appealing to a certain person if those who are important to them recommend it. Additionally, as crowdfunding becomes more accessible to all, social dynamics within communities appear to have a big impact on people's decisions to use it as a fundraising source (Pangaribuan & Wulandari, 2018). In this study, social variables are considered to include the support and impact of the entrepreneurs' reference group. According to Mollick (2014), social networks including those of friends, family, and acquaintances are crucial components of a successful crowdfunding strategy. The successful implementation of the crowdfunding project is also thought to be significantly influenced by close friends (Ordanini et al. 2011). As a result, from a theoretical standpoint, acceptance of crowdfunding is driven by perceived desirability, which is then influenced by social influence.

Proposition 1c: The relationship between social influence and intention to use crowdfunding is mediated by perceived desirability.

The UTAUT model's final environmental factor, facilitating conditions, may have an impact on a person's intention to embrace a certain technology. This refers to the existence of technological and organizational infrastructure that facilitates the use of a certain innovation. Infrastructure in terms of technology and organization is required for crowdfunding implementation to be successful. Therefore, it might have had a favorable association with planning to employ crowdfunding. Moon & Hwang (2018) and other studies, however, have found that the intention to accept crowdfunding is not positively connected with favorable conditions. But the same argument might be made for this last dimension as well. Because if the required infrastructure is in place to make it possible for individuals to use a new system or product, they may be persuaded to do so. For instance, stable internet access, a secure social media platform, and reliable online payment methods are necessary for crowdfunding. These enabling elements thus affected how enticing such a system was. People might not be drawn to utilizing modern technologies to generate money without these enabling circumstances. Therefore.

Proposition 1d: The relationship between facilitating condition and intention to use crowdfunding is mediated by perceived desirability.

Effort expectancy, facilitating conditions, and perceived feasibility.

When deciding whether to adopt new technology or innovation, people frequently take their skills and competencies into account. When someone evaluates their skills, they may discover the predicted efforts needed to carry out behavior and the resources accessible to adapt to the new system. The degree of ease associated with using the system is explained by effort expectancy in the UTAUT paradigm (Venkatesh et al. 2003). The accessibility of instructions and user support determines how simple a method is to utilize. According to Thaker et al. (2018), people's behavior and intentions to use crowdfunding are positively influenced by perceived ease of use. In the case of crowdfunding, user-friendliness determines whether someone uses the platform as a tool for lead generation or not.

Additionally, Pangaribuan & Wulandari (2018) supported the idea that effort expectations have an impact on attitudes toward starting a crowdfunding project on a platform, which in turn affects the intention to accept crowdfunding. Further, they have identified effort expectancy as a dominant factor among other factors in the UTAUT model. Accordingly, effort expectancy is an important determinant that determines the actual adoption of crowdfunding. An individual may begin their self-feasibility assessment for

implementing such a system once they have determined the level of effort necessary to complete a certain task. As a result, effort expectancy, a variable that reflects human attitudes, is connected to perceived feasibility.

Furthermore, based on such a self-evaluation, the decision to embrace such a system may be made. On the other hand, people might think about the surroundings that encourage embracing such a novel system. For instance, available organizational and environmental facilities available for accepting such a system are important factors to consider.

Proposition 2a: The relationship between effort expectancy and intention to use crowdfunding is mediated by perceived feasibility.

Proposition 2b: The relationship between facilitating condition and intention to use crowdfunding is mediated by perceived feasibility.

Implications of the study

This study aims to develop an acceptance model that reveals the impact factors that trigger entrepreneurs to use crowdfunding for their respective project funding. There is a theoretical gap in prior research concerning the crowdfunding acceptance of entrepreneurs. Entrepreneurs are inherently innovative individuals. Ndubisi, Gupta, & Ndubisi (2005) have argued that entrepreneurs as a distinct and peculiar IT user group since most researchers exhibit unique traits that distinguish them from others. Thus, the nature of risk-taking would be a

quality that shows the willingness and commitment of entrepreneurs to experience new technology. Accordingly, the behavioral intentions of choosing crowdfunding as a source of funding for entrepreneurs is the core area of the study. Based on the literature related to technology acceptance, it is understood that there is an incapability to assess the impact of individual factors for determining the acceptance of certain innovative information system solutions. Accordingly, this study considers entrepreneurial intention as a supplementary theory for explaining the acceptance of crowdfunding among entrepreneurs. Hence, technological factors, environmental factors, and individual factors were considered in the study as important factors that determine the acceptance of crowdfunding. Attitudes towards using crowdfunding as a source of financing will be the main variable reflecting the individual factors of the study, and personal traits will not be considered as individual factors that may affect behavioral intention.

This study suggests an integrated model with UTAUT and entrepreneurial intention to include all three aspects that influence an entrepreneur's intention. It is anticipated that the UTAUT model's drawbacks will be avoided by integrating entrepreneurial intention. For instance, the first UTAUT model created by Venkatesh et al. (2003) did not account for self-efficacy. Self-efficacy has a larger likelihood of influencing individuals' intentions to accept and use innovation because it indicates individuals' trust in their abilities to handle the new technology

(Moghavvemi, Salleh, & Abessi, 2013).

Further, this study contributes to practitioners in the field of crowdfunding to evaluate how entrepreneurs may be attracted to using it as a fundraising method. For instance, crowdfunding platform owners can get an idea about the factors that entrepreneurs may choose among other sources of financing such as traditional financing methods. They may design their platforms in an easily understandable manner when they identify the requirements specified by entrepreneurs.

Conclusion

Crowdfunding is an alternative method to raise money online for suggested projects from a wide variety of online investors. Therefore, crowdfunding is an information system-based innovation that business owners can effectively employ to close the funding gap of their businesses, particularly in the start-up phases. Academics and business professionals are interested in crowdfunding as a new subject of research. The body of research includes numerous studies on success criteria, participation drivers, platform performance, platform attractiveness, etc. The adoption of crowdfunding is not addressed in the literature, and the few researchers who have looked at it have mostly studied the perspectives of investors rather than the perspectives of business owners. Therefore, the research wasn't focused on the specifics of accepting crowdfunding. This study hopes to fill that gap in the literature by advancing

a conceptual framework for investigating entrepreneurs' adoption of crowdfunding as a tool for financing.

Therefore, through desk research on technology acceptance models and their application in explaining the intention of accepting crowdfunding, this study proposes the model to explain the impact factors that motivate entrepreneurs to use crowdfunding for their respective project funding. This model considers technological factors, environmental factors, and individual factors. In this regard, theories relating to technological acceptance were studied to explain the acceptability of crowdfunding. It is suggested that the UTAUT model, which is frequently used by researchers to explain the adoption of information systems as a unified theory, can be utilized to describe the acceptance of crowdfunding as an advanced technology acceptance model.

The observed limitations of using technology acceptance models alone to explain the crowdfunding acceptance of entrepreneurs are expected to be minimized by using the proposed model. It is suggested to incorporate perceived desirability and perceived feasibility as mediating variables in the model to reflect the attitudes of entrepreneurs to accept the new form of fundraising. Perceived desirability explains the attraction of an individual to use new technology while perceived feasibility explains the perception of an individual regarding their ability to accept technology. After the review of related literature, propositions were

developed with some assumed relationships. Accordingly, the research objective was achieved by proposing a conceptual framework with an integrated model and prepositions that are to be tested in future studies.

This research attempts to contribute to the literature by proposing an integrated model of the UTAUT and entrepreneurial intention for explaining entrepreneurs' crowdfunding acceptance behavior. Future studies can be done to test and revise the model. Thus, to validate the model, proper research questions should be formulated, the research according to the formulated research questions, a research instrument to collect the data, and an analysis of the data should be done. Empirical testing of the model allows the researcher to understand better the actual behavior and the influencing factors of the intention.

Figures and Tables

Figure 1: The proposed conceptual model
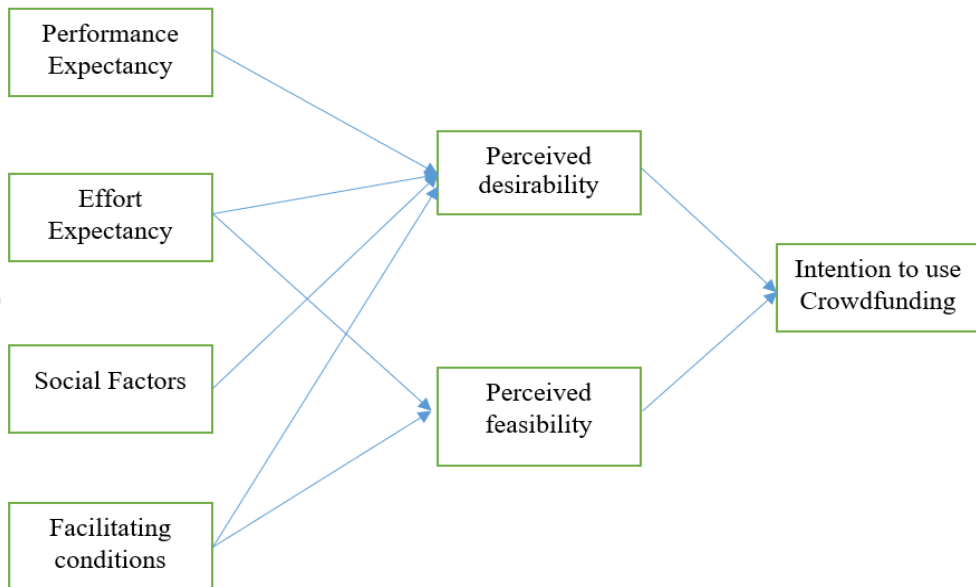
Table 1: Summary of literature – crowdfunding intentions and acceptance

Author	Title	Research focus	Acceptance model	Sample	Variables
Yang and Lee (2019)	An investigation of enablers and inhibitors of crowdfunding adoption: Empirical evidence from start-ups in China.	Investigating the enablers and inhibitors of crowdfunding adoption intention.	-Two-factor theory -Status quo bias theory Innovation diffusion theory	Start-ups (entrepreneurs)	-Relative advantage -Compatibility -Visibility -Result demonstrability -Operational cost -Complexity -Reputational risk -Information disclosure -Value alignment -Adoption Intention
Lacan & Desmet (2017)	Does the crowdfunding platform matter? Risk of negative attitudes in two-sided markets.	Investigate the impact of attitudes towards the crowdfunding platform on participants and word-of-mouth(WOM) intentions for contribution.	TAM	Contributors (backers)	-Perceived usefulness -Perceived ease of use -Social sensitivity -Perceived transaction risk -Attitudes towards a platform -Intention to participate Intention to share WOM
Li et al., (2018)	Factors Impacting Donors' Intention to Donate to Charitable Crowdfunding Projects in China: A UTAUT Based Model	Investigate the impact factors (internal and external) that trigger donors' intention to participate in charitable crowdfunding projects initiated by several non-profit organizations.	UTAUT	Contributors (backers)	-Performance expectancy -Effort expectancy -Social influence -Facilitating conditions -Sense of trust -Experience expectations -Intention to donate crowdfunding projects

Kim & Jeon (2017)	Influencing Factors on Acceptance of Crowdfunding-Focusing on Unified Theory of Acceptance and Use of Technology.	Investigate the core variables in the UTAUT model and perceived risk on participants' intentions and the mediating effect of the attitudes.	UTAUT	Participants of crowdfunding projects (both entrepreneurs and backers)	-Performance expectancy -Effort expectancy -Social influence -Facilitating conditions -Perceived risks -Attitudes -Intention of Participation
Thaker et al. (2018)	Modeling Crowdfunder's behavioral intention to adopt the crowdfunding-waqf model (CWM) in Malaysia; The theory of the technology acceptance model.	To develop a sustainable model to address the issue of liquidity faced by waqf organizations and empirically test the behavioral intentions of crowdfunders and donors.	TAM	Participants of crowdfunding projects (both entrepreneurs and backers)	-Perceived usefulness -Perceived ease of use -Behavioral intention
Thaker (2019)	Modeling SMEs' Behavioral Intention to Adopt Islamic Crowdfunding-Small and Medium Enterprises (ICSMEs) Model as a Source of Financing In Malaysia.	To propose the ICSMEs model for SME financing and test the behavioral intention of SMEs to use the ICSMEs model as a source of financing their businesses.	TAM	SMEs (entrepreneurs)	-Perceived usefulness -Perceived ease of use -Behavioral intention
Guirado et al. (2018)	Beyond signed T-shirts: A socio-technological Model of Equity	Investigate the factors that influence the adoption of equity crowdfunding	TAM	Investors	-Perceived usefulness -Perceived ease of use -Trust -Empathy -Personal innovativeness

	Crowdfunding Adoption.	and identify the strategies crowdfunding platforms should implement to promote adaptation.			
Moon & Hwang (2018)	Crowdfunding as an alternative means for funding sustainable, appropriate technology: Acceptance determinants of backers.	To identify factors that influence backers who participate in appropriate technology projects through platforms and analyze the connections among these factors.	UTAUT	Investors (backers)	-Performance expectancy -Effort expectancy -Facilitating conditions -Social influence -Perceived trust -Perceived risk -Crowdfunding use intention
Pangaribuan & Wulandari (2018)	A Crowdfunding Platform User Acceptance: An Empirical Examination Of Performance Expectancy, Effort Expectancy, Social Factors, Facilitating Condition, Attitude, And Behavioral Intention.	To expand the earlier research by investigating the impact of UTAUT model factors in creating a crowdfunding project.	UTAUT	Project Creators (Entrepreneurs)	-Performance expectancy -Effort expectancy -Facilitating conditions -Social influence -Attitudes -Intention
Islam and Khan (2021)	Factors influencing the adoption of crowdfunding in Bangladesh: A study of start-up entrepreneurs.	To identify the motivation behind the intentions of the entrepreneurs to adopt the crowdfunding model.	UTAUT	Start-up Entrepreneurs	-Performance expectancy -Effort expectancy -Facilitating conditions -Social influence -Trialability -Perceived trust -Perceived risk -Behavioral intention

					-Use behavior
Jaziri & Miralam (2019)	Modeling the crowdfunding technology adoption among novice entrepreneurs: An extended TAM model.	Investigates vital factors influencing the intention of Tunisian entrepreneurs to adopt crowdfunding.	TAM	Novice entrepreneurs	-Perceived usefulness -Perceived ease of use -Risk perception -Use perception -Trust perception -Intention
Tennakoon & Siriwardana (2021)	Fuelling the start-ups, nexus of crowdfunding awareness, perceived parental influence, and internet familiarity on start-up intention.	Investigate how Awareness of Crowdfunding, Perceived Parental Influence, and Internet Familiarity predict Start-up Intention.	TPB	Management interns	-Attitudes -Social norms -Percieved behavioral control -Awareness of crowdfunding -Percieved parental influence -Internet familiarity -Start-up intention
Kazaure et al., (2020)	Determinants of SMEs intention to adopt Islamic crowdfunding model in Northwestern Nigeria	Examine the determinant factors of SMEs intention to adopt the Islamic crowdfunding model as an alternative source of finance.	TAM	SMEs	-Perceived usefulness -Perceived ease of use -Information on crowdfunding -Use of social media
Salim et al. (2021)	Factors influencing the acceptance of Islamic crowdfunding in Malaysia: A study of youth entrepreneurs.	Identify the factors influencing the intention to accept Islamic crowdfunding among youth entrepreneurs in Malaysia.	TAM	Youth entrepreneurs	-Percieved usefulness -Percieved ease of use -Self efficacy -Financial accessiblity -Social influence -Percieved risk -Islamic platform
Tennakoon & Siriwardana (2021)	Fuelling the start-ups, nexus of crowdfunding awareness, perceived parental influence, and	Investigate how Awareness of Crowdfunding, Perceived Parental Influence, and Internet	TPB	Management interns	-Attitudes -Social norms -Percieved behavioral control -Awareness of crowdfunding -Percieved parental influence

	internet familiarity on start-up intention.	Familiarity predict Start-up Intention.			-Internet familiarity -Start-up intenion
Shneor et al. (2021)	Individualism, collectivism and reward crowdfunding contribution intention and behavior	Investigate the role of culture in influencing crowdfunding behavior rather than campaing design or success.	TPB	Contrib utors	-Attitudes -Perceived behavoral control -Subjective norms -Financial contribution intention -Information sharing intention -Financial contribution behavior
Djimesah, et al. (2022)	Analyzing the technology of acceptance model of Ghanaian crowdfunding stakeholders.	To analyze the influential factors of the Technology Acceptance Model (TAM) for crowdfunding stakeholders' behaviors and intention to use.	TAM	Entrepre neur students	-Perceived usefulness -Perceived ease of use -Intention to use -Use behavior
Wulandini et al. (2022)	User Acceptance of the XYZ Crowdfunding Application: A Survey Based on the UTAUT2 Method	To to identify the factors that influenced the acceptance of the XYZ mobile application as a crowdfunding platform.	UTAUT 2	Users	-Performance expectancy -Effort expectancy -Social influence -Facilitating conditions -Hedonic motivation -Price value -Habit -Behavioral intention -Use behaviror

Source: Literature review (2023)

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Impact of Marketing Mix on Customer Satisfaction on Internet Service Providers of Sri Lanka under Post Covid-19 Pandemic Situation

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Abstract

Marketing mix strategies remain a critical driver of customer satisfaction. The primary objective of this research was to assess how Marketing Mix strategies impact customer satisfaction among Internet Service Providers (ISPs) in Sri Lanka following the global COVID-19 pandemic. The target population was internet users in the Western province of the country. Due to time constrains and accessibility issues, a sample of 206 participants was drawn using convenience sampling technique for the survey. Primary data were collected through questionnaires, and the SPSS statistical software package was used for the analysis of the statistical data. The results revealed that all dimensions (Product, Price, Place, Promotion, People, Process, Physical evidence) of Marketing Mix strategies positively contributed to customer satisfaction, implying that Marketing Mix strategies initiatives increase levels of customer satisfaction. The study recommends that ISPs to maintain a well-balanced blend of Marketing Mix strategy components to achieve high customer satisfaction.

Keywords: *Marketing Mix, Customer Satisfaction, Internet Service Providers (ISPs)*

Introduction

The COVID-19 epidemic will undoubtedly have a significant impact on businesses. Companies have been compelled to rethink their marketing strategies and come up with innovative ways to operate and deliver services during a crisis due to the pandemic's impact on customer behaviors, the establishment of new social norms, and the enforcement of new government restrictions. Thus, it is critical to reevaluate how marketing mix methods affect customer loyalty and satisfaction in the context of Sri Lanka's ISPs. This research aims to test established concepts to determine if they may lead to conflicting outcomes in various settings and unforeseen disaster and crisis situations, such as the COVID-19 pandemic.

Businesses rely on the marketing mix to ensure their continued success by providing superior customer service. As per Kotler (2012) 7p's including product, price, place, promotion, people, process, and physical evidence of the marketing mix, have the potential to maximize customer satisfaction while also helping businesses achieve their goals.

Internet is part of our lives in the modern world. It is an empowering tool that enables us to connect with the world in terms of learning, earning, and being entertained. Its inherent borderless, decentralized, and all-inclusive design principles encourage the provision of meaningful access to citizens without any discrimination (Internet Society blog post, 2020). When the COVID-19 pandemic hit at the beginning of 2020, it challenged the foundations of social and economic norms around the world. One after the other, countries initiated lockdown protocols and social distancing procedures for public safety, shifting daily routines to telecommuting, online education, video calls, teleworking, online services, and digital banking (Internet Society blog post, 2020).

The primary objective of this study was to investigate and evaluate how marketing mix techniques impact customer satisfaction. The subject area selected is the Internet service sector of Sri Lanka. The study conducted a systematic analysis of Marketing Mix variables and their impact on Customer Satisfaction using a deductive approach. The study focused on the ground-level realities created by the global COVID-19 pandemic. Research on the similar subject area and subject matter is found to be relatively limited. Therefore, it is expected that this research would add new knowledge and contribute to the enhancement of existing knowledge.

The Internet penetration rate in Sri Lanka in 2019 was approximately 34.11 percent, indicating that a significant portion of the population had access to the Internet (Statista, 2021). This marks an increase from 2010 when approximately 12 percent of the population in Sri Lanka were using the Internet (Statista, 2020). The COVID-19 global pandemic has had a significant impact on businesses and marketing strategies worldwide, including the telecommunications sector. The telecommunications sector has witnessed significant technological advancements over the past few decades, with mobility, broadband, and Internet services expanding in capability and global reach. However, despite progress in access to the Internet and mobile services, many people and

businesses remain disconnected. Globally, 3 billion citizens remain unconnected (Veligura & Karl, 2020).

Companies have been compelled to rethink their marketing strategies and develop innovative ways to manage their operations and services during a crisis due to the pandemic's influence on customer behaviors, the establishment of new social norms, and the enforcement of new government restrictions (Internet Society blog post, 2020). Therefore, it is important to reassess the impact of Marketing Mix strategies on customer satisfaction with reference to the ISPs of Sri Lanka. This research aimed to test established concepts to determine if they could lead to conflicting outcomes in various settings and unforeseen disaster and crisis situations, such as the COVID-19 pandemic.

Research findings from other nations cannot be generalized to the Sri Lankan context due to the lack of empirical evidence regarding the relationship between the marketing mix and customer satisfaction of Internet service providers in Sri Lanka. This research will be based on recent data collected from internet users who will share and reflect on their experiences with internet services usage during the pandemic situation. There is potential for researching the effects of the Marketing Mix to assess customer satisfaction. Above explanation justifies the need for acquiring new knowledge by focusing on ISPs in Sri Lanka to address the empirical and practical research gap. Therefore, this research focused on addressing the research statement "Assessing the Impact of Marketing Mix on Customer Satisfaction of ISPs in Sri Lanka." The purpose of the proposed correlational study is to determine the most influential factors that determine customer satisfaction.

Methods

Based on published works, the researcher created a model, depicted in Figure 1, to conceptualize the theoretical framework of the investigation. This research is quantitative in nature. In this research, the sampling frame consists of internet users/customers who visited any customer care center after the COVID-19 period. The total population consists of customers aged between 18 and 55 years old. The study was conducted from June 12, 2022, to June 18, 2022, by distributing the questionnaire to more than 384 Internet users. The sample size is 384 respondents. Data was collected using a questionnaire, and the sampling technique employed was convenience sampling. Four leading service providers were contacted to obtain details of users who visited customer care centers to acquire internet services, and users were randomly selected from the four data lists received. The sample size for a 95% confidence interval for a proportion is 384 (Cochran, 1977).

Results

The descriptive statistics generated from the obtained dataset are used to understand the distribution of results and the characteristics of the variables in the data. One of the three main elements indicated in the descriptive statistics is the mean value, which represents the average response in relation to the Likert scale values (Table 1: Operationalization of Variables). Furthermore, skewness illustrates the distribution curve of the data set.

Values between +1 and -1 indicate a symmetric data distribution, while values > +1 indicate data skewed to the left and values < -1 indicate data skewed to the right. Kurtosis highlights the peak of the data distribution curve. Values between +3 and -3 indicate a flatter distribution of the curve, while values above this range indicate a peaked distribution curve (Ott & Longnecker, 2015).

During the study to examine the relationship between elements of the Marketing Mix model and customer satisfaction, correlation analysis was utilized. By using correlation analysis, we can measure the efficiency of the service and customer satisfaction, which is essential for achieving the research objectives. Pearson correlations extracted from the data are presented in Table 2. The correlation analysis highlights the comparison of each independent variable to the dependent variable. According to the results obtained, the correlation between customer satisfaction and product, place, process, and physical evidence is greater than 0.861, indicating a strong relationship among them. However, when considering the price, promotion, and people, the value is somewhat lower. This indicates that a considerable number of customers are not satisfied with the service provided in terms of those variables. A test for multicollinearity using tolerance and variance inflation factors (VIF) was conducted, and the results indicated that there were no issues of multicollinearity among the constructs. The tolerance values of the constructs were above the minimum threshold of 0.20, and the VIF values were below 5 as recommended by Hair, Hult, Ringle, and Sarstedt (2013). Therefore, there are no significant issues of high correlation among the constructs.

According to the Service Marketing Mix strategies, there are 7 independent variables that need to be examined to determine their influence on the dependent variable. Thus, it provides a better understanding of the relationship between independent variables and dependent variables. Table 3 presents the regression model summary, which includes the R, R-squared, and adjusted R-squared values for the model, as well as the standard error of the estimate. In this study, regression analysis was used with seven factors as independent variables to test the model for customer satisfaction. The full model was found to be significant, as indicated by the regression model summary highlighted in Table 3. It shows an R-squared value of 0.964, indicating a good fit model since the value is greater than 0.70. According to the results obtained from the study, it shows that all independent variables have a good relationship with each other and have a direct impact on the dependent variable. Since the model fits, the research objectives can be achieved through the study. It shows that all the elements of the Marketing Mix model are aligned with the customer satisfaction of ISPs.

Further, R is the multiple correlation coefficient, which represents all the variables together (R = .982). R-squared is a measure of how much of the variation in the dependent variable is accounted for by the model. According to Table 3, the R-squared value is 0.964 ($R^2 = 0.964$), which explains approximately 96% of the variance in customer satisfaction. This variance is predicted by the combination of the seven independent variables. Adjusted R-squared attempts

to account for the complexity of the model. More complex models will explain more variance than simpler models. Table 3 shows that the adjusted R-squared value is 0.962. The adjusted R-squared value indicates that 96% of the variance in Customer Satisfaction has been significantly explained by a 1% change in the seven independent variables.

The ANOVA results highlighted in Table 4 show a larger F value greater than 1. Furthermore, the significance value is < 0.05. These results combined indicate that the null hypothesis of this study should be rejected.

The coefficient values in the regression analysis highlighted in Table 5 show that the variables of product, price, place, and people have a strong impact on the dependent variable. When considering the coefficient value of Promotion, it indicates a positive, yet moderate relationship between customer satisfaction and promotion. Moreover, considering the physical evidence and customer satisfaction, the coefficient value is less than 0.3, indicating a minor relationship between the two variables. However, the significance value of these variables is less than 0.05, indicating that the null hypothesis would be rejected.

Discussion

Based on the findings of this research, all elements of the marketing mix: product, price, place, promotion, people, process, and physical evidence have positive effects on customer satisfaction.

According to the results, the Pearson correlation between the variables "product" and "customer satisfaction" is greater than 0.5. This indicates a positive and significant relationship between the two. Further, the results of the correlation indicate that a correlation value greater than 0.5 means that the product has a positive and significant impact on customer satisfaction. When considering the significant value of the variables, it is evident that the significance value is less than 0.05, indicating that the null hypothesis would be rejected. The results pertain to the relationship between the variables: Price, Place, People, and Process with customer satisfaction.

However, the Pearson correlation between promotion and customer satisfaction is greater than 0.5, indicating a positive relationship between promotion and customer satisfaction. Further, the results of the coefficient show that the correlation value is less than 0.5 (0.320), which means that promotion does have an impact on customer satisfaction, yet it cannot be considered a strong impact. When considering the significant value of the variables it is evident that significant value < 0.05, which indicate that the null hypothesis would be rejected.

According to the results, the Pearson correlation between Physical Evidence and customer satisfaction is greater than 0.5, indicating a positive relationship between physical evidence and customer satisfaction. However, the results of the correlation analysis indicate that the coefficient value is 0.090. This suggests that physical evidence has a positive impact on customer satisfaction, but it is not statistically significant. When considering the significant value of the variables, it is evident that the

significance value is less than 0.05, indicating that the null hypothesis would be rejected.

Conclusion

According to the research findings, it was concluded that Marketing Mix strategies have a strong and significant influence on customer satisfaction. It was also observed that the research findings are consistent with previous studies, and theoretical and empirical research findings support the validation of these results. The results further showed that variables of the Service Marketing Mix: Price, Place, People, and Process have a strong significant effect on customer satisfaction, while Promotion and Physical evidence have a positive yet moderate effect on customer satisfaction. Based on the research findings and conclusions, the recommendations to enhance customer satisfaction with ISPs in Sri Lanka are as follows: Increase promotional efforts

through strategies that can increase consumer interest, such as advertising, sales promotions, and personal selling. By providing service guarantees, meeting customer requirements, enhancing the brand name, and offering a variety of services to ensure customer satisfaction are essential steps to enhance the product. It can suggest increasing customer satisfaction by providing convenience in the process of delivering internet services. It is also important for the service provider to respond to customer inquiries promptly, ensuring uninterrupted service. Providing services that are more innovative or different from others, improving the facilities provided in the service process, enhancing the service quality, tailoring information to meet customer needs, offering services promptly, expanding service delivery, and streamlining procedures are key aspects that ISPs should prioritize in their Marketing Mix strategies.

Figures and Tables

Figure 1: Conceptual framework
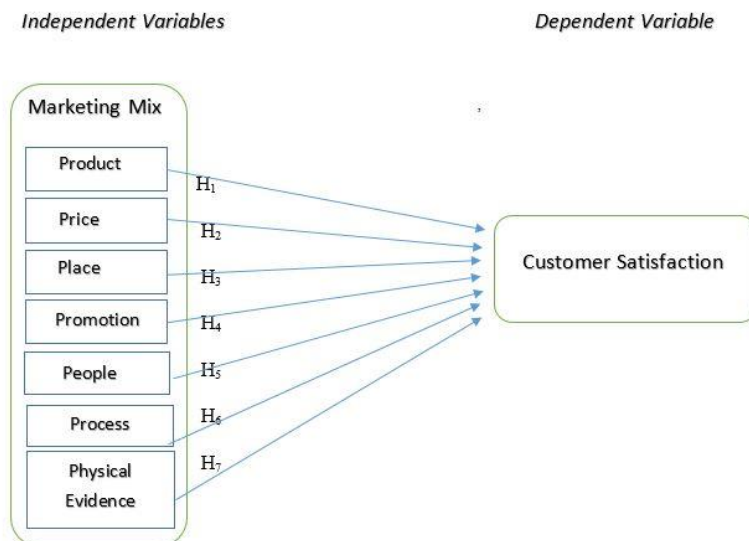
Table 1: Operationalization of variables

Independent variable	Factor	Measurement	Question Number
Product	Variety of services available	Likert Scale	C: 1
	Recognized brand	Likert Scale	C: 2
	Latest technology used	Likert Scale	C: 3
Price	Payment options	Likert Scale	C: 4
	Affordable prices	Likert Scale	C: 5
	Competitive prices	Likert Scale	C: 6
Place	Availability of branches	Likert Scale	C: 7
	Availability of outlets	Likert Scale	C: 8
	Online based accesses to services	Likert Scale	C: 9
Promotion	Creative advertising	Likert Scale	C: 10
	Credibility of the advertisements	Likert Scale	C: 11
	Advertisement and publicity via media	Likert Scale	C: 12
People	Provide immediate services	Likert Scale	C: 13
	Well trained staff to serve customers	Likert Scale	C: 14
	Personalized services offered	Likert Scale	C: 15
Physical Evidence	Availability of public facilities	Likert Scale	C: 16
	Overall atmosphere of service locations	Likert Scale	C: 17
	Appearance of staff members and attire	Likert Scale	C: 18
Process	User-friendliness of the service delivery	Likert Scale	C: 19
	Response to complaints	Likert Scale	C: 20

	Confidentiality and privacy protection	Likert Scale	C: 21

Source: Developed by Researcher

Table 2: Summary of Correlation Values

		Product	Price	Place	Promotion	People	Process	Physical Evidence
Customer Satisfaction	Pearson Correlation	.914	.954	.973	.964	.930	.943	.875
	Sig.(2-tailed)	.000	.000	.000	.000	.000	.000	.000
	N	206	206	206	206	206	206	206

Source: Analysis Results (2023)

Table 3: Regression analysis

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.982[a]	.964	.962	.18827
a. Predictors: (Constant), Process, Physical Evidence, People, Product, Price, Place, Promotion				

Source: Analysis Results (2023)

Table 4: ANOVA table

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	186.622	7	26.660	752.141	.000[b]
	Residual	7.018	198	.035		
	Total	193.640	205			
a. Dependent Variable: Customer Satisfaction						
b. Predictors: (Constant), Process, Physical Evidence, People, Product, Price, Place, Promotion						

Source: Analysis Results (2023)

Table 5: Coefficients values

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.082	.106		.770	.000		
	Product	.627	.070	-.173	-3.263	.000	.776	1.289
	Price	.804	.090	.099	1.259	.000	.668	1.498
	Place	.506	.060	.578	8.484	.000	.620	1.613
	Promotion	.320	.081	.331	3.949	.000	.427	2.340
	People	.766	.047	-.077	-1.383	.000	.723	1.383
	Physical Evidence	.090	.041	.077	2.211	.000	.629	1.590
	Process	.877	.082	.157	2.060	.000	.807	1.239
a. Dependent Variable: Customer Satisfaction								

Source: Analysis Results (2023)

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The Moderating Effect of Transformational Leadership on the Relationship between Employee Happiness and Organizational Citizenship Behavior

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Abstract

Sometimes, employees in every organization are treated with little empathy, which lowers their motivation to execute their tasks. Organizational citizenship behavior is often related to increased organizational effectiveness. Understanding the moderating role of transformational leadership can help organizations tailor their leadership approaches to maximize the positive outcomes associated with employee happiness, ultimately contributing to the overall success of the organization. As a result, the purpose of this study is to investigate organizational citizenship behavior, transformational leadership, and employee happiness. The study's goals are to: (i) determine the effect of employee happiness on organizational citizenship behavior; and (ii) examine the moderating effect of transformational leadership on the relationship between employee happiness and organizational citizenship behavior. The population of the study consisted of 345 workers from the Lagos State Ministry of Employment. The sample size of 183 was chosen using an online sample size calculator, and the study employed stratified sampling. The study used Social Package for Social Sciences for descriptive statistics and Smart PLS 4 for inferential statistics. According to the findings, transformational leadership moderates the relationship between employee happiness and organizational citizenship behavior. The current study has made an effort to address all of the research questions and aims, despite some of its limitations.

Keywords: Employee Happiness, Organizational Citizenship Behavior, Job Performance

Introduction

Out of all of the resources available to an organization, it is believed that human resources are the most significant and essential for the continued existence of every organization (Jimoh, 2023). Employers commonly anticipate that their employees will be creative, motivated, and devoted to high-performance standards for a business to prosper through employee efficiency and effectiveness, which can only be reached through employee behavior. OCB illustrates the attitudes and behaviors needed from employees to produce extraordinary results (Akçakanat, 2020). Despite the large number of studies on organizational citizenship behavior, there are still gaps to fill on how employee happiness influences OCB (Alazeezi & Zainol, 2022).

Happiness is seen as a requirement in life, and service industries have begun to pay it greater attention due to the multiple consequences it has for both employee health and organizational effectiveness (Ritchie & Kuna, 2017; Lee et al., 2017; Atkinson & Hall, 2011). On the other hand, happy employees are expected to contribute more to their jobs by putting their skills, knowledge, and abilities to better use (Alparslan, 2016). While it is also seen as a crucial component of the company because it is assumed that workers spend a large portion of their lives at work, for certain people, their job plays a significant role in defining their personalities (Akçakanat, 2020; Jimoh, 2020).

Since the beginning of written history, Alazeezi1 and Zainol (2022) have been interested in happiness; however, it has only recently become the focus of psychological research, whereas job satisfaction and commitment are of interest to management research (Kolodinsky et al., 2017; Lee et al., 2017). However, it is also a matter of interest for businesses that aim to contribute to the happiness of their workers by fostering pleasant emotions that result in advantageous consequences (Kadiri et al., 2018). This has sparked a body of literature that aims to comprehend the effects of employee happiness at work. However, there has not been agreement on how to improve employee happiness within the company. The majority of the past research also focuses on the impact of employee happiness on organizational outcomes, including organizational commitment (Field & Buitendach, 2011), work engagement (Bakker & Oerlemans, 2016), productivity improvement, employee turnover reduction, and customer satisfaction (de Waal, 2018). There is still very few literature that examined the effect of employee happiness and OCB, and the studies that do exist have conflicting results regarding how employee happiness affects OCB. For instance, Akçakanat (2020) found that in the setting of Turkish 4 and 5-star hotels, employee happiness has a mediated effect on corporate citizenship behavior rather than a direct one.

According to Wimalanaga and Kaluarachchige (2020), when employees are content at their place of employment, they display good

conduct when carrying out organizational tasks. De Waal (2018) demonstrated in reality that raising employee happiness at work increases both employees and the public's perceptions of the organization's attractiveness. However, he pointed out that rather than how devoted employees are to the company, the positive effects of employee satisfaction are mostly tied to work itself. However, it is very important in this field of study to understand the opinions of the staff members of public sector organizations. This is because occasionally public sector workers are treated with little empathy, which lowers their motivation to execute their tasks (Jimoh 2023). This study's background is in the public sector, employees of the Ministry of wealth creation and employment in the state of Lagos which is crucial because of the constant pressure they face to carry out their civic duties.

Research Objectives

i. To determine the relationship between employee happiness and organizational citizenship behavior.

ii. To examine the moderating role of transformational leadership on the relationship between employee happiness and organizational citizenship behavior.

Employee Happiness & Organizational Citizenship Behavior

Employee happiness in this context is defined as a consistent sense of contentment with the company and the job, as well as a regular experience of pleasant emotions and feelings toward the work rather than negative ones (Lee et al., 2017). Additionally, whereas the majority of earlier studies looked at employee happiness as a multidimensional concept and employed employee engagement, job satisfaction, and emotional commitment as their proxies, some studies focused on employee happiness as a single variable. As for this study, employee happiness is perceived as a single concept. Happy workers may be more helpful and supportive to their coworkers and other employees with whom they interact (Joo and Lee, 2017). They are expected to take part in civic activities since they value and respect them more. According to Akçakanat (2020), people who are content may act in ways that produce ongoing happiness and satisfaction, such as by practicing various OCB traits like altruism, empathy, or civility. Akçakanat (2020) asserts that OCBs are more driven by pleasant emotions. Relationship maintenance and the development of flourishing social interactions can both be facilitated by positive and cheerful feelings. According to studies, such positive encounters may increase employees' propensity for altruism (supporting others), courtliness (behaving politely with others), and sportsmanship (ignoring concerns that may endanger relationships).

According to Saxena, Tomar, and Tomar (2019), a key element of an employee's employment experience is job satisfaction since happy

employees are more relaxed and committed to their tasks. The researchers investigate how work satisfaction affects organizational citizenship behavior in light of that assertion. They discovered a straight correlation between corporate citizenship behavior and job happiness. Their findings further demonstrate that there are no disparities between male and female employees' levels of corporate citizenship activity. Tansky (1993) made a similar discovery and discovered a weak correlation between affective commitment and organizational citizenship behavior. Inferred from the literature examined above and the current investigation is that

H1: Employee happiness has a significant influence on the OCB levels of employees.

Transformational Leadership as Moderator between Employee Happiness and Organizational Citizenship Behaviour

Transformational leadership is a leadership style that focuses on inspiring and motivating followers to achieve their full potential and exceed their own expectations. Therefore, using charismatic speech, motivation, intellectual stimulation, and taking into account employees' perceptions when making decisions are all examples of transformational leadership (Jimoh, et al., 2017). This managerial approach improves employee satisfaction and organizational citizenship behavior (Chan & Lai, 2017). When their leaders foster a climate of trust, which

results in the employee performing above and beyond expectations, employees have been shown to display OCB (Nohe & Hertel, 2017). Additionally, it was discovered that effective leadership involvement was a substantial predictor of OCB (Diebig, Bormann, & Rowold, 2017); nevertheless, the moderating effect of transformational leadership has been disregarded in the OCB studies.

EH and OCB have been linked directly in a number of studies published in the literature (de Waal, 2018; De Neve et al., 2017; Salas-Vallina et al., 2017). In a similar vein, several studies (Abdullahi et al., 2020; Kim et al., 2019; Choudhary et al., 2017) found a connection between transformational leadership and OCB. The leaders' upbeat and supportive bearing, along with a pleasant atmosphere, will lessen stress and foster contentment. As an employee's degree of enjoyment, such as contentment and commitment, rises, so will their OCB. Additionally, it will improve the effectiveness of the organization.

Their confidence in the leadership is strengthened by the credibility and trust of the leader as well as the frank and open communication with the staff, which raises their feelings of self-worth and emotional support (Rego & Cunha, 2008). It encourages cooperative conduct among employees in addition to developing their experience of affective well-being. Concern for others is one of the key components of transformational leadership; it encourages positive feelings among staff, which shapes and improves their behaviors and

attitudes. Happy OCB is influenced by higher levels of happy feelings at work (Jimoh, 2023). The amount of confidence and excitement that employees feel as they work toward achieving goals increases under transformational leadership, which in turn raises their level of task satisfaction and pleasure (Bass, 1998). Additionally, transformational leadership works well to support and enhance organizational performance over the long term by promoting organizational learning and policy. Because of transformative leadership and increased job satisfaction, employees with high levels of ability, expertise, competence, and commitment may accomplish their jobs more than once and go above and beyond what the organization expects (Bahadori & Dahghan, 2017).

While other researchers (Watts, Steele, & Den Hartog, 2020; Hai, Wu, Park, Chang, & Tang, 2020; Green, Millar, & Aarons, 2013; Vasilaki, Tarba, Ahammad, & Glaister, 2016; Syrek, Apostel, & Antoni, 2013) examined the role of leadership as a moderator, Martin, Epitropaki, Erdogan, and Thoman (2019), on the other hand, emphasized the need to research the impact of transformative leadership on the relationship between employee behavior, namely OCB and its antecedents. According to Ryan and Deci (2000), a job benefit that can help a person's intrinsic motivation, which affects a person's ability to motivate others, is transformational leadership's enabling behavior. According to other researchers' findings (Breevaart et al., 2014; Hoon Song, Kolb, Hee Lee, & Kyoung Kim, 2012), transformational leadership

significantly affects and increases employee engagement. Employees who believed their supervisors and leaders had supportive and successful leadership styles felt more a part of and involved with their organization, according to Albrecht and Andreetta's (2011) research.

Additionally, researchers found that the absence of a moderator—transformational leadership—leads to an inconsistent association between the independent and dependent variables (Salas-Vallina, Alegre, & Fernandez, 2017; Rego et al., 2017; Borman, 2018). The association between the moderator and dependent variables—transformational leadership and employee OCB levels—is also significant at the same time (Yuan & Yue, 2019). It follows that the association between employee happiness and OCB levels is moderated by transformative leadership. The following theory is put forth in light of the literature review that was just mentioned.

H2. The positive relationship between employee happiness and OCB will be stronger for organizations with high transformational leadership practices.

Social Exchange Theory

Employee and employer interactions can be seen as actors who participate in exchange transactions over time to build exchange connections at the organizational level, according to social exchange theory (Settoon et al., 1996). This viewpoint holds that social relationships revolve around the

advantages and disadvantages of commerce. The working relationship can be described as a series of social and economic interactions, according to Aryee, Budhar, and Chen (2002). The social exchange connection, which is often established by a formal contract, refers to the conditions of the transaction that imply certain obligations (Blau, 1964). Social ties can be initiated by an organization's treatment of its employees in the hopes that it will lead to future reciprocation. Socially oriented relationships also have a propensity to last longer. However, short-term economic trade partnerships are becoming more common.

Exchange connections may develop when both the employee and the supervisor make commitments to work hard for each other. According to Shanock and Eisenberger (2006), beneficial relationships between an employee and an organization may result in the proper treatment of superiors, subordinates, and coworkers, depending on the person's position within the business and the nature of his or her job. Some researchers claim that workers at almost any level of the company can return to POS by helping their peers. Coworker exchange connections can also develop (Lynch et al., 1999). Eisenberger et al. (1986; Konovsky & Pugh, 1994) claim that the relationship between the participants in the transaction determines the kind and degree of obligation felt as a result of a social exchange link.

According to Settoon et al. (1996), the social exchange theory has also been used to explain why employees feel pressured to go above and beyond the terms of their formal employment contracts in order to impress their superiors. According to Konovsky and Pugh (1994), the social exchange relationship is based on trust, which implies that other participants in the trade process will eventually show the same commitment. For an organization to operate effectively, organizational cooperative behavior (OCB), a form of reciprocal connection, is essential. The social exchange theory was used in this study to explain how organizational citizenship is the moderating impact of transformative leadership on employee happiness.

Human Capital Theory

Schultz (1961), who first proposed that human capital is made up of an organization's employees' capacity, knowledge, and skills, coined the term "human capital" in the early 1960s. Human capital was redefined by Schultz (1981) as "all human abilities, natural or acquired." A wise investment can improve human capital, which is a priceless asset (Schultz, 1961). According to an empirical study, having good human resources makes employees happier (Crook, Ketchen, Combs, & Todd, 2008). Human capital is thus a valuable resource (Nahapiet, 2011). Human capital can be divided into general and specific forms, according to Becker and Huselid (2016). General human capital refers to knowledge, skills, and talents that apply to all enterprises, whereas specific human capital is only beneficial in a particular

environment or enterprise (Dokko, 2017). The human capital idea is related to Barney's (1991) resource-based vision of an organization. According to this thesis, a company can only maintain a competitive edge when it has a human resource base that cannot be imitated or replaced by its rivals. According to Boxall (1996), this circumstance grants "human capital advantage" and "human process advantage." A large portion of its approach is built on recent results from hiring individuals with knowledge and talent that is competitively useful. Contrarily, the latter is the outcome of the organization's creation of difficult, extremely sophisticated procedures, such as cross-departmental cooperation and executive development.

According to Overfelt, Deloof, and Vanstraelen (2010), human capital refers to the knowledge, skills, time, and experience that can be applied to the manufacturing process by one family or generation. According to this notion, when employed wisely, people have the same capacity for learning that other natural resources do, and they may be used to an organization's advantage. The inquiry into how talent management could enhance crucial procedures for recruitment, retention, and training and development for job performance was therefore supported by the human capital theory. Since human capital is made up of many different elements, including skills, time, experience, and knowledge, all of which are embedded in specific people, this method is crucial for talent management (Dokko, 2017). In order to use data

from this theory to explain employee satisfaction in terms of skills, knowledge, and capability, it will be crucial to look at how human capital theory defines the collective skills, capabilities, and knowledge of the employees employed by a business. In conclusion, the study's independent and dependent variables, employee happiness and organizational citizenship behavior, are both explained by human capital theory.

Methods

Research design, according to Mishra and Alok (2017), is a snapshot of the procedures used to perform research. The major objective of this study is to examine how positive and transformational leadership affects the correlation between OCB and employee happiness. The study will use the descriptive research approach in order to accomplish this target as well as all others that have been stated. Because this form of research design goes a little further than theories and makes an effort to explain various facets of a phenomenon, the study is primarily descriptive in nature. The study's construction of a model for a system for measuring employee happiness a mechanism for its operation made up of related objectives, guiding principles, and assessment techniques is of particular significance. Based on underlying theories, the study's research framework and hypotheses were developed. In light of this, it is preferable to perform a study based on hypotheses using the quantitative research approach (Mackenzie &

Knipe, 2006). As a result, a positivist research philosophy will be used in this investigation.

All 345 of the Ministry of wealth creation and employment employees in the state of Lagos make up the study's population due to the homogeneity within the sampled ministry's staff and the heterogeneity amongst staff members who work in other areas. The researcher also has limitations in terms of time and money. So, in this study, stratified sampling was used to select a sample from the population of the study. The technique is more applicable when some strata are expected to exhibit unequal variability, such as when some strata appear to be excessively small or too large (Cavana et al., 2001). The population of the study consisted of 345 workers from the Lagos State Ministry of Employment.

It took three months (July–December 2022) to administer the questionnaire via electronic means, which is recognized as an effective method of data collection (de Waal, 2018; Salas-Vallina et al., 2017). The current COVID-19 pandemic, which has restricted human-to-human connection, was one of the main reasons for using an electronic survey for the gathering of data, in addition to being effective and affordable. The optimal alternative for the data collection process is therefore considered to be an electronic questionnaire.

Measurement of the Variables

The Schriesheim and Tsui (1980) scale, which consists of five items, was modified to serve as the basis for the employee satisfaction measurement used in this study. A seven-point Likert scale is used to evaluate the scale, with the values ranging from strongly disagree (1) to strongly agree (7). Work engagement has a Cronbach's alpha of 0.856. The OCB measurement used in this study was adapted from a Lucey (2017) study. To assess how frequently these behaviors occur, the researcher employed 20 items on a seven-item Likert scale with seven points. The study by Lucey (2017) found that this scale had a Cronbach's alpha of 0.948, indicating a high degree of consistency. The research of Atta (2017) served as the basis for measuring transformational leadership. Nine items were used by the researcher to measure this construct. To assess how frequently these actions occur, the researcher employed a 7-item Likert scale. From never true (point 1) to always true (point 7), the scale has seven points. In the study conducted by Atta (2017), the scale's Cronbach's alpha score was 0.895, indicating a good degree of consistency.

Method of Analysis

In this study, descriptive analysis was carried out using SPSS version 28. Additionally, preliminary analysis and data screening were carried out using SPSS prior to the descriptive analysis to make sure the data were suitable and appropriate for further research. Then, using partial least squares structural equation modeling (PLS-SEM), an inferential analysis was carried out to make predictions based on the data. To determine the strength and direction of the association

between or among the study variables, the PLS-SEM is used. Statistical analysis Given that PLS-SEM can distinguish between and measure with accuracy both reflective and formative measures, it is appropriate for this investigation. Hair, Hult, Ringle, and Sarstedt (2017) lack factor indeterminacy or convergence problems, and their distributional assumptions are significantly easier (Reinartz, Haenlein, & Henseler, 2009).

Results

In order to determine the importance of the route coefficients, the PLS algorithm was used to create the path coefficients and bootstrap with a total of 5000 bootstrap samples and 345 cases (Hair et al., 2014; Hair et al., 2011; Hair et al., 2012; Henseler et al., 2009). The purpose of running the model with all variables was to ascertain the outcomes of the direct and indirect relationships that resulted from the study's research goals.

Table 1

Based on this result in table 1, hypothesis 1 (H1), which stated that employee happiness has a positive and significant relationship with organizational citizenship behavior, is supported at the 0.05 level of significance ($\beta= 0.553$, t = 10.164, p<0.05). This result revealed a significant positive relationship between employee engagement and organizational citizenship behavior. Therefore, hypothesis one is supported.

Table 2

According to Table 2 which displayed the result of the moderating effect below, it can be discerned that hypothesis 2 was supported as the positive relationship between employee Happiness and organizational citizenship behavior ($\beta= 0.092$, t=2.757, p<0.05) does get stronger when there is high-level practice of transformational leadership in the organization.

Discussions

Hypothesis one (H1) was found to be supported based on the PLS-SEM output result (=0.553, t = 10.164, p = 0.005). According to the findings, corporate citizenship behavior is strongly and favorably influenced by employee satisfaction, which measures how enthusiastic and committed an employee is to the company. The results of this study underline the significance of employee satisfaction and assert that businesses that foster an environment that allows for free employee engagement may see an increase in the number of times workers behave responsibly toward one another and the business as a whole. The results validate the applicability of employee happiness and highlight its significance as a valued workplace attitude, building on earlier studies. The results show that improving employee satisfaction has a significant impact on improving corporate citizenship behavior.

This research indicates that corporate citizenship behavior is strongly and

favorably predicted by employee happiness, which is a measure of employee contentment with their employment. This result was consistent with the vast majority of earlier research conducted in both the public and private sectors, which indicated and claimed that employee happiness is a helpful contributor to and enhancer of employee organizational citizenship behavior. Such studies include but are not limited to the studies of Murphy, Athanasou, and King (2002), Weikamp and Göritz (2016), Foote and Li-Ping Tang (2008), Tharikh, Ying, Mohamed Saad, and Sukumaran (2016), Salas-Vallina et al. (2017), Saxena, Tomar, and Tomar (2019), Prasetio, Yuniarsih, and Ahman (2017), and Gyekye and Haybatollahi (2015). Murphy, Athanasou, and King (2002), who also looked into a similar study in the setting of Australia, found supporting evidence for the findings of the current study by drawing on the findings of the aforementioned investigations. The findings from the current study, which similarly discovered a positive and significant association between employee happiness and corporate citizenship behavior, are also supported by Weikamp and Göritz's (2016) study.

The results of the current study primarily support the encouraging findings from the body of existing research on the influence of employee happiness on improving corporate citizenship behavior. The literature review component of this study provides more evidence in support of some of the prior claims made by other scholars that employee satisfaction affects corporate citizenship behavior. This suggests that when workers feel satisfied at work, they are more likely to want to go above and beyond what is required of them and to assist other workers in achieving their own goals and objectives as well as the overall organizational aim.

According to the second of this study's research aims, "transformational leadership has a moderating effect on the relationship between employee happiness and organizational citizenship behavior." The research goal was followed by the formulation of the following hypothesis: "Organizations with high levels of transformational leadership will have a stronger positive relationship between employee happiness and organizational citizenship behavior." However, the outcome of hypothesis two (H2) showed the following (= 0.092, t = 2.757, p = 0.05), which meant that hypothesis two (H2) was supported. This was in line with our expectations as stated in the hypothesis. This indicates that transformative leadership moderates the positive and statistically significant impact of employee satisfaction on organizational citizenship behavior. This result is in line with other earlier studies, such as those by Goswami, Nair, Beehr, and Grossenbacher (2016), who discovered that transformational leadership favorably moderated the association between leadership humor and employee job happiness.

The current study, which proved that transformational leadership favorably modifies the link between employee

satisfaction and psychological capital, was in line with Scott's (2020) finding. Corporate factors may be a factor in the lack of a substantial moderating influence of transformational leadership on the connection between employee satisfaction and corporate citizenship activity. According to Podsakoff et al. (2009), organizational characteristics are features that are derived from the management model of the company as stated in its structure or strategy as well as the business culture as reflected in the makeup of its members and interactions. Additionally, Dentnakarin and Rurkkhum (2019) pointed out that organizational traits may affect employees' OCB. In order to impact the relationship between employee satisfaction and organizational citizenship behavior, organizational attributes such as perceived organizational or supervisor support may become more internalized and take precedence over transformational leadership.

Theoretical Implications

The conceptual framework of this study was built on the theoretical gaps revealed in the body of previous research as well as earlier empirical findings. It was also supported by social exchange theory, which was used to explain it. The current study has produced significant theoretical contributions to the study of employee happiness and OCB levels among employees, according to the research findings. Measures of employee satisfaction are crucial in helping us understand corporate citizenship behavior from the employees' point of view, as the analysis in the previous

chapter demonstrated. A similar moderating effect of transformative leadership in the relationship between the aforementioned direct relationships was also found by the study. The study's theoretical contribution in this context has two parts.

Practical Implications

The current study has various practical implications for human resource management techniques in the setting of government institutions based on the research findings. First, the findings imply that perceptions of employee pleasure are a crucial factor in improving employees' OCB levels. The degree of OCB among employees can be significantly increased by government entities by improving their views of satisfaction. Governmental organizations can lessen their staff members' propensity to engage in OCB by fostering a positive work environment. For instance, rewarding staff members who consistently display OCB is one way to promote such behaviors (Organ, 2018).

Conclusion

Overall, the current study has broadened the frontier of knowledge in terms of the moderating effect of transformative leadership on the link between employee happiness and OCB levels. The investigation's results support the basic theoretical presumptions. The current study has made an effort to address all of the research questions and aims, despite some of its limitations. Even though

the root causes of OCB have been the subject of numerous studies, the current study addressed a theoretical gap by taking transformational leadership into account as a crucial moderating factor. Additionally, the moderating role of transformative leadership on the relationship between employee satisfaction and OCB levels is supported by this study's theoretical and empirical findings.

The study was able to pinpoint just how the correlations between exogenous and endogenous factors are theoretically moderated by transformational leadership. In order to further the field of social exchange theory, this study's theoretical framework analyzed employee contentment and OCB levels. The results of this study have important practical ramifications for organizations, particularly public institutions, and managers, in addition to their theoretical contributions. Some suggested directions for future research were also given in light of the limitations of the current study. In conclusion, the current study has significantly advanced both theoretical and applied knowledge in the area of organizational and industrial psychology, particularly in the context of human resource management.

Table 1: Direct relationship

Hyp.	H	Path coefficient	Standard Error	T Stat.	P-value	CI [2.5%;97.5%]	Decision
H1	EH -> OCB	0.553	0.054	10.164	0.000***	[0.438;0.652]	Supported

Note. *** $P<0.05$; BI means Confidence interval; H: Hypothesis; EH means employee Happiness; OCB means organizational citizenship behavior.

Table 2 : Indirect relationship

Hyp.	Constructs	Beta	Standard Error	T Stat.	P-value	Decision
H2	LDS* EH -> OCB	0.092	0.033	2.757	0.006***	Supported

Note. *** P<0.005; EH means Employee Happiness; LDS means transformational leadership; OCB means organizational citizenship behavior.

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Determinants of Foreign Direct Investments in Sri Lanka

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Abstract

Foreign Direct Investment (FDI) has become an engine of growth and vital for economic development. Sri Lanka has also been entertaining FDI seeking acceleration of economic growth through various channels such as employment generation, poverty alleviation and creating foreign exchange. However, the factors that are likely influence the FDI inflow has been varied country to country in terms of their Institutional and socio-economic characteristics. Accordingly, this study investigates the determinants of FDI in Sri Lanka during the time period from 1990 to 2017, using annual time series data extracted from the World Bank, and Central Bank databases. We can choose the data reason of 1990 to 2017, that datas have stronger and stability to identify in the determinents in FDI. As determinants, the study incorporates six variables such as gross domestic product, inflation, trade openness, labor force and tourism income. The study employs ADF unit root test, Johansen's Co integration analysis and Error correction model based on the Vector error correction model (VECM) to ascertain the significance of macroeconomic and country specific factors on FDI inflow in Sri Lanka. The results derived from this study suggest that all variables are significantly influencing on the FDI in the long run. Gross domestic product and labor force have positive impact, whereas inflation, trade openness, and tourism income are found to hurt FDI.

Keywords: *Sri Lanka, Foreign Direct Investment, Gross Domestic Product, Inflation, Trade Openness, Co-integration,Vector Error Correction,*

Introduction

As far as the acceleration of Global economic growth is concerned the growth in flow and stocks of FDI has been vital. It has been revealed that Foreign Direct Investments (FDI) serve as an engine of economic growth through various channels such as enhancing employment opportunities, increasing per capita income, trade promotion, and poverty alleviation. However, the distribution and the size of FDI are unequal as various factors determine the flow of FDI from the home country to the host country. Especially, the less-developing countries face difficulties in attracting FDI despite the fact that FDI is immensely important to these countries. Numerous factors possibly determine the FDI in a host as well as in-home countries that can be classified as pushing and pulling factors. Pushing factors are responsible for moving the FDI from the home countries whereas pulling factors in the host country side are responsible for attracting the FDI. The direction and magnitude of the influence of these factors depend on the socio-economic, demographic, institutional, and environmental factors of home and host countries.

Sri Lanka is also in the line of entertaining FDI after the trade liberalization which was introduced in 1977, since then the country has been successful in receiving FDI into the economic system, especially after 2009 when the civil war ended. The successive measures in government policies have also addressed all the ways to attract FDI in such a way as creating free trade and investment zones, reduction of food subsidies, development projects to improve tourism potentials, development infrastructure, transportation, and so on. Contrarily, political instability, terrorist attacks, the level of corruption, poor policies on property rights, and outdated transportation, such as railways are possibly hindering the inflow of FDI. Therefore, the inflow and utilization of foreign direct investment in Sri Lanka is at a very low level compared to other developing countries. Abbott et al (2012). Therefore, it is imperative to increase foreign direct and private investment in Sri Lanka rather than relying solely on the income of the government to facilitate development in the country. Though Sri Lanka has implemented all the ways to attract FDI inflows, as shown in Figure 1, its overall trend shows an increasing trend with major fluctuations indicating that possible development in uncertainty in economic contribution of FDI. Therefore, this study selects some factors theoretically and empirically to investigate whether these variables are significantly contributing to attracting FDI into Sri Lanka.

Source: Central Bank Report – 2017

Figure 1: Th Trend of FDI inflow into Sri Lanka during 1990-2017
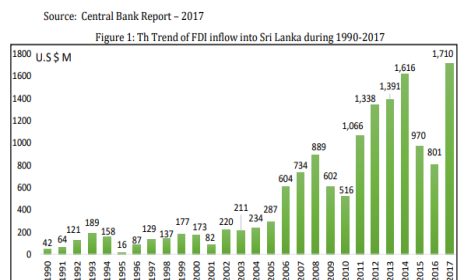
Methods

This study uses annual time series data for 27 years for the period 1990 - 2017. The data were extracted from the World Bank database and the annual report of the Central Bank of Sri Lanka. As the first step, the Augmented Dickey-Fuller Analysis is employed to test the stationary properties of time series data because miss-conducting econometric analysis avoiding time stationary properties would give a spurious result and lead to inappropriate conclusions. As the second step, Johansen's Cointegration analysis and Error correction model based on the Vector error correction model (VECM) are employed to investigate the short and long-run relationship among the variables. Foreign direct investment is treated as the dependent variable whereas GDP, Inflation, Trade Openness, labor force, and tourism income have been used as independent variables to analyze the factors that determine foreign direct investment. The econometric model used for this study is specified as follows:

$$lnFDI_t = \alpha_0 + \alpha_1 lnGDP_t + \alpha_2 lnCPI_t + \alpha_3 lnTOP_t + \alpha_4 lnLAB_t + \alpha_5 lnTOU_t + \varepsilon_t$$

Where:

lnfdi= logarithm of foreign direct investment (in US dollars)

α_0 = constant

lngdp= logarithm of gross domestic product (in US dollars)

lncpi= logarithm of consumer price index (in US dollars)

lntop= logarithm of trade openness (Defined as the sum of exports and imports over GDP)

lab = logarithm of labor force

into = logarithm of tourism income (in US dollars)

ε = error term

Results

Unit Root Test When analyzing time series data, it is necessary to evaluate the trend and stationary of the variables. Most of the macroeconomic variables are non–non-stationary. Thus, invariance and parallel invariance of the time series data are not consistent with time. The problem with non -stationary time series is that the OLS can simply lead to spurious sequences. Then the variables will have no real connections. The dependent variable and the independent variables used in this case are converted to logarithmic form. The Unit root test for each of the time series variables used in this study is based on the test equations of Intercept, Trend & Intercept, None.

Table – 2 shows that, the Trace test and the maximum Eigenvalue test evidently generate conflicting results. The trace test indicates at least three co-integrating equations at the 5 percent level of the model. On the other hand, the maximum Eigenvalue test indicates at least one co-integrating equation at the 5 percent level of the model. The results reveal the existence of a long-run equilibrium relationship between the variables. However, the study's main aim is to establish if there is a long-term relationship between the variables and not necessarily the number of co - integrating vectors, so the null hypothesis of no cointegration was

rejected at 0.05 percent level of significance from both the trace statistic and the maximal-Eigen value. This indicated that there is a co-integrating relationship among the variables,

Table 3 shows the results of normalized co – integration coefficients. According to the results, all the variables taken in the study for determining FDI in Sri Lanka are statistically significant at the 1% and 5% level having a long-run relationship. The model is followed by the long-term equation of FDI as follows:

$$lnfdi_t = \alpha 0 + \alpha 1 \, lngdp_t + \alpha 2 lncpi_t + \alpha 3 \, lntop_t + \alpha 4 \, lnlab_t + \alpha 5 \, lntou_t + \varepsilon_t$$

$$lnfdi_t = -138.6612 + 3.795508 \, lngdp_t - 1.226325 lncpi_t - 1.321235 lntop_t + 4.972501 \, lnlab_t - 0.296955 lntou_t$$

The results suggest that GDP and labor force have a positive impact on FDI inflows in Sri Lanka. However, CPI, trade openness, and tourism income have a negative effect on FDI inflows in Sri Lanka. The results are explained in detail below. Gross Domestic Product (GDP) The positive co - integrating coefficient of 3.795508 illustrates a positive relationship between GDP and the FDI inflows. According to the coefficient for GDP, a 1% increase in GDP would cause FDI to be increased by 3.8 %. The results confirm the priori expectations and are in line with the findings of Enisan (2017) in Nigeria. GDP is statistically significant in explaining changes in FDI inflows, suggesting that GDP is an important factor in attracting FDI inflows into Sri Lanka. Inflation The Consumer Price Index (CPI) is used as a proxy variable for inflation. The negative co - co-integrating coefficient of 1.226325 as a measure of economic stability shows a negative relationship between CPI and FDI inflows into Sri Lanka. FDI reveals that a 1.2 % decrease in FDI performance is explained by a 1% increase in CPI. The results agree with a prior expectation that macroeconomic instability discourages FDI inflows and is consistent with Demirhan and Masca (2008) in Developing Countries. The variable is statistically significant explaining that any macroeconomic instability brings with it economic uncertainty. Trade Openness The empirical results show that the co – co-integrating coefficient for trade openness is 1.321235, illustrating a negative relationship between trade openness and FDI inflows into Sri Lanka. FDI reveals that a 1.3% decrease in FDI performance is explained by a 1% increase in trade openness. These results are consistent with Rebecca Penn (2017) in India and correspond to the prior expectations. Labor force According to the results, the co - integrating coefficient for the labor force is 4.972501, illustrating a positive relationship between the labor force and FDI inflows denoting a 1% increase in the labor force would translate to a 5% increase in FDI inflows. labor force is statistically significant in explaining changes in FDI inflows. The results are consistent with

Leitao and Faustino (2010) in Portugal. Tourism income A negative coefficient of 0.296955 indicates a negative relationship between FDI inflows and tourism income with statistically significant at a 5% level, implying that a 1% change in tourism income will render a 0.3% decrease in FDI inflows

This section seeks to analyze the short-run effects of the explanatory variables on the FDI inflows. The persistence of the analysis is to determine whether the short-run dynamics are influenced by long-run equilibrium co - integrating vectors. Table 4 shows the results of the Error Correction Model. In the results, the technique of speed adjustment parameters explores how quickly the system returns to equilibrium after a random shock. According to the results, the error correction term of foreign direct investment is -0.395553 and it is statistically significant at 1% level. Labor force and tourism income are statistically significant at a 10% level, whereas the coefficients for Gross Domestic Product, Inflation, and Trade Openness are insignificant. The coefficient for D_lnfdi indicates that the speed of adjustment to the long-run equilibrium is significant and can be concluded that 39% of deviation would be eliminated annually.

Last year's FDI was statistically Positive and significant at a 1% level in the current FDI inflows, meaning that when other factors don't change, a 1% increase in last year's FDI would translate to a 0.651068 increase in current year FDI inflows.

At the same time, independent variables weren't statistically significant. Residual Diagnostic Test The residuals were examined for the Serial Correlation test employing Historam normality and Heteroskedasticity Test. The results are reported in detail below in Table 5.

According to the results as can be seen in the LM test for serial correlation, the test statistic is 0.898677 with a probability of 0.3431. Thus, the model is significant at all levels of significance; hence the null hypothesis which states that the error terms are independent cannot be rejected.

Discussion
In general, foreign direct investment has a greater influence on the economic development of a country. Therefore, it is necessary to maintain the FDI inflow in an optimal manner without getting into a loophole. Hong Kong and Singapore, which have a smaller land area and population compared to Sri Lanka, are the countries that receive more foreign direct investments than Sri Lanka. In this, Hong Kong with a population of 7 million receives an average of 108 billion US dollars annually, Singapore with a population of 56 million receives an average of 62 million US dollars annually, and the Netherlands with a population of 17 million receives an average of 92 billion US dollars annually as foreign direct investments.

Today's development of these

countries cannot be compared with Sri Lanka. Therefore, the following recommendations can be made to bring about a similar economic development in Sri Lanka similar to the economic development that has occurred in these countries.

In the case of Sri Lanka, domestication is limited. But the market is the countries like India, China, and Bangladesh which are close to Sri Lanka and have the biggest domestic market and sales. Because of that, foreign investors with big brand names choose other countries instead of Sri Lanka as their investment destination. Therefore, to attract more foreign investments, the Sri Lankan government must examine how to expand the borders of domestic markets in its economic policies.

To attract more foreign direct investment, the country's infrastructure needs to be improved. However, all developments in Sri Lanka are centered around Colombo. The most important reason for this is the lack of adequate infrastructure in other parts of the country. This means that facilities such as electricity, water, transport, and communication should be provided uniformly in all areas to carry out investments

Inflation as a socio-economic factor plays a major role in creating a stable economic environment in the country. So the government should pay more attention and follow the policies of the time to maintain the inflation in the best way. Because when inflation is high, foreign direct investment is also low

A report by the trade association pointed to a decline in tourist arrivals and revenues in the future. It is also mentioned that the quality of tourist accommodation for tourists is not sufficient compared to other Asian countries. Unless these problems are resolved, not only tourist arrivals but also income cannot be increased Therefore, the Sri Lankan government should create the best environment to attract more foreign investments in tourism. Giving priority to the development of the country's workforce means that it is necessary to prepare the country's workforce to be able to cooperate with foreign investors who are making investments in a country like Sri Lanka. Only then can the ideas of the investors be fully implemented in the country and the country can fully enjoy the benefit of the said projects. It is a huge responsibility to implement the training sessions nationwide and prepare the country's workforce for it.

A free market economy necessitates changes in Sri Lanka's trade policy. At present, it is necessary to resolve the contradictions found in Sri Lanka's export and import operations and trade policy with other countries. Through this, the investments of investors from different countries come into the country and the openness of Sri Lanka for the future, which is only dependent on countries like China, can get more investments.

Conclusion

The main aim of this study was to analyze the determinants of FDI in

Sri Lanka by incorporating GDP, Inflation, Trade Openness, Labor force, and Tourism income as determining variables using time series data from 1990 - 2017. Firstly, using Unit root analysis the stationary properties of time series data were tested, and accordingly, as a second step, Johansen's Co - integration analysis was employed to investigate the long-run relationship among the variables. Thirdly, the Vector Error Correction model was employed to study the dynamic relationship between the variables. GDP and Trade openness were found to have a positive relationship with FDI inflows in Sri Lanka. Further, inflation, trade openness, and tourism income were found to have a negative relationship with FDI inflows into Sri Lanka.

Author Contributions

This Article is fully made by me. I collected all data from the World development indicators.

Acknowledgments (If any)

This Article is created by me. Here used data is very updated and clear information is given. So in the future, this Article may help to improve our country's F

Figures and Tables

Table 1

Variables	ADF Test	Intercept p-value (5%)	Trend & Intercept	None	Stationary Mark	Order of Integration
Life	Level	0.9127	-6.1422			Non Stationary
	1st Difference	-6.9582	-6.7365		**	Stationary I(1)
Lngdp	Level	0.3890	-1.5035			Non Stationary
	1st Difference	-4.1365	-4.0471		**	Stationary I(1)
Lncpi	Level	-2.0744	-0.6992			Non Stationary
	1st Difference	-3.7254	-4.0269		**	Stationary I(1)
Lnlab	Level	0.5050	-2.6111			Non Stationary
	1st Difference	-5.6510	-5.5183		**	Stationary I(1)
Lntop	Level	-0.4976	-2.2495		*	Non Stationary
	1st Difference	-4.3140	-4.4416		**	Stationary I(1)
Lntour	Level	1.3349	-0.5492		*	Non Stationary
	1st Difference	-3.4294	-3.6667		**	Stationary I(1)

Source: Created by Researcher

Table 2

Table – 2: Johansen Tests for Cointegration Unrestricted Cointegration Rank Test (Trace)				
Maximum Rank (r)	Eigen Value	Trace Statistic 5%	Critical Value	Probability Value
0	0.904544	142.2404	95.75366	0.0000
1	0.704873	81.16416	69.81889	0.0047
2	0.564360	49.43505	47.85613	0.0353
3	0.477323	27.83065	29.79707	0.0829
4	0.282713	10.96206	15.49471	0.2138
5	0.085464	2.322800	3.841466	0.1275
Trace test indicates 3 co-integrating eqn (s) at the 0.05 level				

Source: Created by Researcher

Table 3

Table – 3 Vector Error Correction Model						
Variables	D_lnfdi	D_lngdp	D_lncpi	D_lntop	D_lnlab	D_lntou
α Coefficients -	-0.395553***	-0.006754	0.002879	-0.087112	0.027744*	-0.217754*
Standard Errors	0.06470	0.01539	0.02833	0.05256	0.01305	0.11452
T-Statistics	-6.11329	-0.43881	0.10164	-1.65730	2.12576	-1.90146
*, **, *** indicate 10%, 5%, and 1% significant levels, respectively.						

Source: Created by Researcher

Table 4

Table – 4: Short Run Testing						
Variables	D_lnfdi (-1)	D_lngdp (-1)	D_lncpi (-1)	D_lntop (-1)	D_lnlab (-1)	D_lntou (-1)
α Coefficients	0.651068***	2.916790	2.324601	0.491593	2.092066	-0.548656
Standard Errors	0.18737	3.54333	2.33383	0.89900	3.63365	0.46719
T-Statistics	3.47471	0.82318	0.99605	0.54682	0.57575	-1.17437

Source: Created by Researcher

Table 5

F-statistic	0.696358	Prob. F (1,21)	0.4134
Obs*R-squared	0.898677	Prob. Chi-Square (1)	0.3431

Source: Created by Researcher

Table 6

F-statistic	0.168861 Prob	Prob. F(1,25)	0.6846
Obs*R-squared	0.181146	Prob. Chi-Square(1)	0.6704

Source: Created by Researcher

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Audit Expectation Gap of Government Auditees on the Duties of Public Sector Auditors in Sri Lanka

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Abstract

The phenomenon of the audit expectation gap (AEG) is a significant concern within the private sector while the AEG in the public sector has garnered little attention from scholars. However, it was found that the definition provided for the expectation gap is directly relevant to the context of public sector auditing as well. The purpose of this study is to investigate the differences in perceptions of government auditees on the duties of public sector auditors (PSA) in Sri Lanka. Further, it is expected to examine the causes for such differences in perceptions empirically. The sample was selected randomly from government sector auditees consisting of administrators, accountants, and senior staff members. Self-administered questionnaire including twenty existing duties of public sector auditors was used as the instrument for collecting primary data. Kruskal-Wallis test, a non-parametric test, was mainly performed to examine the significant differences of the auditee group, whereas the significant differences between groups were further examined by employing the Mann-Whitney U test. Perception gaps were found related to the existing duties of PSA, the perceived standard of performance of PSA, and the expected duties of PSA in Sri Lanka. It was further found that the AEG was widely spread between staff-associated groups rather than non-staff-associated groups. Consequently, it was concluded that AEG exists among the government auditees in relation to the duties of PSA in Sri Lanka. Further, five main causes for the AEG were recognized.

Keywords: *Audit Expectation Gap, Auditees, Auditor's Duties, Causes for AEG, Public Sector*

Introduction

The audit expectation gap is a well-acknowledged critical issue within the field of accounting in the modern era. It is obvious that there is a gap in perceptions and expectations between the financial statement users and the practicing members, the auditors, and this is what is broadly explained as the Audit Expectation Gap (AEG) in the auditing literature (Chowdhury et al., 2005). It is evident in the literature on auditing that most of the scholars (Liggio, 1974; Cohen, 1978; Humphrey, 1991; Porter, 1993; Power, 1998; Porter & Gowthorpe, 2004; Salehi et al., 2009; Porter et al., 2012) have mainly suggested the difference between the services received and the expected services rendered by the auditors as the audit expectation gap. Hence, the presence of the AEG between the perceptions of auditors and that of users of audit reports has been unambiguously recognized in the existing auditing literature (see, for instance, Liggio, 1974; Cohen, 1978; Craswell, 1985; Humphrey, 1991; Chapman, 1992; Porter, 1993; Power, 1998; Chowdhury et al., 2005; Ruhnke & Schmidt, 2014; Salehi, 2016).

The phenomenon of AEG has been extensively explored via empirical studies conducted in many countries worldwide since 1970. It is evident that a significant proportion of these studies have mostly concentrated on the private sector within the context of developed countries (Choudhury & Innes, 1998; Chowdhury et al., 2005; Dana, 2011). However, Chowdhury et al. (2005) assert that the notion of the expectation gap has direct relevance to the field of public sector auditing since the essential principles at the core of this

the problem remains consistent. Dana (2011) claims that even though the development of the AEG has been explored in many countries, the extent of the notion has not been investigated considerably in public domains. Moreover, Deepal and Jayamaha (2023) assert that the current body of research highlights a significant disparity in the attention given to the AEG between the private and public sectors. Specifically, the private sector has been extensively studied, while the public sector has been mostly neglected in this regard. Based on the current body of research, it is evident that there is a paucity of studies undertaken in Sri Lanka on AEG within the public sector domain. Due to the limited amount of existing research in this particular domain, it is evident that conducting studies on AEG in the public sector of Sri Lanka is of great importance. Therefore, this research aims to investigate the AEG among the public sector auditees in Sri Lanka, with the objective of bridging this gap. Consequently, the objectives of this study are presented as follows.

1. To investigate the differences in perceptions of government auditees regarding the existing duties of public sector auditors in Sri Lanka

2. To investigate the differences in perceptions of government auditees regarding the perceived standard of performance of the existing duties of public sector auditors in Sri Lanka

3. To investigate the differences in perceptions of government auditees regarding the expected duties of public sector auditors in Sri Lanka

4. To examine the causes that impact the expectation gap of government

auditees on the duties of public sector auditors in Sri Lanka

In accordance with Deepal and Jayamaha (2023, p. 81-84), It is evident that most of the public sector AEG studies have been concentrated on several dimensions, namely Accountability and responsibilities (Chowdhury & Innes, 1998; Daud, 2007; Dana, 2011; Arung, 2017; Ellul & Scicluna, 2020; Conteh & Hamidah, 2021), Independence of the auditor (Chowdhury & Innes,1998; Daud, 2007; Dana, 2011; Conteh & Hamidah, 2021), Fraud detection and audit report related matters (Ebimobowei & Kereotu, 2011; Emmanuel, 2016; Dauda, 2020; Conteh & Hamidah, 2021), and Qualities of audit such as materiality, integrity, objectivity, and audit evidence (Chowdhury & Innes, 1998; Coetzee, 2016; Krambia-Kapardis, 2016; Arung, 2017; Okoro et al., 2019; Ellul & Scicluna, 2020; Budding & Wassenaar, 2021; Conteh & Hamidah, 2021). Hence, it is obvious that there is a paucity of studies regarding the existing duties, perceived standards of performance of those existing duties, and the expected duties of the public sector auditors. Hence, this is the originality of the study, which is considered a pioneering study since a dearth of studies has been done previously regarding the expectation of public sector auditees on the existing duties of public sector auditors within the current body of Auditing literature. Moreover, it is evident that scholars have used different types of target groups to represent the government auditees such as civil servants in the Local Governments in Indonesia (Pongsapan, 2012), public servants attached to ministries, departments, and government agencies in Nigeria (Emmanuel, 2016), officials from local government in Indonesia (Arung, 2017); Senior staff of Enugu State Broadcasting Service in Nigeria (Okoro et al.,2019) and Present and former Public Accounting Committee members in Malta (Ellul & Scicluna, 2020). However, government accountants, administrators, and the senior staff members of the related accounts/ finance divisions of those auditee institutions were selected as the auditees in this study. Hence, this may be considered a significant contribution to the study.

Another contribution of the study is associated with the context of the study. It is evident that several scholars have investigated AEG in Sri Lanka in the private sector setting (Abeydeera, 2005; Gunarathna, 2012; Kumari et al., 2019; Kumari & Ajward, 2022). To the best of the researcher's knowledge, very few studies to date have been conducted in Sri Lanka related to AEG in the public sector context (Deepal & Jayamaha, 2022). In light of the evidence, this study could be regarded as pioneering research in the context of the public sector AEG in Sri Lanka.

Further, this study identifies the contributory factors to the expectation gap among the government auditees. Thus, these findings propose related decision-making bodies, such as the National Audit Office of Sri Lanka (NAOSL) and the Institute of Chartered Accountants of Sri Lanka, to initiate discussions regarding how to minimize this gap. Moreover, the policymakers might use these empirical results to recommend to the parliament the expansion of essential legislative provisions by altering the current audit act or via a constitutional change.

Review of Literature

The literature review section commences by defining the term "audit". Subsequently, the term "audit expectation gap" will be defined along with its main components and areas. Furthermore, it describes the findings of prior studies on AEG in different contexts in the world.

Definitions of the Concepts

Definition of Auditing

According to the extant literature, a few definitions of audit have been suggested; for example, Early auditing, according to Littleton (1933), was intended to examine the honesty of persons in charge of finances rather than management duties. Moreover, he distinguished two sorts of early audits: public hearings on government officials' findings and review of charge-and-discharge accounts. Both sorts of audits seem to be created solely to provide a check on 'accountability'. The term "audit" is defined by the American Accounting Association (AAA, 1973) as "a systematic process of objectively obtaining and evaluating evidence regarding assertions about economic actions and events to ascertain the degree of correspondence between those assertions and established criteria and communicating the results to interested users". It is obvious that most scholars, such as Mautz and Sharaf (1961), Gray and Manson (2008), and Arens et al. (2014), also agree with the main components of this definition. Mautz and Sharaf (1961, p.461) define auditing as "the verification of accounting data, with determining the accuracy and reliability of accounting statements and reports." When comparing the definitions given by the AAA (1973) and Mautz and Sharaf

(1961), it appears that an audit is considered a system that consists of a series of rationally structured and organized operations, including inputs, processes, and outputs, to ensure that all critical components are addressed.

In contrast, "the verification of accounting data" in Mautz and Sharaf's (1961) definition has been further expanded and strengthened by AAA's (1973) definition incorporating "assertions about economic actions and events". Arens et al. (2014) define the term "audit" as "the accumulation and evaluation of evidence about information to determine and report on the degree of correspondence between the information and established criteria, and auditing should be done by a competent, independent person" (Arens et al., 2014, p. 4). Evidently, both Arens et al. (2014) and AAA (1973) definitions concern the themes of "degree of correspondence" and "established criteria", the related auditing framework when defining the concept. Established criteria could be considered as the benchmarks by which assertions or managerial presentations are measured (Salehi, 2011).

Definition of the Audit Expectation Gap

From a historical standpoint, the literature on AEG develops the claim that there is a broader understanding within the profession of the difference between users' expectations and auditors' perceived performance (AICPA, 1978; CICA, 1988; Porter, 1991). Thus, it is obvious that there is a gap in perceptions and expectations between the financial statements users and the practicing members, the auditors, and this is what is broadly explained in the auditing literature as the Audit Expectation Gap (AEG)

(Chowdhury et al., 2005). It is evident in the literature on auditing that most of the scholars (Liggio, 1974; Cohen, 1978; Humphrey, 1991; Power, 1998; Porter & Gowthorpe, 2004; Salehi et al., 2009) have suggested the difference between the services received and the expected services rendered by the auditors as the audit expectation gap. Liggio (1974) initially introduced the Expectation Gap to the auditing literature, and he defined it as "the difference between the levels of expected performance as envisioned by the independent accountant and by the user of financial statements" (Liggio, 1974, p. 27). Liggio's definition of the expectation gap is considered the first official definition. However, it is evident that the issues around the 'expectation gap' have been the topic of extensive research since the end of the 20th century, despite the fact that the AEG phenomenon is likely to have existed much earlier.

The Cohen Commission 1978 defined the AEG as "the difference between what the public expects or needs and what auditors can and should reasonably be expected to accomplish" (AICPA, 1978, p. xi). Porter (1993) introduced the concept of the "Audit Expectation-Performance Gap" (AEPG) instead of the "Audit Expectation Gap" for the first time in history by adding substandard performance as a part of the auditor's role. Accordingly, AEPG is the "The gap between society's expectations of auditors and auditors' performance, as perceived by society" (Porter, 1993, p.50). It is apparent that some scholars such as Jennings et al. (1993) and Humphrey (1991) bear the same notion as defined by Liggio (1974) and AICPA (1978) and have attempted to elaborate by adding some of the aspects

pertaining to the audit profession. However, it could be concluded that most of the definitions have been located around Porter's (1993) basic definition of audit expectation-performance gap. The AEG definitions especially for the public sector perspective are difficult to find in the existing literature, and thus, Deepal and Jayamha (2023, p.76) defined it as "The difference of perceptions between what society as a whole expects auditors to perform and what public sector auditors are perceived to accomplish by complying with the related legislations and auditing promulgations when performing an audit in practice".

Theories and Models associated with Audit Expectation Gap

The extant literature suggests some theories and models related to the AEG, such as Institutional Theory, Agency Theory, Game Theory, Role Theory, and Inspired Confidence Theory, and several models starting from the well-established "Porter's (1993)" model. These theories and models have been commonly developed from the private sector AEG perspective. Hence, it was determined that the Accountability theory is the most related theory for the public sector AEG perspective. Accordingly, with its relevance and relatedness to the study, the accountability theory is discussed along with Porter's (1993) AEPG model, on which most scholars have based their AEG studies.

According to Mahmudi (2007), public accountability can be defined as the government's responsibility to manage resources, record, and reveal all actions and activities pertaining to public resource users (principal). It is evident that different scholars in different

contexts have defined the concept of accountability with some slight differences. Gray et al. (1996, p. 38) define accountability as "the duty to provide an account (by no means necessarily a financial account) or reckoning of those actions for which one is held responsible". Stewart (1984) argues that public accountability is used to turn arbitrary behavior into legitimate execution of government power. Subsequently, individuals who hold authority in society should be accountable for their actions, and the issue of exercising government authority affects a far broader group of people than is usually acknowledged (Stewart & Longley, 1992). Therefore, it is obvious that this argument fits well with the government sector audit setup, in which society as a whole may be considered a possible interest group. Subsequently, Parker and Guthrie (1993, p. 71) conclude that "it is public expectations that will dominate and determine ultimate public sector accountability directions".

Accountability is a "conversational condition" that initiates a conversation between the public and public officials (Drahos, 2017). Hence, he further declares that "we actuate public accountability by deciding for ourselves whether the accounts offered by public officials are proper and in our interest, and how exactly we should respond in our actions to the officials offering these accounts" (Drahos, 2017, p. 206). Hence, there is a possibility of responding against public officials when their expectations accounts are not up to their expectations. Accordingly, the public sector Auditors could be considered the officials, while the government auditees could be regarded as the public under this conversational condition.

Subsequently, Funnel (2001, p. 19) describes public sector accountability as "a responsible person or institution on whom is laid a task, function or role to perform, together with the capability to carry it out". As a result, being accountable entails being responsible for one's decisions and actions, which occurs when the authority to act on behalf of a person or body (the principal) is delegated to another (the agent) (Funnel & Cooper, 1999). Accordingly, it is clear that the association between the public sector auditor (the agent) and the government auditor clearly explains the public accountability theory more meticulously.

Empirical Evidence on the AEG

Empirical research into the presence of the audit expectation gap has been conducted extensively concerning the private sector contexts in many developed and developing nations all over the world, and different conclusions on different factors for the gap have been identified. The studies on AEG were initiated in the international context with Liggio's study in 1974 (Porter, 1993). When it comes to empirical research performed in international contexts, it is clear that the majority of the studies have been concentrated in developed countries such as the United States (Baron et al., 1977; Porter et al., 2012), Australia (Low et al., 1988), New Zealand (Porter, 1993; Porter & Gowthorpe, 2004), and the U.K. (Humphrey et al., 1993; Vinten, 2005).

Humphrey et al. (1993) undertook an empirical study to investigate the presence of AEG in the United Kingdom, and the results confirmed the presence of AEG on auditors' perceived

performance (Humphrey et al., 1993). Porter conducted a survey in New Zealand in 1993 and introduced a new term to the auditing literature, AEPG, by integrating the duties of the auditor, and she categorized the gap into two major gaps, namely "the reasonableness gap" and "the performance gap" in which the latter is subdivided further into "the deficient standard gap" and "the deficient performance gap" (Porter, 1993). Fadzly and Ahmad (2004) experimented with the AEG in Malaysia with the purpose of investigating the AEG in Malaysia by using the methodology in Monroe and Woodliff (1993) as well as in Schelluch (1996). According to the results of the study, Malaysia has a substantial expectation gap, specifically as it relates to auditor responsibilities. It is emphasized that the results of Masoud's (2017) study (in Libya) are comparable with that of the famous Porter's (1993) study (in New Zealand). Accordingly, it is not possible to see significant differences between the two studies in different contexts, developed and developing contexts. Azagaku and Aku (2018) found that AEG exists in Nigeria and claimed that current auditors' duties and responsibilities must be clearly outlined and extended to detect fraud while the public should be educated. Consequently, one might conclude that the components of the AEPG would not be affected by the contextual differences of the countries on whether it is a developing or developed country.

Empirical studies on AEG have yet to be widely taken place in the Sri Lankan context. Abeyadeera (2005) investigated the AEG between professional auditors and investors using 12 areas of auditor's duty and found the presence of AEG with all the 12 aspects of auditor's duties. These findings were further confirmed by another study conducted by Gunathilaka (2012), who conducted a questionnaire survey among practicing auditors, investors, business managers, and university undergraduates in the management area of study. Kumari et al. (2019) examined the status of the existence of AEG in Sri Lanka, employing a sample selected from practicing auditors and investors in listed companies in Sri Lanka, and came up with the results very close to Porter (1993).

Methods

The purpose of this section is to describe the methodology of the study that was utilized to explore the existence of AEG of the government auditees related to the duties of the public sector auditors concerning the financial audit and to examine the factors affecting the AEG. Following the research objectives of the study, the population at large can be identified as the government auditees in Sri Lanka. The term "auditee" refers to any ministry, state ministry, government department, or government institution that has its accounts audited by the government auditor. Extant literature on public sector AEG studies indicates that the government auditees have been selected to the sample in most of the studies as respondents (for example, Pongsapan, 2012; Emmanuel, 2016; Krambia-Kapardis, 2016; Arung, 2017; Okoro et al.,2019; Ellul & Scicluna, 2020). The sample of this study consisted of 300 individuals, with each of the three primary groups represented by 100 individuals. Accordingly, 100 respondents from each party of administrators, accountants, and senior staff members of the related accounts/ finance divisions of those government

auditee entities were randomly selected for the sample of this study. The rationale for selecting these three groups for this study is that the so-called groups are assumed to have a proper understanding of the duties of the public sector auditors since they are closely working with them during the audit process. The rationale for selecting these three groups for this study is based on the assumption that they possess a comprehensive awareness of the duties of public sector auditors since they closely collaborate with them throughout the audit process.

In order to achieve the research objectives of this study, it was necessary to collect data on the perceptions held by individuals concerning the duties of PS auditors in Sri Lanka. Hence, this study depends on primary data, as secondary data are neither available nor suitable for this type of specific study (Hair et al., 2020). Further, the "descriptive research design" was adopted, and as a result, quantitative data collection was decided to be the method of data collection that would be most appropriate to employ for this particular study. A self-administered questionnaire was used as the instrument for collecting primary data. It is emphasized that the structure of the questionnaire was based on the questionnaire used by Porter (1993). The questionnaire was comprised of three parts. The first part is on the demographic information of the respondents. The second part of the questionnaire comprised 20 existing duties of the public sector auditor, and it includes three sections. Section 1 and Section 3 were about the perception of the participants regarding whether the specific duty is an existing duty of the PS auditor and whether the specific duty is an expected duty of the PS

auditor, respectively. The possible responses for these two sections were "yes," "no," and "not sure", and those options were coded as "+1", "-1" and "0", respectively. Section 2 was about the perceived standard of performance of existing duties of the public sector auditors in Sri Lanka. Further, potential replies to section 2 were "poorly", "adequately", "well", and "unable to judge", and these responses were coded as "1", "2", "3", and "0", respectively. The third part of the questionnaire includes 14 factors/ reasons contributing to the expectation gap, all of which are sourced from existing literature. Subsequently, the participants were instructed to choose the most suitable option from the choices: "strongly agree", "agree", "neutral", "strongly disagree", and "Disagree". Those five options were coded from "5" to "1" on the Likert scale.

According to Zikman et al. (2013), validity implies the precision of a measurement or the degree to which a score faithfully represents a notion. In order to improve the validity and reliability of the questionnaire, a few steps were taken. The questions (the duty statements) included in the questionnaire were derived from the duty lists of PS auditors and the financial audit manual (2017). Once the questions were formulated, the list of duties was submitted to two superintendents of audits and a senior academic in Auditing for their expert opinions. Subsequently, the duty list was refined appropriately. Finally, a pilot test was conducted on the questionnaire before distributing it among the auditees.

The normality of data was tested by employing the Shapiro-Wilk test, and

the p values of the Shapiro-Wilk test are less than the significant value of 0.05, and therefore, it is determined that the data is not normally distributed in this study. Three main hypotheses were proposed in order to achieve the first three objectives.

H_1 (1): *There is a significant difference in the perception of the government auditees on the existing duties of the public sector auditors in Sri Lanka.*

H_1 (2): *There is a significant difference in the perception of government auditees pertaining to the perceived standard of performance of the existing duties of public sector auditors in Sri Lanka.*

H_1 (3): *There is a significant difference in the perception of government auditees pertaining to the expected duties of the public sector auditors in Sri Lanka*

Due to the non-normal distribution of data, non-parametric tests need to be used to test the hypotheses mentioned above. As the main analysis, the Kruskal-Wallis test, a non-parametric test, was performed to examine the significant differences of the auditee group. Further, as a further analysis, the significant differences between groups (administrators-accountants group, administrator-staff group, and accountant-staff group were examined by employing the Mann-Whitney U test. The significance threshold of 0.05 was chosen for the analysis. The causes for the expectation gap were analyzed employing the factor analysis.

Results and Discussion

Descriptive Analysis

This section provides a comprehensive analysis of the demographic characteristics (not tabulated due to parsimony) of government auditees. A total of 190 questionnaires out of 300 were collected, resulting in a response rate of 63%. Accordingly, 57 administrators, 55 accountants, and 78 staff members in accounting/finance divisions of auditee entities have been responded to the questionnaires. It was found that the female representation is higher than the male representation in all three categories, where the highest female-male difference (20.6%) is found among the staff members. In terms of age, 11.5% of the staff members are below the year 25, whereas none of the respondents are found in that range for accountants and administrator categories. It is obvious that it takes more than 25 years to be appointed to those two positions in Sri Lanka. However, as far as more than 45 years category is concerned, accountants and administrators represent 43.6% and 49.1% of their groups, respectively. In terms of the years of experience of the respondents, the majority of the staff member group falls under the year 5-10 group, whereas that of accountants and administrators falls under the more than 15-year category. This may result from the government's promotion schemes where administrators' and accountants' titles stay the same, though their grades (such as class III, II, I and Super Grade) are changed. As far as the educational and professional qualifications of

respondents are concerned, 90% of the Administrators and 98% of the accountants have acquired Degrees postgraduate qualifications, whereas 56% of the staff members have obtained such qualifications. Subsequently, neither administrators nor staff members have obtained professional qualifications, while 7% of accountants have obtained such qualifications. As far as the academic background of the participants is concerned, it is evident that 100% of the accountants have come from Management backgrounds, whereas other groups represent social studies, engineering and other streams.

Perception gap of Government Auditees on the Duties of Public Sector Auditors

Perception of Existing Duties

In order to test three hypotheses, the Kruskal-Wallis test was mainly applied to all the groups. The degree of freedom associated with the test statistic is 2 (3-1). The Kruskal-Wallis test statistics ($\chi2$ values and p values) were calculated and reported separately for all 20 existing duties, as depicted in Table 1. The p-value for the Kruskal-Wallis test was found to be less than 0.05 (df = 2, p < 0.05) for all the 20 existing duties. Accordingly, the Kruskal-Wallis test statistic was calculated, and the results have been presented in Table 1. Subsequently, the empirical data supported hypothesis 1($H_1$1) and found that there is a significant

difference in perceptions among the PS auditees related to all the duties listed in the questionnaire except collecting data about the information published in electronic/print media about the auditee and conduct audits on important matters (duty no. 09) on the existing duties of the public sector auditors in Sri Lanka. This finding is aligned with the findings of Porter (1993), Porter and Gowthorpe (2004), and Adeyemi and Uadiale (2011). It is highlighted that duty no. 09 is a duty specified in the audit officer's duty list.

Furthermore, to perform this duty, the NAOSL has allocated an audit officer to the head office of the NAOSL to collect the related information published in electronic/print media in Sri Lanka. The Mann-Whitney U test was carried out as a further analysis to examine the perception gaps between groups. Table 2 shows significant differences in perceptions of auditor's existing duties between administrator-accountants for five duties, administrator-staff group for 14 duties and accountant-staff group for 12 duties. It is highlighted that all three groups significantly differ in perceptions of two duties (duty no.02 and no. 06).

The second hypothesis ($H_1$2) was about examining a significant difference in the perception of government auditees on the perceived standard of performance of the existing duties of public sector

auditors in Sri Lanka. According to the results of the Kruskal-Wallis test shown in Table 1, auditees have significant differences of opinions on the perceived standard of performance related to all duties except 02 duties (duty no. 03 and 15). Duty no.15 is a fundamental duty of the PS auditors, whereas duty no. 03 is an existing duty specified in the audit superintendents' duty list. It is vital to highlight that the present results concerning sub-standard performance essentially following Porter's (1993), Porter's (2014) and Kumari et al. (2019). The results of the Mann-Whitney U test shown in Table 2 indicate significant differences in the perception of PS auditees on 06 duties between the administrator-accountant group, 12 duties between the administrator-staff group, and ten duties between accountant-staff groups. Consequently, it is found that the expectation gaps are wider in the staff-associated group rather than in the non-staff-associated group. Administrators and accountants interact more closely with auditors than staff members of the accounting divisions of the auditee entity, which may be one of the possible reasons for such a wider gap of perception related to the non-staff associated groups.

The Kruskal-Wallis test results relating to the third hypothesis (H_13), as shown in Table 1, indicate that there are significant differences in perceptions of government auditees on the expected duties of the public sector auditors in Sri Lanka. This finding is consistent with the findings of Porter (1993), Porter et al. (2012) and Masoud (2017). As far as the results of the Mann-Whitney U test shown in Table 2 are considered, it was found that there are significant differences in perception of more than half of the total existing duties in staff-associated groups.

The final objective is to examine the causes/factors affecting the AEG of auditees on auditor duties in the public sector of Sri Lanka. Fourteen causes for the AEG, as shown in Table 3, were identified based on the literature. The factor analysis was conducted using the varimax rotation method. The results in Table 3 showed that five factors were extracted, which explained 67% of the variance in the data. Accordingly, the suggested fourteen factors could be loaded into five dimensions.

The first factor was labeled as "Excessive expectations on PS Auditor and audit process" and associated with factor no. 01, 02 and 09. This factor has been identified as one of the most significant factors affecting the AEG studies conducted by Ruhnke and Schmidt (2014), Okoro et al. (2019), and Olojede (2020). The second factor was identified and labeled as the "Insufficient awareness/ lower level of education in society about PS Audit" and was composed with factor no. 03, 04, 05, and 06, as seen in Table no. 03. This finding is

consistent with the findings of other studies such as Fadzly et al. (2004); Sidani (2007); Bui and Porter (2010); Okafor and Otalor (2013); Ruhnke and Schmidt (2014); Fulop et al. (2019); Dang and Nguyen (2021); and Dewi et al. (2021). The Complexity of audit function and lack of genuine feedback to auditees could be considered as another factor affecting the AEG of government auditees, and that factor is associated with factor no. 07, 08, and 10, as depicted in the Table 03. It is apparent that the roles and responsibilities of public-sector auditors are different when compared with those of private-sector auditors, and as a result of that, it is obvious that the duties and responsibilities of a public-sector auditor are different. Accordingly, this factor has been found as a factor affecting the AEG, especially in the public sector studies of Okoro et al. (2019) and Conteh and Hamidah (2021).

The fourth factor affecting the AEG was labeled as "Inability in evaluating auditor's performance and lack of interaction with them", and it was constituted with the 11th and 12th factors as shown in Table 03. Bui and Porter (2010), Pourheydari and Abousaiedi (2011), and Schmidt (2014) found the same reasons for the AEG in studies conducted in Germany and New Zealand, respectively. The final factor affecting the AEG of auditees in Sri Lanka was associated with factors no. 13 and 14, labeled as the "Lack of executive powers for

auditors". The Auditor General of Sri Lanka exclusively reports to the parliament in accordance with the constitution (1978) and associated auditing promulgations. Sec. 06 of Article 154 of the Constitution (1978) states, "The Auditor-General shall within ten months after the close of each financial year and as when he deems it necessary report to Parliament on the performance and discharge of his duties and functions under the Constitution". In addition to the above mentioned Constitution (1978) and the National Audit Act, no. 19 of 2018, the official website of the NAOSL clearly inform that "The Auditor General through the Auditor General's Department provides an independent review of the performance and accountability of the public sector institutions and reports to Parliament" (http://www.auditorgeneral.gov.lk/) . Consequently, it is very clear that the PS auditors are not empowered with executive powers for giving punishments to the wrongdoers, or at least they are not permitted to report to the authoritative bodies such as the police or Criminal Investigation Division when fraudulent activity is found.

Conclusions, Implications, and Further Research

The purpose of this section is to synthesize and make conclusions on the key findings and discuss the contributions of the study with its implications, as well as provide directions for future research. This study attempted to examine the existence of an audit expectation gap among the government auditees in Sri

Lanka. In order to achieve the objectives of the research, four research objectives were established.

Three hypotheses were formulated to test the existence of significant differences in the perception of government auditees on the duties of PS auditors. Significant differences in perception were found related to all existing duties, the perceived standard of performance of PS auditors, and the expected duties of PS auditors. All three hypotheses were empirically supported. Hence, it is concluded that there is an audit expectation gap between government auditees on the duties of public sector auditors in Sri Lanka. It was observed that the findings of this study are consistent with the findings of Porter's (1993) study in which similar types of private sector duties were tested. Further, these findings are consistent with the existing literature (for example, Porter & Gowthorpe, 2004; Adeyemi & Uadiale, 2011; Masoud, 2017; Enes et al., 2017; Nguyen & Nguyen, 2020). Moreover, the findings of this study are in line with the extant literature related to the public sector AEG as well (for example, Daud, 2007; Dana, 2011; Pongsapan, 2012; Ellul & Scicluna, 2020; Conteh & Hamidah, 2021). Apart from that, the findings of this study align with the existing body of literature pertaining to the Sri Lankan context as well (Abeydeera, 2005; Kumari et al., 2019; Kumari & Ajward, 2022).

The findings suggest that there is a significant presence of the audit expectation gap among staff-associated groups, namely the Administrator-staff group and the Accountant-staff group, as compared to the non-staff-associated group, which consists of the Administrator-Accountant group. The

factors namely, Excessive expectations of the PS Auditor and audit process, insufficient awareness/ lower level of education in society about PS Audit, Complexity of the audit function and lack of genuine feedback to auditees, Inability to evaluate auditor's performance, and lack of interaction with them and lack of executive powers for auditors were determined as the main five factors for the audit expectation gap of the government auditees in Sri Lanka. All these findings were well supported by the existing literature irrespective of the sector.

This research makes a major theoretical contribution to the body of literature on auditing by examining the AEG in the public sector using the existing duties of the public sector auditor on the financial audit. There is a dearth of public sector studies on the AEG. Almost all of the research on AEG in the public sector has focused on other topics, such as auditor independence, detection of frauds and errors, and transparency of audit reports (Chowdhury & Innes, 1998; Chowdhury et al., 2005; Arung, 2017; Ellul & Scicluna, 2020). Hence, this could be considered as the originality of this study. Another contribution of the study is associated with the context of the study. It is evident that several scholars (for example, Abeydeera, 2005; Gunarathna, 2012; Kumari et al., 2019; Kumari & Ajward, 2022) have investigated AEG in Sri Lanka under the private sector setting. To the best of the researcher's knowledge, very few studies to date have been conducted in Sri Lanka related to AEG in the public sector context (Deepal & Jayamaha, 2023b). In light of the evidence, this study could be regarded as pioneering research in the context of the public sector AEG in Sri Lanka. Moreover,

this study aimed to examine the audit expectation gap (AEG) across three distinct sub-groups and between groups, specifically focusing on government auditees. It is worth noting that there is little research available in the field of auditing that explores this particular aspect.

This study offers important and insightful information for those responsible for making decisions and formulating and implementing policies, as well as for the government in general. This study identified twenty existing duties of public sector auditors. It was found that significant differences in perceptions have occurred in all three aspects: existing duties, perceived standard of performance, and expected duties of auditors. Hence, the officials in the NAOSL should take necessary actions to reduce these gaps related to auditees. Moreover, five main causes for the AEG of auditees have been identified, and relevant authorized bodies such as NAOSL and the Parliament of Sri Lanka should take suitable actions for those causes. Moreover, it is recommended to investigate the AEG and its underlying causes in relation to several types of government auditees, including government bankers, members of the

oversight bodies in the parliament, public servants in government corporations, and statutory bodies.

The primary focus of this study is on the perception gap of the financial audit in the public sector. The National Audit Office of Sri Lanka conducts value-for-money (VfM) audits, performance audits, compliance audits, and special investigations other than financial audits. Investigating the AEG of these types of audits is very important to fill the theoretical and practice gap, and they may represent a promising avenue for future investigations. Furthermore, this study focused only on the AEG of auditees in the government sector. There are many interested parties, such as trade unions, bankers, academics, and the general public. Moreover, they are directly and indirectly affected by the PS auditors. Hence, studying the AEG on those parties and identifying the real causes of such perception gaps are essential, and it will be a better avenue for further research. This study used only 20 existing duties of the public sector auditors in Sri Lanka. Hence, it is suggested to conduct a similar type of study by using existing and non-existing duties of public sector auditors together.

Author Contributions

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

Author.

The second author provided constructive suggestions to improve the overall manuscript.

Figures and Table

Table 1: Results of the Kruskal-Wallis test on existing duties, the perceived standard of performance of existing duties, and expected duties of public sector auditors

Duty No	Suggested Existing Duty of Public Sector Auditor	χ2 & Significance (P-value)	Existing Duties	Perceived Standard of Perfor:	Expected Duties
			All 3 Groups	All 3 Groups	All 3 Groups
01	Perform an audit to get reasonable assurance that financial statements are free from material misstatements while complying with Ethics	χ2	58.54	42.05	76.3
		P-value	0.000	0.000	0.000
02	Ensure that the audit queries issued by the Auditor are accurate, complete, and logical in all respects	χ2	52.51	31.26	111.2
		P-value	0.000	0.000	0.000
03	Update and maintain a computer database that includes important financial and non-financial data about Auditees	χ2	34.44	03.72	20.3
		P-value	0.000	0.403	0.000
04	Make acceptable, logical, and practical recommendations for rectifying irregularities, errors, or omissions revealed in the Audit	χ2	41.33	37.26	46.2
		P-value	0.000	0.000	0.000
05	Prepare reports required for Parliamentary Oversight Committees (COPE/ COPA) which discuss the auditee's reports	χ2	27.27	19.04	16.93
		P-value	0.000	0.000	0.001
06	Disclose in the audit report about misappropriation of assets/ thefts of the Auditee by its employees/ officers	χ2	97.94	29.35	202.1
		P-value	0.000	0.000	0.000
07	Take follow-up actions on corrective actions taken by the Auditee for the audit queries submitted by the auditor	χ2	59.15	67.64	125.3
		P-value	0.000	0.000	0.000
08	Examine and report on the efficiency and effectiveness of the management / administration of the Auditee	χ2	28.12	31.67	39.2
		P-value	0.000	0.000	0.000
09	Collect data about the information published in electronic/print media about the Auditee and conduct audits on important matters	χ2	05.83	63.52	102.3
		P-value	0.13	0.000	0.000
10	Report in the audit report on whether the assets of the Auditee have been efficiently used to achieve entity's objectives	χ2	48.82	40.75	12.7
		P-value	0.000	0.000	0.004
11	Disclose in the auditor's report if it is discovered that a theft has been committed by employees/ officers of the Auditee	χ2	24.68	81.19	37.5
		P-value	0.000	0.000	0.000
12	Identify risks through gaining a deep understanding of the areas being audited	χ2	17.90	14.58	84.2
		P-value	0.000	0.000	0.000
13	Prepare accurate and complete audit reports in all respects and submit to the Parliament with a copy to the relevant Auditee	χ2	41.42	43.90	34.9
		P-value	0.000	0.000	0.000
14	Examine the public representations of Auditee and submit necessary reports	χ2	99.16	76.36	171.5
		P-value	0.000	0.000	0.000
15	Give practical and SMART recommendations addressing the shortcomings and issues identified at the end of the audit	χ2	36.84	04.26	14.0
		P-value	0.000	0.112	0.000
16	Develop an overall annual strategy including the scope, timing, and advice of the audit based on the Auditee and its role	χ2	27.39	20.93	10.0
		P-value	0.000	0.000	0.018
17	Evaluate the efficiency and effectiveness of the Auditee's accounting and internal control system	χ2	52.68	55.99	25.4
		P-value	0.001	0.000	0.00
18	Disclose through the audit report if it is discovered that financial information has been deliberately distorted	χ2	27.14	33.79	143.3
		P-value	0.000	0.000	0.000
19	Discuss with the management of the Auditee at any time during the audit and keep notes of it	χ2	29.19	39.62	17.3
		P-value	0.000	0.000	0.001
20	Attend with advance preparation for the Parliamentary Oversight Committees of COPE, COPA that discuss auditee's Audit report	χ2	110.0	42.15	82.9
		P-value	0.000	0.000	0.000

Table 2.: Results of Mann Whitney u test on the existing duties, perceived standard of performance of existing duties, and expected duties of public sector auditor

D. No	Z Score & Prob.	Existing Duties			Standard of Performance			Expected from Auditors		
		Admin/ Acc	Admin /Staff	Acc/ Staff	Admin / Acc	Admin /Staff	Acc/ Staff	Admin / Acc	Admin /Staff	Acc/ Staff
01	Z Score	-1.964	-1.896	-2.925	-1.358	-4.693	-0.885	-2.982	-1.211	-4.516
	Prob.	0.054	0.073	0.002	0.205	0.000	0.376	0.004	0.220	0.000
02	Z Score	-2.191	-4.881	-2.168	-1.420	-0.945	-1.184	-1.578	-7.814	0.530
	Prob.	0.038	0.000	0.038	0.116	0.524	0.079	0.074	0.000	0.596
03	Z Score	-1.631	-5.925	-1.687	-3.354	-5.273	-0.171	-1.430	-4.284	-0.714
	Prob.	0.103	0.000	0.081	0.000	0.000	0.864	0.082	0.000	0.361
04	Z Score	-0.784	-5.903	-4.729	-4.190	-1.092	-5.045	-2.122	-1.529	-4.495
	Prob.	0.594	0.000	0.000	0.000	0.210	0.000	0.043	0.080	0.000
05	Z Score	-0.123	-0.079	-0.821	-1.421	-1.234	-1.047	-3.694	-1.004	-0.855
	Prob.	0.912	0.500	0.412	0.115	0.110	0.215	0.000	0.240	0.393
06	Z Score	-1.909	-9.890	-2.248	-5.811	-1.421	-4.215	-1.563	-1.008	-6.265
	Prob.	0.046	0.000	0.035	0.000	0.191	0.000	0.081	0.410	0.000
07	Z Score	-0.584	-3.625	-2.311	-1.133	-3.027	-0.222	-0.445	-9.974	-4.654
	Prob.	0.559	0.000	0.027	0.251	0.002	0.721	0.640	0.000	0.000
08	Z Score	-0.314	-1.777	-0.515	-1.462	-1.017	-1.218	-3.956	-1.191	-1.573
	Prob.	0.753	0.077	0.606	0.112	0.310	0.410	0.000	0.230	0.116
09	Z Score	-1.138	-0.743	-0.517	-5.310	-1.214	-2.816	-0.367	-0.253	-0.267
	Prob.	0.166	0.457	0.032	0.000	0.109	0.010	0.736	0.878	0.866
10	Z Score	-1.423	-5.516	-1.713	-1.031	-6.228	-4.414	-1.579	-2.924	-0.712
	Prob.	0.186	0.000	0.087	0.118	0.000	0.000	0.075	0.006	0.489
11	Z Score	-0.139	-1.130	-3.419	-7.376	-7.872	-0.813	-4.290	-3.456	-3.635
	Prob.	0.890	0.121	0.001	0.000	0.000	0.390	0.001	0.000	0.000
12	Z Score	-1.914	-4.231	-0.920	-0.646	-0.149	-0.931	-0.482	-1.303	-1.612
	Prob.	0.470	0.000	0.358	0.518	0.000	0.352	0.630	0.193	0.107
13	Z Score	-0.858	-1.391	-2.966	-1.574	-5.928	-3.314	-3.117	-5.272	-2.353
	Prob.	0.382	0.190	0.003	0.170	0.000	0.001	0.001	0.000	0.024
14	Z Score	-0.377	-12.04	-4.533	-1.754	-7.157	-5.416	-7.428	-1.022	-5.583
	Prob.	0.616	0.000	0.000	0.210	0.000	0.000	0.000	0.241	0.000
15	Z Score	-0.105	-3.242	-3.226	-1.192	-1.331	-1.703	-2.677	-2.898	-0.144
	Prob.	0.917	0.002	0.001	0.128	0.094	0.171	0.007	0.004	0.886
16	Z Score	-1.912	-3.805	-1.250	-1.148	-3.805	-0.964	-0.800	-1.381	-0.535
	Prob.	0.062	0.000	0.221	0.251	0.000	0.335	0.422	0.170	0.663
17	Z Score	-2.717	-3.552	-0.254	-3.733	-1.449	-5.273	-1.744	-3.980	-1.977
	Prob.	0.007	0.001	0.808	0.000	0.190	0.000	0.081	0.000	0.048
18	Z Score	-3.478	-4.426	-0.956	-1.663	-3.995	-5.552	-2.438	-8.712	-1.704
	Prob.	0.001	0.000	0.339	0.091	0.000	0.000	0.014	0.000	0.456
19	Z Score	-0.046	-2.819	-3.293	-1.110	-3.008	-2.714	-1.092	-1.195	-2.725
	Prob.	0.963	0.006	0.001	0.145	0.001	0.007	0.275	0.233	0.000
20	Z Score	-0.887	-1.534	-3.441	-1.789	-5.224	-5.512	-0.560	-4.373	-1.476
	Prob.	0.370	0.130	0.001	0.121	0.000	0.000	0.511	0.000	0.115

Table 3 : **Results of factor analysis related to the causes for age of public sector auditees**

No.	Possible Causes for AEG	Components				
		1	2	3	4	5
01	Over expectations of society on Auditor performances	.073	.833	-.141	-.033	.094
02	Exorbitant expectations of responsibilities of auditors	.326	.517	.073	.005	-.001
03	Differences in the level of education about Auditing and Auditors	.711	-.010	.262	.125	-.055
04	Communication Ignoring the information needs of users (society) by Auditors	.773	.102	.007	.166	.134
05	Insufficient awareness in society about Audit Act and Auditing Standards	.745	.238	-.003	.053	.056
06	Society's misconceptions about the duties of Auditor	.547	-.029	.441	-.035	.136
07	The complex nature of the audit function	.152	.012	.750	.143	-.071
08	Lack of genuine feedback and suggestions to auditees	.170	.070	.743	.027	.327
09	High level of expectations on Audit Act and audit standards	.007	.783	.240	-.130	.122
10	Excessive use of technical words by auditors in audit reports	-.046	.433	.534	.286	-.172
11	Lack of interaction between auditor and auditees	-.006	.145	.174	.283	.724-
12	Difficulties faced by auditees in evaluating the performance of Auditors	.146	.032	-.048	-.034	.846
13	The government Audit function has become a mere reporting function	.009	-.079	.226	.776	.222
14	Lack of executive powers for auditors to punish the offenders	.293	-.050	.016	.817	-.006

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization (Rotation converged in 6 iterations)

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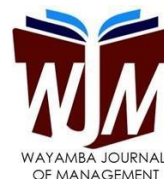
Relationship between Social Media Marketing Activities and Consumer Response: A Comparative Study between Generations Y and Z with Reference to Retail Fashion Wear

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Abstract

The study was conducted to identify the relationship between social media marketing activities (SMMA) and consumer response between Generation Y and Z. Although research has been done to determine the relationship between SMMA and customer response, there is a gap in the Sri Lankan context when comparing Generation Y and Generation Z in terms of retail fashion wear. Therefore, the objective of this study is to determine the relationship between SMMA and consumer response among generations Y and Z, concerning retail fashion wear in Sri Lanka. A deductive approach was adopted and the study was conducted as a survey by collecting data from 320 residents of the Colombo district who ranged in age from 10 to 25(Generation Z) and from 26 to 41 (Generation Y) years old using a convenience sampling technique. The results of the independent sample t-test showed that Generations Y and Z had considerably different responses for entertainment and customization. The findings of the correlation analysis showed a positive relationship between consumer response and SMMA aspects: entertainment, interaction, trendiness, customization, and electronic word of mouth (e-WOM) among the two generations. It was found that there is a stronger correlation between SMMA and consumer response for Generation Y than for Generation Z. Therefore, it is suggested to build a strong relationship with Generation Y to draw more customers from them via social media. These findings are crucial for fashion retailers to select the best generation to target when marketing their products on social media.

Keywords: *Customer response, Retail Fashion Wear, Social Media Marketing Activities*

Introduction

With the introduction of the Internet in the last few years of the twentieth century, both the role of businesses and consumers underwent a significant change. The rapid advancement of digital technology has impacted consumers' daily lives. As the internet enables social networks to form a place much more quickly among people, digital marketing is recognized as one of a company's primary marketing strategies for advertising products and increasing awareness. Among the various channels of digital marketing, SMMA is recently regarded as the most crucial component used by businesses. The prevalence of social media platforms has resulted in a significant shift in how people interact, communicate, and shop with each other.

According to the social media usage statistics, the global count of social media users stands at 4.89 billion and it is expected to increase to approximately 5.85 billion by the year 2027 (Sproutsocial, 2023). Recent research findings highlight that 74% of consumers worldwide favor utilizing social media platforms to purchase goods and among this group, 71% are more prone to making purchasing decisions based on reviews found on social media platforms. Therefore, in light of the pervasive influence of social media in people's lives, organizations and businesses are leveraging these platforms to foster relationships between customers and brands. They actively employ SMMA to prompt prospective consumers to engage and interact with their brands, creating a dynamic and participatory

connection (McClure & Seock, 2020). In the Sri Lankan setting, as well social media has become a highly effective tool for marketers to promote their products and services. Among the Sri Lankan population, 66.06% of the population has Facebook accounts, 22.61% are YouTube users, 3.27% engage on Instagram, and 2.59% are active on Twitter (Statcounter, 2023). These statistics underscore the significant role of social media platforms in reaching and engaging with the target audience for advertising purposes.

This is particularly significant for industries such as fashion wear, which have witnessed remarkable growth and financial success on a global scale. According to reports from the Fashion United Group in 2023, the fashion wear industry boasts a staggering 1.7 trillion-dollar market share, representing approximately 2% of the global GDP. In Sri Lanka, fashion wear retailing accounts for 40% of the entire retail industry, which indicates a significant part of the retail sector (Oxford Business Group, 2022). The forecasted revenue generated from online fashion retail in Sri Lanka is poised to reach US$714.60 million in 2023, and by 2027, the user penetration for online fashion shopping is anticipated to reach 33.5% (Statista, 2022). This demonstrates the potential for the industry to grow in the future.

Ahmad, Salman, and Ashiq (2015), identified this industry as full of glitz and glamour making it inherently attractive to customers. Recognizing the industry's intrinsic appeal, SMMA is deemed particularly impactful in

this context (Ahmad et al., 2015). Godey et al. (2016) complement this perspective by defining SMMA as a pivotal technique for not only creating but also preserving brand value, especially for fashion brands.

Therefore, fashion wear retailers must consider SMMA as a sophisticated and reliable channel for connecting customers to their goods and services (Rishi and Sharma, 2017).

However, despite the potential advantages, scholars have consistently identified common pitfalls in SMMA over the years that hinder its success. Kamburugamuwa (2015) identified ignoring the proper usage of SMMA as one of the reasons for its failure. In Sri Lanka, it has been reported that fashion businesses have a lower online presence because of people's ignorance of the usage of SMMA (Kodippili et al., 2016). This leads to a significant loss of money wasted by adopting pricey media for industrial marketing (Kamburugamuwa 2015). Cook et al. (2021) identified poor targeting as another basic error in SMMA failures. With social media posts, effective marketers can communicate with a specific target audience. If marketers do not have a good understanding of their target markets, they must create audience personas. This requires a thorough examination of their interests, anxieties, desires, and actions. By understanding their target audience, marketers can efficiently contact customers who are most interested in what they have to offer (Hill et al., 2006). Marketers can categorize and target consumers according to their generation. As marketers, it is essential to understand how different

generations behave and update their marketing plans accordingly. This enables marketers to target an audience based on the similarities and differences between them. Further, for marketing to be successful, it is crucial to comprehend each generation and its preferences (William & Page, 2011). In this regard, it is important to include members of generations Y and Z in the target audience, since they have been identified as the group with the most access to the internet and are actively present online.

Although research has been conducted to determine the relationship between Social Media Marketing Activities (SMMA) and customer response (Khan, Yang, Shafi, & Yang, 2019; Sandunima, Bandara, Viduranga, Kodagoda, & Jayasooriya, 2019) in the context of Sri Lanka's fashion industry, none of the studies have aimed to identify which generation is most effectively targeted through SMMA. Studies indicate that SMMA has been successful in persuading individuals from Generation Y and Z to make purchases in various industries, but this has not been specifically explored in the fashion industry (Separamadu et al., 2021). Since there is a knowledge gap regarding the relationship between SMMA and customer response between Generation Y and Z considering retail fashion wear the current study seeks to close that gap. Therefore, the research was conducted to investigate the below-mentioned problem.

What is the relationship between SMMA and consumer responses among Generation Y and Z regarding

retail fashion wear?

Research Objective

To determine the difference between the relationship between SMMA and consumer response among Generations Y and Z regarding retail fashion wear.

Empirical and Theoretical Review
Social Exchange Theory

The study is based on social exchange theory. According to the social exchange theory, the receiving party must repay the favor when one party serves another well (Kurtessis, Eisenberger, & Adis, 2015). Understanding the target for consumer involvement in social media marketing is the essence of this approach. Zhao and Chen (2022) assert that when customers are pleased with the brand and its marketing efforts, they tend to form stronger psychological bonds. Participating in social media activities results in perceived benefits and satisfaction from customers. Kim and Baek (2022) stated that influencers can interact with customers and create a network of connections through social media activity.

Social Media Marketing Activities

Social media refers to virtual communities and networks that promote the exchange of ideas, opinions, and information (Carr & Hayes, 2015). When it comes to social media, there may be an owner for that specific social media platform, but all of the material shared on that social media platform is generated by the community without the intervention of a controlled organization. The

evolution of social media has influenced many generations to seek important and useful information regarding brands or products (Phan et al., 2011). Many generations have been influenced by the emergence of social media to seek crucial and valuable information about a brand or product. Social media users place a high value on the responses provided by their friends, family, and coworkers on social media and tend to blindly believe what social media displays to them. Consequently, in the modern era of technology, it has created a trusting impression on social media, which has ultimately become an effective marketing method (Vasudevan et al., 2020). Therefore, scholars and academics have investigated a wide range of SMMA topics in the current scenario, identifying social media as a critical factor for businesses to survive in a highly competitive market. Kim and Ko (2012) examined SMMA through five dimensions: customization, entertainment, interaction, trendiness, and electronic word of mouth (e-WOM).

Customization

Customization is an activity in which customers' perspectives are vital to preparing the product or service itself. Customization can be defined as the extent to which a social media platform provides customized and personalized services. Customer satisfaction is the primary goal of customization (Schmenner 1986). A brand's social media platform can be easily modified to meet the needs of its customers and should reflect distinctiveness. This will ultimately result in a loyal customer base for a particular brand (Martin & Todorov,

2013).

Entertainment

Entertainment, a dimension of social media marketing, has gained prominence in recent research. Scholars have found that incorporating entertainment elements into social media content can motivate and engage users (Nambisan, 2017). For example, humorous and creative content tends to grab users and enhance their overall experience (Shao et al. 2020). They spend time on social networks for entertainment. Hence, users also consume brand-related content on social media platforms for refreshment and entertainment (Muntinga et al., 2011).

Interaction

Interaction on social media platforms has been recognized as a critical factor in enhancing customer engagement and response (Phan, Thomas, & Heine, 2021). Muntinga et al., (2011) defined social media interaction as a platform where users interact with one another, contribute to the discussion, make recommendations on specific services or products, and meet with others to express their opinions on specific issues. When companies actively engage with their audience through comments, responses to queries, and user-generated content sharing, it fosters a sense of community and trust (Fang, Chan, & Zhang, 2019).

Trendiness

Trendiness in social media marketing refers to the alignment of content with current trends and cultural phenomena. Research indicates that tapping into trends and pop culture references can boost customer engagement (Naylor et al. 2012). Content that resonates with the current zeitgeist is more likely to be shared and discussed, leading to increased exposure and customer response (Stokes et al., 2020). Customers who need to follow the most recent industry trends may find inspiration from trending information.

Electronic Word of Mouth

E-WOM is a medium that is used by individuals to obtain information about goods and services not only from their friends, colleagues, and family on a personal level but also from other people who are unknown to them but have had experience with the relevant services or products via Internet-based social media platforms (Hennig & Walsh, 2004). It involves customers sharing opinions, reviews, and recommendations about products and brands on social platforms (Hennig-Thurau et al. 2013). The e-WOM dimension is crucial in shaping customer responses by linking loyalty and trustworthiness to a product or service.

Consumer Response

Kim and Ko (2012) identified the features of social media platforms that build brand value in customer minds, and these platforms' marketing initiatives serve as the primary engine for generating consumer demand. Consumers then respond favorably to these marketing strategies because these activities assist the brand in positively influencing consumers' intention to purchase a specific brand. A brand with a higher BE will have a higher brand preference by customers, a willingness to pay a higher price, and a more devoted customer base to the

brand (Aaker, 1991; Keller, 1993, 2013).

Social Media Marketing Activities and Consumer Response

SMMA has a significant positive impact on consumer behavior when it comes to purchasing any service or product. Brand marketers should talk about these marketing activities on social media platforms because they can influence potential customers to purchase a service or product. Moreover, entertainment on social media platforms has been linked to increased user participation, sharing, and positive brand perceptions (Duffett 2015). Thus, it is evident that the entertainment dimension of social media marketing has a positive and significant relationship with customer responses. Research suggests that higher levels of interaction positively correlate with increased customer loyalty, satisfaction, and purchase intentions (Phan et al., 2021; Zhang, Wang, & Yu, 2020). Thus, the interaction dimension of social media marketing plays a pivotal role in influencing customer response. Moreover, trendiness can be instrumental in enhancing brand perception and attracting a younger trend-conscious audience (Naylor et al., 2012). Studies have shown that positive e-WOM can significantly influence customer purchase intentions and decisions (Cheung et al., 2018). Moreover, e-WOM has been identified as a crucial factor in shaping customer responses (Cheung et al., 2018). Based on these findings, the research hypotheses are as follows:

H1: There is a significant difference between the relationship between entertainment and customer response among Generation Y and Z

H2: There is a significant difference between the relationship between interaction and customer response among generations Y and Z

H3: There is a significant difference between the relationship between trendiness and customer response among Generation Y and Z

H4: There is a significant difference between the relationship between customization and customer response among Generation Y and Z

H5: There is a significant difference between the relationship between e-WOM and customer response among Generation Y and Z

Generational Cohorts

The influence of social media marketing activities on consumer behavior is a dynamic area of study, and researchers have increasingly recognized the significance of considering different generational cohorts, particularly Generation Y and Generation Z. These two generations have grown up in a digital age surrounded by social media platforms, which have significantly shaped their consumer habits and responses.

The literature offers a variety of categories for generational groups. Lyons et al. (2015) put forth one of the substitute classifications which was adopted by the study as follows,

a) Generation Y (also known as millennials) - born in 1981–1994,

b) Generation Z - born in 1995 and

onwards

Generation Y, often referred to as millennials, has been the subject of extensive study regarding their interactions with social media marketing activities. They became the first digital generation to enter the technological world and were extremely competent in digital awareness. Research indicates that this cohort tends to be more receptive to personalized content (Lee & Kim, 2021). They appreciate interactive campaigns and engagement with brands through social media platforms (Tondari and Kanupriya 2021). Moreover, the influence of peer recommendations and electronic word of mouth (eWOM) on Generation Y, purchase decisions is well-documented (Wen, Kang, & Liu, 2020). These findings highlight the importance of tailored social media marketing strategies to engage and influence Generation Y consumers effectively. Generation Z, the cohort following millennials, exhibits unique characteristics in its response to social media marketing activities. Generation Z must be surrounded by a technologically advanced environment because they are raised in one environment and feel comfortable there. They virtually never stopped online on any technological device. This can also be seen in their behavior, which is related to their technical surroundings and can be a tool or setting in their daily lives. Recent studies have emphasized their preference for authentic and visually appealing content (Khodakarami & Di Pietro, 2020). Generation Z consumers are also more likely to

engage with brands that align with their values and demonstrate social responsibility on social media platforms (Vukasović and Manhart 2021). Furthermore, this cohort is highly influenced by social media influencers and user-generated content (Laroche et al. 2019).

In conclusion, understanding the distinct preferences and behaviors of Generation Y and Generation Z in response to social media marketing activities is crucial for marketers. While Generation Y tends to favor personalized and interactive content, Generation Z values authenticity and social responsibility for brands. Acknowledging these generational differences, the following hypothesis was constructed,

H6: Response to SMMA of Generation Y differs from that of Generation Z

The conceptual model of the study is shown in Figure 1

Methods

Research Design
This study is based on positivism and uses a deductive approach to examine the research objectives. This research was conducted as a cross-sectional study using a survey as the research strategy. The unit of analysis was individual customers who use social media. Primary data were collected using a structured questionnaire.

Population, Sample Size, and Method
The population of the study comprised individuals who belong to Generation Y, ages 26-41, and Z, ages 10-25, who

use social media in the Colombo district to purchase retail fashion wear. Dalol, Islam, and Sardar (2021) outlined social media is continuously increasing among Generation Y and Z and they spend more time on social media. Bennett, Maton, and Kervin (2008); and Euajarusphan (2021) explored that information technology has had a huge influence on the individuals who live in Generation Y and Z regarding how they live and work as they were ranked as the highest social media users.

Convenience sampling was employed due to the unknown size of the population that utilizes social media for purchasing retail fashion wear in the Colombo district, particularly among Generation Y and Z. This method was chosen for its ease of accessibility, allowing for a rapid outreach to a substantial number of individuals. The sample size was determined using the Krejcie and Morgan table. The sample comprised 384 individuals who belonged to generations Y and Z and used social media in the Colombo district to purchase retail fashion wear. The Colombo district served as the study sample because it has Sri Lanka's greatest population and highest population density (Department of Census and Statistics, 2022). However, only 320 questionnaires were received, reporting an 83.3% response rate.

Measurement Scales of Study

SMMA activities:
Using Kim and Ko's (2012) survey, SMMA activities were evaluated. The survey consisted of 13 items, including the measurement scales for the five subscales of entertainment, interaction, trendiness, customization, and e-WOM. The alpha coefficient for entertainment, interaction, trendiness, customization, and e-WOM were 0.639, 0.679, 0.689,0.714, and 0.652 respectively. Every response was evaluated using a Five-Point Likert scale ranging from "Strongly disagree" to "Strongly agree."

Customer response:

The dependent variable was evaluated by employing Godey, et al., (2016) survey with 10 question items. The alpha coefficient for the original measurement scale was 0.880. The assessment was done on a Five-Point Likert scale ranging from "Strongly agree" to "Strongly disagree.

Data Evaluation, Analysis, and Presentation

The primary data was analyzed using Microsoft Excel and the Statistical Package for Social Sciences (SPSS) version 23.0. The data was presented using frequency tables. Cronbach's Alpha coefficient was used to establish the consistency of the variables. To examine the hypotheses and get a conclusion, correlation analysis and independent sample t-test were used.

Results

Reliability Analysis
The Cronbach's Alpha values, which measure the data's internal consistency, were used to assess the data's reliability. If the alpha value is more than 0.7, the instrument is

considered to have strong internal consistency. The internal reliability of each instrument was therefore satisfactory as Cronbach's Alpha Coefficient was above 0.7 as shown in Table 1.

Participants Characteristics

Individuals who use social media platforms to buy retail fashion wear in the Colombo district of Sri Lanka comprise the study's sample, and they range in age from 41 to 26 and 25 to 10 years. Further, the majority of respondents in generations Y and Z were females. The majority of respondents in Generation Y were government-employed (50%) and in Generation Z majority were non-employed (53.1%). In Generation Y the majority's average monthly income was between 50000-100000 rupees (36.3%) and in Generation Z the majority earned below 20000 (51.9%) as the average monthly income. The results are elaborated in Table 2.

Relationship between SMMA and Customer Response between Generation Y and Z

The results in Table 3, indicate that customer response is significantly correlated with SMMA ($r = .731$, $p < .01$) concerning generation Y, and SMMA has reported a strong positive relationship. The relationship between SMMA and customer response is significant concerning Generation Z since the p-value is below .001 and indicates a strong positive ($r = .504$) relationship. The relationship between customer response and entertainment is significant as the p-value is below $0.001(p<.000)$ about Generation Y and the relationship was high ($r = .581$). Moreover, the relationship between entertainment and customer response to Generation Z is also considered significant ($r= .666$, $p<.000$). According to the results customer response is significantly correlated with interaction ($r = .731$, $p < .01$) regarding Generation Y and showed a strong positive relationship. Further, the relationship between interaction and customer response is significant regarding Generation Z since the p-value is below .001 and indicates a strong positive ($r = .776$) relationship with customer response. Customer response is statistically correlated with customization ($p<.000$) about Generation Y. The results review that there is a high positive correlation ($r = .536$) between the two variables. Customer response is also significantly correlated with trendiness($p<.001$) about Generation Z and as per the study there is a strong positive relationship ($r = .698$) between the two variables. The relationship between customization and customer response is significant as the p-value is below $0.001(p<.000)$ about generation Y and the relationship was high ($r = .718$). Moreover, the relationship between customization and customer response to Generation Z is also considered significant ($r= .777$, $p<.000$). The results indicate that customer response is significantly correlated with WOM ($r = .720$, $p < .01$) with reference to Generation Y. Further, WOM has a strong positive relationship with customer response ($r = .720$). The relationship between WOM and customer response is significant with reference to Generation Z since the p-value is below .001. The results

indicate that WOM has a strong positive (r = .759) relationship with customer response.

Comparison of the Response to SMMA by Generation Y and Z

Table 4 indicates, that there is a statistically significant difference between Generation Y and Generation Z concerning entertainment (F = 12.154, p < .01). In this case, the value of the mean difference was 0.83 in favor of Generation Z (M_Y = 3.58, SD_Y = .480; M_Z = 4.41, SD_Y = .647). Concerning the customization, there was also a mean difference of 0.70 in favor of Generation Y (M_Y = 4.30, SD_X = .630; M_Z = 3.60, SD_Z = .503). This difference can be considered statistically significant (F = 16.589, p = .000). No statistically significant differences were found for the remaining three SMMA activities. According to Table 4, Generation Z liked entertainment and WOM the most (M_Z = 4.41), (M_Z = 3.65) in contrast to Generation Y. Generation Y liked interaction, trendiness, and customization more than Generation Z (M_Y = 4.40), (M_Y = 3.71), and (M_Y = 4.30). Both generations preferred WOM the least (M_Y = 3.57; M_Z = 3.65). According to the means and contrary to the preference customers respond to nearly the same extent by Generation Y and Generation Z, except the entertainment and customization. Therefore, the hypothesis was partially supported.

According to the results hypothesis 1, hypothesis 2, hypothesis 3, hypothesis 3, and hypothesis 5 are indicated in Table 5.

Discussion

According to the results of the independent sample t-test, there is a significant difference in entertainment and customization between the Z and Y generations. The average scores indicate that the Z generation (m=4.41) prefers entertainment in SMMA activities more than the Y generation (m=3.58) and generation Y (m=4.30) prefers customization more than generation Z (m=3.60). No statistically significant differences were found for trendiness, interaction, and e-WOM between generations Y and Z. In contrast to Generation Y, Generation Z preferred entertainment and WOM more (M_Z = 4.41), (M_Z = 3.65). Compared to Generation Z, Generation Y preferred interaction, trendiness, and customization more (M_Y = 4.40, M_Y = 3.71, and M_Y = 4.30). Except for entertainment and customization, Generations Y and Z respond to customers in the same ways.

According to the results of the correlation analysis, the relationship between entertainment, interaction, trendiness, customization, and e-WOM and customer response was high and positive in Generation Y. However, e-WOM was reported to have the strongest relationship with customer response about Generation Y. As individuals of the Y generation are considered to seek more information before making a purchase, they like to visit online communities and consumer review sites, to gather information about the products. Reading comments, writing own ideas, and reading others'

experiences are the most common methods of WOM (Cheung et al., 2008). The results of the study were relevant to some previous studies. According to Jalilvand & Samiei (2012), e-WOM has a significant influence on consumer response and reported a higher relationship. Additionally, they pointed out that both real-world experience and others' opinions (positive or negative) can greatly influence how people respond to a product or service. Additionally, they have found that e-WOM is vital for boosting intentions, fostering a positive image, and cutting back on promotional expenses. Mehyar, Saeed, and Baroom (2020) also demonstrated the positive impact of e-WOM on buyer intentions to purchase a product and emphasized that the clarity of the message and the volume of the message distributed via social media platforms will be capable of influencing the response of potential customers. When considering Generation Z, all the SMMA efforts reported a significant impact on customer response and the relationship between the SMMA efforts and customer response was high. However, customization has the strongest impact on customer response in Generation Z. Generation Z is regarded as smart and always demands new products, yet they typically want customization (Desai & Lele, 2017). Because of this, businesses may offer a more individualized experience through social media, to create brand affinity, and increase client loyalty (Martin & Todorov, 2010).

According to the findings, the relationship between customer response and SMMA of Generation Y was stronger than the relationship between customer response and SMMA of Generation Z. Therefore, it can be concluded that SMMA can impact customer response of Generation Y more than Z. According to the results of the personal characteristics more of generation Y individuals are private and government employed and more of them earn an average monthly income more than fifty thousand rupees. However, the majority of the individuals of Generation Z reported as non-employed and earned an average monthly income below twenty thousand rupees. Thus, it can be concluded that the purchasing power of Generation Y is higher than Generation Z. As a result of that, the relationship between customer response and SMMA of Generation Y is stronger than the relationship between customer response and SMMA of Generation Z. This finding is further proved by Separamadu, et al., (2021) where they have identified that the purchasing power of Generation Y is greater than the purchasing power of generation Z.

Conclusion

The objective of the study was to identify the relationship between SMMA and customer response between Generation Y and Z about fashion retail wear. Correlation analysis and independent sample t-test were used to achieve the objective. The sample of the study was the individuals who are in generations Y and Z in the Colombo district, using social media to purchase retail fashion wear in Sri Lanka. The results of the study indicated that SMMA

significantly impacts customer response. The driving factors of SMMA including entertainment, interaction, trendiness, customization, and WOM also had a significant positive relationship between customer response between both generations. However, the relationship between customer response and SMMA of Generation Y was stronger than the relationship between customer response and SMMA of Generation Z.

However, the results reveal that all the driving factors of SMMA can be used as effective tools to promote retail fashion wear through different social media platforms for both generations Y and Z. Independent sample t-test was used to identify whether there is a difference in the response for SMMA activities between generation Y and generation Z. The mean difference revealed that Generations Y and Z interact with clients in essentially the same manner, except for entertainment and customization. To attract more customers from Generation Y through social media, it is advised to maintain good connections with them, such as by offering a chat box, to gain insight into both existing and potential customers' preferences. Further, employing a brand ambassador to spread the word about the products, motivate happy customers to provide reviews, set up feedback channels, and offer incentives to consumers (discounts, gift cards, etc.) can be used to boost the influence of e-WOM. This study carries significant theoretical implications for the academic community and offers practical insights for scholars. Earlier studies

have given limited attention to exploring the relationship between SMMA and customer responses, particularly in the context of comparing Generation Y and Z. Importantly, the study not only addresses this gap but also identifies the specific generation that should be a primary focus in the retail fashion wear sector.

On a practical level, the research demonstrates that SMMA plays a substantial role in influencing consumer responses and affecting their likelihood to purchase retail fashion wear. These findings provide concrete insights into how SMMA shapes consumer perceptions and drives their intentions to make purchases. These results offer valuable and relevant information for researchers investigating the nuanced interplay between social media strategies and consumer responses, particularly within the retail fashion wear industry. However, in conducting the research, the researcher faced some difficulties including a limited sample size and a limited number of variables. Future studies can be conducted by taking more variables and taking gender as a moderating variable. In addition, future studies can follow one gender identity to carry out this study because there is a considerable difference between males and females towards fashion wear choices.

Author Contributions
In terms of conception, design, data gathering, analysis, and interpretation, both writers have significantly contributed.
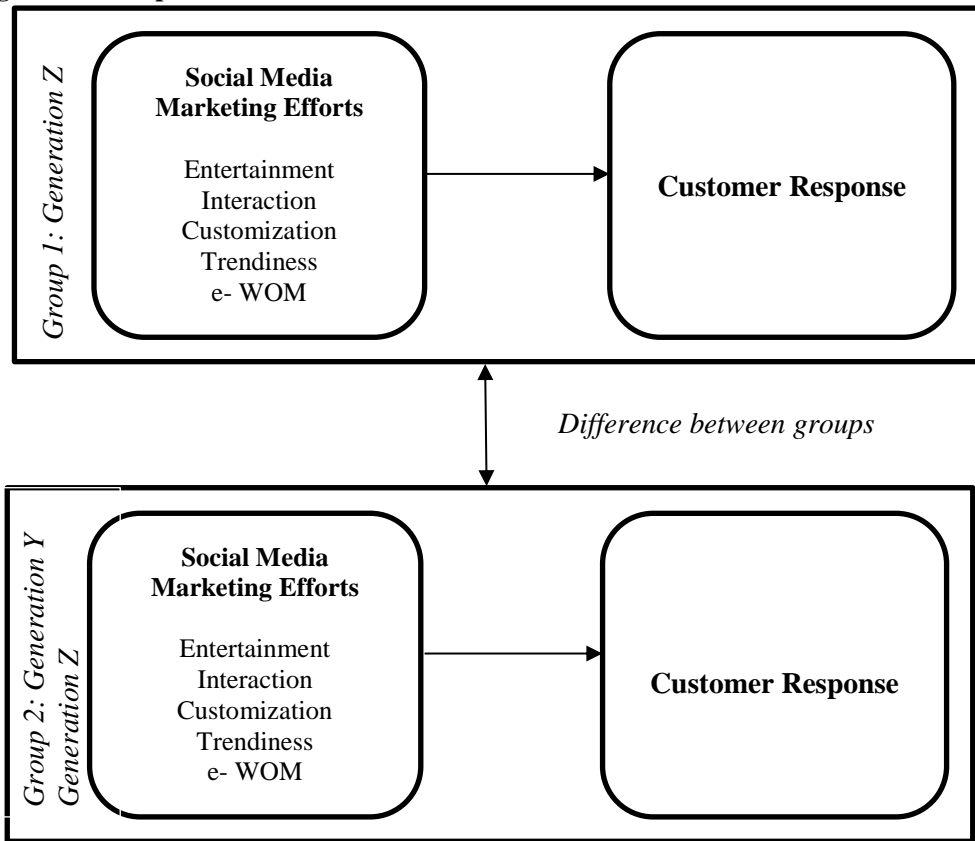
Figures and Tables

Figure 1: Conceptual Framework

Table 1: Results of reliability tests

	Generation Y	**Generation Z**
Variable	Cronbach's Alpha Value	Cronbach's Alpha Value
SMMA	0.918	0.903
Customer Response	0.854	0.787

(Source: Survey Data)

Table 2 : Results of participant's characteristics

	Characteristic	**Generation Y**		**Generation Z**	
		Frequency	Percentage	Frequency	Percentage
Gender	Male	35	28.9%	52	32.5%
	Female	125	78.1%	108	67.5%
Occupation	Non employed	2	1.2%	85	53.1%
	Private employed	72	45%	55	34.3%

	Self-employed	6	3.8%	19	11.9%
	Government employed	80	50%	1	0.7%
Average Monthly Income	Below 20000	2	1.3%	83	51.9%
	20000-49999	55	34.4%	75	46.9%
	50000-100000	58	36.3%	2	1.2%
	Above 100000	45	28%	0	0

(Source: Survey Data)

Table 3 : Results of the correlation between SMMA dimensions and customer response between generations y and z

	Variable / Dimensions		Customer Response
Generation Y	Entertainment	Person Correlation	.581
		Sig (2-tailed)	.000
Generation Z		Person Correlation	.731
		Sig (2-tailed)	.000
Generation Y	Interaction	Person Correlation	.666
		Sig (2-tailed)	.000
Generation Z		Person Correlation	.776
		Sig (2-tailed)	.000
Generation Y	Trendiness	Person Correlation	.536
		Sig (2-tailed)	.000
Generation Z		Person Correlation	.698
		Sig (2-tailed)	.000
Generation Y	Customization	Person Correlation	.718
		Sig (2-tailed)	.000
Generation Z		Person Correlation	.777
		Sig (2-tailed)	.000
Generation Y	WOM	Person Correlation	.720
		Sig (2-tailed)	.000
Generation Z		Person Correlation	.759
		Sig (2-tailed)	.000
Generation Y	SMMA	Person Correlation	.731
		Sig (2-tailed)	.000
Generation Z		Person Correlation	.504
		Sig (2-tailed)	.000

(Source: Survey Data)

Table 4 : Comparison of SMMA of generation Y and Z

Variables	Generations	N	Means	Standard Deviation	F	Sig
Entertainment	Y Gen	160	3.58	.480	12.154	.000
	Z Gen	160	4.41	.647		
Interaction	Y Gen	160	4.40	.645	.256	.458
	Z Gen	160	4.39	.643		

Trendiness	Y Gen	160	3.71	.440	.389	.368
	Z Gen	160	3.52	.360		
Customization	Y Gen	160	4.30	.630	16.589	.000
	Z Gen	160	3.60	.503		
WOM	Y Gen	160	3.57	.629	.569	.225
	Z Gen	160	3.65	.692		

(Source: Survey Data)

Table 5: Results of hypothesis testing

H1	H2	H3	H4	H5	H6
Accepted	Accepted	Accepted	Accepted	Accepted	Partially Accepted

(Source: Survey Data)

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Unraveling the Link between Public Service Motivation and Job Performance: An Empirical Investigation in the Nigerian Public Service

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Abstract

Given the endemic challenges of low productivity, corruption and weak service delivery facing public sector organizations in Nigeria, investigating drivers of performance is crucial for improving governmental effectiveness. This study explores the impact of Public Service Motivation (PSM) on the job performance of Nigerian federal civil servants, with job satisfaction and Person-Organization Fit (POF) as mediators. Using a questionnaire and data analysis with PLS-SEM, the study finds that PSM has a significant effect on job performance, partially mediated by job satisfaction and POF. The study also reveals that high levels of PSM and POF are necessary conditions for high job performance among public servants in Nigeria. The findings highlight the importance of increasing public servants' PSM levels and promoting better alignment with their organizations to enhance job satisfaction, motivation, and performance.

Keywords: *Job Performances, Public Service Motivation, Job Satisfaction, Person-Organization Fit, Public Sector*

Introduction

Public service motivation (PSM) has been recognized as an important research topic in public administration, especially in understanding public service performance. PSM refers to the inclination to work for the public interest and serve the public, even in the face of challenges and low rewards (Christensen et al., 2017). It is an important factor that influences public servants' performance. In Nigeria, the public sector faces numerous challenges, including a lack of adequate resources, low salaries, and insufficient opportunities for career advancement (Oyedele, 2015). These challenges could have a negative effect on motivation and performance among public service employees (Omisore & Adeleke, 2015).

The Nigerian public sector is one of the country's largest employers, with the federal government alone employing over 80,000 workers. Despite the significant number of workers, the Nigerian public sector is plagued with several issues, including low productivity, corruption, and inefficient service delivery. Over time, the Nigerian public service has been criticized for lacking professionalism, inefficiency, and being unresponsive to citizens' needs, leading to decreased public trust and confidence in the public sector (Oyedele, 2015). Low productivity is a significant challenge in the Nigerian public sector. Studies have shown that the productivity of public servants in Nigeria is relatively low compared to other countries in the region

(Mustapha et al., 2018; Omisore & Adeleke, 2015). Corruption has been identified as one of the fundamental factors affecting the Nigerian public sector, which reduces its contributory rate to economic development and growth (Abdulkareem et al., 2021). The combination of low productivity and corruption has resulted in an inefficient public service that cannot deliver quality services to citizens (Omisore & Adeleke, 2015).

These challenges have significantly affected the public's perception of the Nigerian public sector, decreasing public trust and confidence (Abdulkareem et al., 2016). The lack of trust is a significant concern because it affects the acceptability of the government and its ability to govern effectively. Therefore, there is a need to address the challenges facing the Nigerian public sector and improve the performance of public servants in the country.

Previous studies have established that PSM positively impacts public service performance in various contexts, especially in the Western world (Kim & Vandenabeele, 2010; Schwarz et al., 2020). However, studies linking PSM to job performance in the Nigerian public sector are limited. More so, the Nigerian public sector faces unique challenges compared to Western government agencies, including significant resource constraints, low wages and lack of infrastructure, high levels of corruption, and weak organizational cultures. These distinct environmental factors are likely to moderate how public service motivation translates into actual job performance. Thus,

while findings on public service motivation may generalize across some cultural contexts, the unusual stresses endemic in African public bureaucracies like Nigeria's suggest there could be crucial differences that existing research has not accounted for.

Therefore, it is crucial to investigate this relationship in Nigeria to gain insights into enhancing public servants' performance in the country. Consequently, a growing need exists to explore factors that could enhance public servants' performance in Nigeria. In this regard, public service motivation has been identified as a critical factor that could promote public servants' performance in different contexts. However, its impact on job performance in the Nigerian public sector has not been adequately examined. Given the unique challenges of the Nigerian public sector, it is important to explore how PSM relates to job performance in this context.

This study, therefore, aims to investigate the nexus between motivation in public service and job performance among public servants in Nigeria while examining job satisfaction and POF (POF) as mediators.

Job satisfaction and POF are theorized as mediators in the relationship between PSM and job performance because highly motivated public servants are likely to feel greater satisfaction and purpose in their roles, thus enhancing performance. Likewise, individuals with higher PSM may perceive greater alignment between their own values and their organization's mission. This value-fit could translate into higher engagement and effort exerted. Explicitly testing the indirect effects of PSM on performance can reveal these underlying mechanisms by which employee attitudes shape workplace behaviors.

Job satisfaction reflects the degree of satisfaction employees experience in their job and work environment (Goetz & Wald, 2022; Spector, 1997). POF is the compatibility between employees and their organisation (Kristof, 1996). Previous research has established the relevance of job satisfaction and POF as mediators in the public sector (Ahmad & Jasimuddin, 2021; Ellis et al., 2017; Mostafa, 2016; Rostiana, 2017).

Therefore, understanding the mediating effect of job satisfaction and POF is crucial in comprehending the link of PSM to job performance. Public servants with high PSM levels may experience increased job satisfaction, boosting motivation and greater efficiency in performing their duties. Moreover, POF may promote a suitable alignment of employees to their organizations, and enhances job satisfaction and motivation.

Theoretical Review

The underpinning theories for this study are the Self-Determination Theory (SDT) and Person-Environment (PEF) theory. The SDT is a widely accepted theory in psychology that explains how people are motivated and how their motivation influences their behavior

(Deci & Ryan, 2000). According to the SDT, autonomy, competence, and relatedness are the three common basic individuals' psychological needs. Satisfaction with these needs' increases individuals' motivation and engagement.

Besides, the PE Fit theory explains how the compatibility between an individual and their work environment can influence job satisfaction and performance. The theory posits that when there is a good alignment between an individual and their work environment, there is a greater likelihood of job satisfaction and performance (Kristof-Brown et al., 2023). The proposed model for this study suggests that PSM directly and positively affects public servants' performance in Nigeria. Additionally, the study proposes that job satisfaction and POF mediate the link of PSM to job performance. As shown in Figure 1, the model proposes that PSM directly influences job satisfaction and POF, influencing job performance. The mediating effect of job satisfaction and POF suggests that public servants recognized as having a

Hypothesis Formation

Public Service Motivation (PSM)

The motivation of public service has become an integral part of research in public administration. Perry and Hondeghem (2008) view PSM as the inclination to work for the public interest and serve the public, even in the face of challenges and low rewards. PSM is an important factor that influences the job performance of public servants. Kim and Vandenabeele

degree of PSM are likelier to experience job satisfaction and feel a better fit with their organization which, in turn, could lead to higher levels of job performance.

The SDT provides a theoretical foundation for understanding the interchangeable link among PSM, job satisfaction, and performance. PSM is an intrinsic motivation linked to the psychological needs that constitute autonomy, competence, and relatedness. So, there is every tendency for public servants who attain greater levels of PSM would feel a sense of autonomy and competence in their work, promoting increased levels of job performance and satisfaction. The PE Fit theory offers a theoretical basis for understanding the mediating effect of POF in the link between PSM and job performance. POF measures the match between an individual and their work environment. There is a tendency for public servants to experience job satisfaction when they are found suitable for their organizations, which could lead to greater levels of job performance.

(2010) found that PSM is positively associated with job performance in the public sector. Previous studies have reported that PSM is an important predictor of job performance among public servants in different contexts (Kim & Vandenabeele, 2010; Wang & Kim, 2013). Similarly, Awan and Azhar (2014) noted that PSM was positively correlated related to job performance among Pakistani public servants. Westover and Taylor (2010) also found PSM connected to job satisfaction in public service. These findings suggest that PSM is a vital

determinant of job performance and satisfaction among public servants. Therefore, we hypothesise thus:

H1: PSM influences job satisfaction among civil servants in Nigeria.

H2: PSM influences the job performance of civil servants in Nigeria.

H3: PSM influences POF among civil servants in Nigeria.

Job Satisfaction

Satisfaction with a job is a fundamental factor that influences job performance. Spector (1997) conceptualized job satisfaction as the extent employees are content with their jobs and the work environment. Research has demonstrated that job satisfaction can significantly impact an employee's work behaviour and performance (Iis & Yunus, 2016; Wright & Cropanzano, 2000; Wright et al., 2007). Employees who report higher levels of job satisfaction are likelier to display punctuality, remain present at work, and exhibit greater focus, accuracy, and effort (Yuen et al., 2018). In a study by Mount et al. (2006) involving employees in customer service positions across ten fast-food restaurants, job satisfaction directly impacted job performance. These findings suggest that job satisfaction is significant in shaping employees' work behaviour and performance and could be a significant factor in enhancing the overall productivity of organizations.

H4: Job satisfaction influences job performance among civil servants' in Nigeria

H5: Job satisfaction influences POF among civil servants in Nigeria.

H6: Relationship between public service motivation and performance is mediated by job satisfaction among civil servants in Nigeria.

Person-Organization Fit (POF)

POF is a fit between employees and their organisation (Kristof, 1996). POF has been observed to have a positive relationship with job satisfaction and performance in different sectors, including the public sector (Hassan & Yusuf, 2016). POF is an important factor influencing job performance because it could lead to a suitable alignment of employees to their organizations, enhancing job satisfaction and motivation. Almalki et al. (2017) found that POF facilitates the link between PSM and job performance among public servants in Saudi Arabia.

H7: POF influences job performance among civil servants in Nigeria.

H8: There is a mediating effect of POF on the connection between job satisfaction and performance among civil servants in Nigeria.

Methods

A 10-item indicators of three dimensions developed by Coursey and Pandy (2007) was used in measuring PSM. The scale measures individuals' motivation to serve the public and contribute to the common good. Sample items include "I would rather work for the government than for a private company" and "It is important to me to do work that benefits society." Job satisfaction will be measured using 5-items developed by (Spector, 1985). The scale measures the extent to which individuals are satisfied with various aspects of their job, including pay, work conditions, and co-workers.

Sample items include "I am satisfied with my job" and "I feel that I am paid fairly for my work." POF was measured using 7-item indicators developed by (Kristof, 1996). The scale measures the extent to which individuals perceive a fit between their values and those of their organization. Sample items include "The values of my organization are similar to my own" and "I feel that I fit in well with the culture of my organization." Job Performance was measured using Williams and Anderson (1991)'s task-performance 7-item indicators. The scale measures the extent to which individuals effectively perform their job duties and responsibilities. Sample items include "I can complete my work on time" and "I can meet the goals and objectives set for me by my supervisor."

The population for this study is Federal civil servants in selected ministries and agencies in Nigeria. The G*power software was used to determine the sample size to be 110. The sample for the study was purposively selected to include executive officers and senior officers who are more likely to understand the constructs under investigation better. Three hundred fifty questionnaires were distributed, and 194 were collected, giving a response rate of 46.4%. Of the 194, 46 were incomplete, hence discarded, while 148 were used for further analysis.

The questionnaire used in this study consists of four sections. The first section collects demographic information such as age, gender, educational qualification, and job position. The second section measures PSM, the third section measures Job Satisfaction, the fourth section measures POF, and Job Performance is

measured using a 5-item scale.

Data for the study were collected between the month of May to August 2022. The questionnaires were administered in paper format, and participants were given two weeks to complete and return the questionnaire. The questionnaires were collected from the participants' offices. Reminders were sent to the participants after two weeks to increase the response rate. A response bias test was done to check the differences between the early (88) and late submissions (60). The t-test result showed that there are no differences between the two.

The data collected were analyzed using PLS-SEM with SmartPLS software. PLS-SEM was chosen because it is a suitable method for analyzing complex models with multiple latent variables and predicting the behaviour of a dependent variable based on its relationship with other independent variables. Also, a Fuzzy set Qualitative Comparative Analysis (FsQCA) was conducted to determine the necessary and sufficient conditions that lead to high job performance among public servants in Nigeria using FsQCA 4.0.

A marker variable approach was used to test for common method bias, including a marker variable in the questionnaire to assess the extent to which respondents may have given socially desirable responses. The marker variable used in this study was "I always do what is expected of me by my supervisor," which was included in the section measuring job performance. The results of the marker variable test showed that common method bias was not a significant problem in this study.

Data Analysis

Demographic Profile

Respondents' demographic profile in this study showed that most respondents were male (62%), while 38% were female, suggesting that more male civil servants participated in the study than female civil servants. The respondents' age distribution indicates that most respondents (56%) were between the ages of 30-45, while 23% were between 46-55, and 21% were above 55 years old, which implies that most of the civil servants who participated in the study were in the mid-career stage. This is also an interesting finding as it suggests that younger civil servants are more likely to participate in surveys than their older counterparts. The respondents' service length result shows that 39% of the participants have served between 10-20 years, while 30% have served for less than ten years. The remaining 31% have served for more than 20 years, indicating that a significant number of the respondents have been in service for a considerable length of time. Also, this suggests that the sample included a mix of civil servants at different levels of the hierarchy. The educational qualification of the respondents reveals that 46% of the participants have a bachelor's degree, while 39% have postgraduate qualifications, which implies that most respondents have tertiary education, and a significant proportion has higher education qualifications. The cadre of the respondents reveals that the majority of the participants were senior administrative officers (44%), followed by deputy directors (19%) and directors (8%), which indicates that most respondents were mid-level to senior civil servants.

Measurement Model

All indicator variables were reflective measures. The measurement model tested the constructs validity and reliability in the study. The results indicated that all constructs had acceptable internal consistency reliability measures, as indicated by Cronbach's alpha values ranging from 0.70 to 0.80 as shown in Table 1. The composite reliability (CR) values for all constructs exceeded the recommended threshold of 0.70, indicating good reliability. Furthermore, the construct's convergent validity was established by examining the values of average variance extracted (AVE), which ranged from 0.50 to 0.59, exceeding the recommended threshold of 0.50. The results also showed that all indicators significantly loaded according to their respective constructs, with all factor loadings exceeding the recommended threshold of 0.70. The Heterotrait and Monotrait (HTMT) ratio was calculated for each pair of latent variables to test discriminant validity. HTMT is associated with the ratio of correlation between two (2) latent variables to each variable's square root of the product of AVE. If the HTMT ratio is less than 0.85, then discriminant validity is considered to be established between the two latent variables. In this study, the HTMT ratios for all pairs of latent variables were below 0.85, indicating that discriminant validity was established as shown in Table 2.

Structural Model

The results of the PLS-SEM analysis are presented in Table 3. The results show that Public Service Motivation has a significant positive effect on Job Satisfaction ($\beta = 0.58$, t-value = 12.31, $p < 0.001$) and POF ($\beta = 0.33$, t-value = 6.42, $p < 0.001$). Job Satisfaction has a

positive and significant effect on Job Performance($\beta = 0.15$, t-value = 2.39, p < 0.05), while POF maintains a positive and significant effect on Job Performance($\beta = 0.27$, t-value = 4.69, p < 0.001). PSM's indirect effect on job performance through Job Satisfaction was also significant ($\beta = 0.09$, t-value = 2.16, p < 0.05), indicating that Job Satisfaction partially mediates the link of PSM to job performance. Similarly, the indirect effect of PSM on job performance through POF was also significant ($\beta = 0.09$, t-value = 3.10, p < 0.05), indicating that POF partially facilitates the connection between PSM and Job Performance. As examined based on the R^2 values, the model's coefficient of determination showed that PSM, POF and job satisfaction explained 41% ($R^2 = 0.411$) of the total variance for Job Performance. Also, PSM and job satisfaction explain 49% ($R^2 = 0.493$) of POF, and finally, PSM explains 34% ($R^2 = 0.339$) of Job Satisfaction.

FsQCA Result

The results of the FSQCA analysis revealed that the combination of high levels of PSM and POF are necessary conditions for high job performance among public servants in Nigeria. Specifically, when PSM and POF are both high, then high job performance is achieved. However, when PSM is low, high job performance can still be achieved if POF is high. On the other hand, when POF is low, high job performance can still be achieved if PSM is high. The results of the FSQCA analysis suggest that PSM and POF are critical predictors of job performance among public servants in Nigeria. The finding supports previous research highlighting the importance of PSM and POF in predicting job performance in the public sector.

Discussion

This study examined the interconnectivity among Public Service Motivation (PSM), Job Satisfaction, POF, and Job Performance of public servants in Nigeria. The study's findings showed that the effect of PSM is positive and significant to Job Satisfaction and POF, while the effect of job satisfaction and POF have a significant and positive effect on Job Performance. Additionally, the study found that job satisfaction with and POF partially mediate the relationship between PSM and Job Performance. There is a consistency in the outcomes of this study compared to the previous research on the link of PSM to Job Satisfaction ((Breaugh et al., 2018; Kim, 2012; Kim & Vandenabeele, 2010; Rainey & Steinbauer, 1999); Kim & Vandenabeele, 2010) and PSM and POF (Kim, 2012; Wang & Brower, 2019). Public servants motivated to serve the public will likely find their work more meaningful and satisfying, leading to better performance (Perry and Wise, 1990; Kim et al., 2012). The finding that Job Satisfaction and POF partially mediate the relationship between PSM and Job Performance is consistent with previous research (Kim and Vandenabeele, 2010; Kim et al., 2012). This finding suggests that public servants inspired by the willingness to serve the public are more likely to perform well if they are satisfied with their jobs and feel that their values align with their organizations'.

Theoretical Implications

The findings of this study have significant theoretical implications for public administration and management research. First, the study contributes to the growing body of existing literature on public service motivation by

examining its effect on job performance in the Nigerian public sector. This study confirms that PSM positively affects job performance, consistent with previous research in different contexts (Kim & Vandenabeele, 2010; Schwarz et al., 2020). The results suggest that PSM is a valuable concept that can enhance public sector performance in Nigeria.

Also, this study has contributed to literature recognizing the effects of job satisfaction and POF as mediators on the relationship between PSM and job performance. The study confirms that job satisfaction and POF mediate the relationship between PSM and job performance. These findings suggest that PSM is more likely to improve job performance when public servants experience higher levels of job satisfaction and a better fit with their organization. This finding is consistent with previous research highlighting the importance of these variables in public sector performance (Hassan & Yusuf, 2016; Wright et al., 2016).

The study provides insights into the Nigerian public sector context by examining the role of PSM, job satisfaction, and POF in job performance. The study confirms that these variables are relevant to public sector performance in Nigeria. The findings suggest that efforts to improve public sector performance should focus on enhancing PSM among public servants, improving job satisfaction, and ensuring a better fit between employees and their organizations. This finding is particularly relevant to the Nigerian context, where the public sector has been disapproved for low productivity and inefficient service delivery.

Practical Implications

The findings of this study have several practical implications for the Nigerian public sector. The study found that public service motivation has a direct positive effect on job performance. Therefore, to improve the performance of public servants in Nigeria, it is important to recruit individuals with high levels of public service motivation. Recruitment processes should be designed to assess the level of PSM of job applicants.

The study found that job satisfaction and POF mediate the relationship between PSM and job performance. Thus, public sector organizations should create a work environment conducive to job satisfaction and a good fit between employees and the organization. This suggestion could be achieved by providing adequate training and development opportunities, fair remuneration, a safe working environment, and opportunities for career advancement.

Furthermore, the study highlights the importance of POF in enhancing job satisfaction and performance. Public sector organizations should, therefore, strive to create an organizational culture that promotes a good fit between employees and the organization. This could be achieved by ensuring that the organization's values and goals align with its employees' values and goals.

And finally, the study underscores the need for public sector organizations to develop and implement policies and practices that promote public service motivation, job satisfaction, and POF. Such policies and practices could include the provision of incentives to employees who demonstrate high levels of public service motivation, the

development of a career progression framework that aligns with the goals and values of the organization, and the creation of a performance management system that recognizes and rewards employees who demonstrate high levels of job performance.

Conclusion

In conclusion, this study provides evidence that PSM is an important factor in shaping the behaviour of public servants in Nigeria. Public servants motivated by a desire to serve the public are more likely to be satisfied with their jobs and feel that their values align with those of their organization, which in turn leads to better performance. Public sector managers and policymakers should recognize the importance of PSM in shaping the behaviour of public servants and work to create a work environment that fosters public service values, improves Job Satisfaction and POF, and promotes a culture of public service within the public sector.

Limitations and Suggestions for Future Research

The study has several limitations that must be acknowledged. Firstly, the study used a cross-sectional design, which limits the ability to establish causality between the variables. Secondly, the study was conducted among federal civil servants in selected ministries and agencies in Nigeria. Therefore, the generalizability of the findings to other sectors and contexts may be limited. Future studies could investigate other sectors, such as state and local government, and compare the results with the findings of this study. Thirdly, the study used self-reported data, which could lead to common method bias. However, we conducted a marker variable test, which showed no significant common method bias. Finally, other variables could mediate the relationship between PSM and job performance, which were not included in this study. Future studies could investigate the mediating effect of other variables, such as organizational commitment, work engagement, and leadership behaviour.

Conflict of Interest

The authors declare no conflict of interest

Figures and Tables
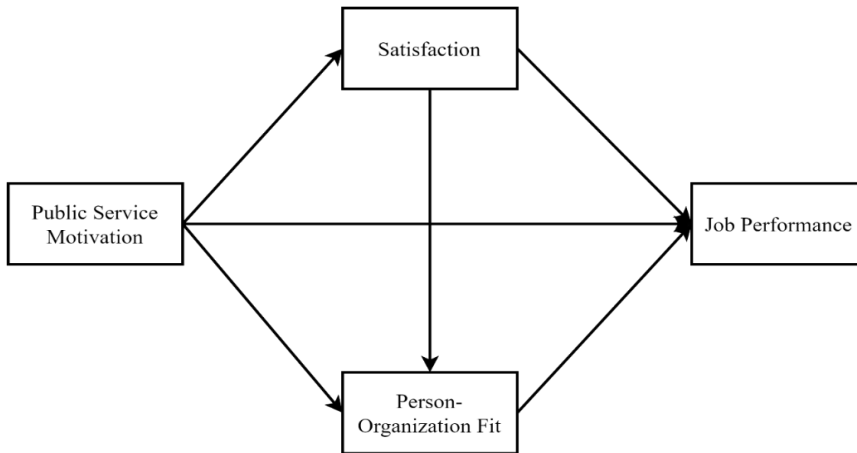
Figure 1: Theoretical Framework

Table 1: Table of reliability and validity

	Items	Loadings	Cronbach Alpha	AVE
Job Performance	PERF1	0.82	0.80	0.51
	PERF2	0.78		
	PERF3	0.64		
	PERF4	0.83		
	PERF6	0.78		
Person-Organization Fit	POF2	0.71	0.80	0.59
	POF3	0.70		
	POF4	0.81		
	POF5	0.79		
	POF7	0.62		
Public Service Motivation	PSM1	0.69	0.70	0.58
	PSM10	0.71		
	PSM2	0.77		
	PSM3	0.69		
	PSM4	0.83	0.80	0.50
	PSM5	0.68		
	PSM6	0.75		
	PSM7	0.71	0.80	0.57
	PSM8	0.90		
	PSM9	0.70		
Satisfaction	SAT2	0.79	0.76	0.51
	SAT3	0.66		
	SAT4	0.80		

	SAT5	0.72		
	Marker Variable	MRK	1.00	

Source: Author generated (2022)

Table 2: **Discriminant validity (HTMT criterion)**

	PERF	**POF**	**PSM**	**Satisfaction**
PERM				
POF	0.51			
PSM	0.51	0.69		
Satisfaction	0.47	0.69	0.51	

Source: Author generated (2022)

Table 3: Results of pls-SEM analysis

	B	**T-values**	**P-values <**	**5.00%**	**95.00%**	**F²**
PSM -> SAT	0.58	12.31	0.01	0.49	0.65	0.52
PSM -> PERF	0.40	6.42	0.01	0.30	0.50	0.19
PSM -> POF	0.33	5.02	0.01	0.23	0.44	0.14
SAT -> PERF	0.15	2.39	0.05	0.05	0.25	0.02
SAT -> POF	0.46	7.22	0.01	0.34	0.55	0.27
PSM -> SAT -> PERF	0.09	2.16	0.05	0.03	0.15	
POF -> PERF	0.27	4.69	0.05	0.17	0.36	0.07
PSM -> POF -> PERF	0.09	3.10	0.05	0.05	0.14	
R²: SAT = 0.339; Job Performance = 0.411; POF = 0.493						

Source: Author generated (2022)

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