

**Do Transaction Costs  
Avert Livelihoods? An  
Empirical Study of  
Samurdhi Beneficiaries in  
Sri Lanka**

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**Abstract**

*This study empirically investigates the impact of Transaction Cost (TC) determinants on the livelihood success of Samurdhi beneficiaries in Sri Lanka. Data was collected from 1820 beneficiaries, employing a structural questionnaire and conducting face-to-face interviews. Partial Least Squares-Structural Equation Modelling (PLS-SEM) was utilized to analyse the data. The empirical results discovered that uncertainty and asset specificity had made insignificant effects though other determinants have influenced significantly on the livelihood success of the Samurdhi beneficiaries. The study found that bounded rationality has a significantly higher negative impact on livelihood success and increases opportunism, affects livelihood success. TC as the mediating variable also significantly reduces livelihood success. It heightens the negative effect of TC determinants on livelihood success, except for asset specificity. Thus, the study identified that making appropriate information flow removes information asymmetry and reduces bounded rationality of Samurdhi beneficiaries, thereby increasing livelihood success. Further, the study may enable evolving strategies to mitigate TC by improving the rational ability and transaction frequency; both helping to avoid the opportunistic behavior of exchange partners and decreasing the transaction uncertainty that leads to improving the livelihoods of Samurdhi beneficiaries.*

**Keywords:** *Bounded Rationality, Livelihoods, Opportunism, Samurdhi Beneficiaries.*

## 1. Introduction

Since Independence all successive governments in Sri Lanka have implemented programs aiming at poverty alleviation and livelihood improvement. In the first two to three decades after Independence, spending on health and education increased, and governments introduced several indirect measures to eradicate poverty and improve livelihoods, including free education and free healthcare and various subsidy programs (Central Bank of Sri Lanka, 1998; Priyanath & Premaratne, 2014). Sri Lanka entered into an open economic policy in 1978, and these policies and programs targeted in increasing consumption and self-employment among the poor to improve livelihoods and poverty alleviation of the families of the oppressed and downtrodden (Central Bank of Sri Lanka, 1998). Consequently, long-term subsidies tend to make the poor dependent on the government (Central Bank of Sri Lanka, 1998; Vijayakumar, 2013; Wickremasinghe, 2011). Therefore, it is more effective to facilitate them to be on their own feet. Towards this goal, the government launched several development initiatives targeting poverty alleviation. Consequently, the Janasaviya program replaced the old food stamp scheme, a revenue exchange program targeted at World Bank assistance (Wickremasinghe, 2011). The main objectives were to bridge the development gap between urban and rural areas and alleviate poverty through livelihood development by providing incentives for industries in rural areas (Gunatilaka et al., 2009). After the 1995 coup, the *Janasaviya* program was replaced by the Samurdhi (Samurdhi) program. It consisted of a small rural infrastructure component, a large income transfer component and a series of loan schemes to help the poor, modeling the Grameen Bank Scheme (Gunatilaka et al., 2009; Ranatunga, 2018). According to the Department of Samurdhi Development (DSD) (2019), the number of Samurdhi beneficiaries in Sri Lanka was 1,414,340 in 2018. The report mentioned that the department had identified that it could empower 1,253,846 families, of which plans have been made to empower 125,385 families. This department implemented livelihood development programs at the divisional level, and projects were implemented to empower identified beneficiary families concerning economic, social, political, physical, psychological, and legal. However, finally the focus of the project alternated to livelihood development of marginalized families in Sri Lanka.

The program which has been in operation for more than three decades had certain hitches that impeded its progress. According to the Global Multidimensional Poverty Index (2020), 0.8% of Sri Lanka's total population cannot afford to spend \$ 1.90 per day, and 4.1% of the population lives below the poverty line. It indicates that the project could not achieve its goals even after a lapse of 30 years. Empirically, people of this category mostly engage in micro and small businesses as livelihoods. Despite receipt of various assistance such as financial, infrastructure and advisory, their

businesses could not survive longer. A more pragmatic approach is needed to understand this situation, as apparently, these individuals will not be able to sustain their livelihoods in the long run based on the exploitation of middlemen and their opportunistic behaviour (Priyanath & Buthsala, 2017). Accordingly, TC can be assumed to be one of the major problems affecting the livelihood industry of these people, and no in-depth study has been found in the literature. According to the transaction cost theory, the manufacturer has to add cost to the production cost to minimize the uncertainty caused by opportunism and exploitation which is due to the bounded rationality of transaction parties. As a result, the price of that product increases opportunism (Carmel & Nicholson, 2005; Nooteboom, 1993). Asset specificity also influences opportunism (Williamson, 1981). Rising product prices make it impossible to compete in the competitive market environment. Based on the above, this research aims to study the impact of opportunism and uncertainty caused by bounded rationality and asset specificity on the livelihoods implemented under the Samurdhi program. Thus, this study has several theoretical, empirical, and practical importance and its findings may aid in improving the livelihoods of Samurdhi beneficiaries by mitigating TC. Studies on TC and agriculture (Bhattarai & Bhusal, 2015; Jagwe, et al., 2009), industry (Carmel & Nicholson, 2005; Dyer & Chu, 2003; Miththrananda, & Priyanath, 2020), and services (Priyanto, et al., 2014; Silva, 2021) have revealed vital findings. However, the effect of TC on livelihoods, particularly in Samurdhi beneficiaries, is deemed understudied. Hence this study is important since the findings may help evolve new strategies to improve the livelihoods of Samurdhi beneficiaries by minimizing TC. Further, the study helps understand the relative efficacy of TC theory in different contexts and how it works practically, especially in the low-income group in Sri Lanka.

The rest of this paper is organised as follows: presenting the theoretical and empirical literature in Section 2, the research model and hypotheses in Section 3, the methodology in Section 4, results and discussion in Section 5, and Section 6 is the conclusion.

## **2. Theoretical background**

This section discusses the theoretical background to understand the variables clearly reviewing TC and livelihood success. In the first section, TC and its determinants have been reviewed, and the second part discusses livelihood success.

Although traditional economists saw the economic institution as a ‘production function,’ they have pointed out that a company with an efficient (low-cost) production process wins in the market. Williamson (1979) introduced Transaction Cost Economics (TCE) and recognized that the productivity of a value chain is a function of both production costs and transaction costs. More generally, TCE focuses

on the theoretical construction of how business transactions are organized in a complex and challenging decision-making environment (Dyer & Chu, 2003; Macher, & Richman, 2008). This theory explains the economics of complex recurring transactions subject to uncertainty and commitments that are difficult to repay without a significant economic loss (Rindfleisch, 2019; Williamson, 1981, 1985). According to Nooteboom (2006, p. 2), “A *transaction is an event that takes place during a process of exchange, in which the transaction has a past and a future.*” TCE’s behavioral assumptions are based on the premise that people’s rationality is limited and can be opportunistic. People try to be rational, but a lack of information limits their potential (Williamson, 1981). There is uncertainty, and it comes in two forms; a). Unpredictable of the behaviour of exchange partners, and b). The unpredictability of threats coming from the external business environment (Rindfleisch, 2019; Williamson, 1985). Behavioural uncertainty is about the intentions and opportunism of the transaction partners and environmental uncertainty is regarding the conditions that affect the execution of an agreement. Because of this, forecasts do not take place between closed parties that can know and regulate all possible scenarios (Rindfleisch, 2019; Williamson, 1985). Therefore, opportunism occurred due to the unpredictability of conditions and asymmetric information (Williamson, 1981). Not all parties are the same opportunists, but there is the potential for opportunism. Accordingly, three stages, such as Contact, Contract, and Control, have occurred during this transaction process to avoid or minimize economic loss (Nooteboom, 1999, 2006).

The contacting step should identify and examine market opportunities, outlets, and partners in purchasing, selling, and transferring ownership of goods and services. Once the customer is found, trade agreements should be negotiated and transfer the ownership of goods and services included in the contract step (Nooteboom, 2006; Rindfleisch, 2019). The process does not end there. Monitoring should be done with the relevant specification conditions to determine compliance with the agreed terms. If the goods or services are not appropriately provided, the terms prescribed by legal, social, or other means must be enforced, and control steps are allowed. In addition to the cost of production, a simple cost has to be borne by following the above process. In some cases, it may also be necessary to embark on a more complex process. For example, further bargaining on price or specifications, proving the feasibility of specifications should be done (Nooteboom, 2006; Rindfleisch, 2019). These additional costs have been divided into two main categories. Formerly called ‘ex-ante’ includes two kinds of costs: search and contracting or negotiating cost. Later is mentioned as an ‘ex-post’ cost, consisting of two types of costs: monitoring and enforcement (Dyer, & Chu, 2003; Hennart, 1993; Nooteboom, 2006; Rindfleisch, 2019; Williamson, 1985).

Dyer (1997, p. 536) mentioned, “*Search costs include the costs of gathering information to identify and evaluate potential trading partners.*” According to Nootboom (2006), search cost includes finding a transaction partner, which is twofold: including search costs on the part of the finder and marketing costs on the part of the supplier who provides the requirement. Search costs are divided into external and internal. External search costs include the financial costs of obtaining information about partners and the opportunity costs of the time it takes to search. At the same time, the organization should make a greater mental effort to search, categorize incoming information, and integrate it with known information. This cost is called the internal search cost and is determined by the ability of the relevant agency or customer to perform the search, which is more or less based on intelligence, prior knowledge, education, and training. According to Dyer (1997), contracting costs are defined as costs associated with negotiating and writing an agreement. Williamson (1985) explained that contracting costs include establishing the governance structure of the transaction, which helps avoid disputes. Further, it also comprises the cost of irregularities, adjustments, and bonding costs for reliable transactions; “*Monitoring costs refer to the costs associated with monitoring the agreement to ensure that each party fulfills the predetermined set of obligations*” (Dyer 1997, p. 536). It can also be expressed as the cost of the action taken to ensure that certain actions that harm the agreement are not taken. Also, in such an agreement, a security bond is formed. Then a certain amount of money is retained for a certain period. The opportunity costs of such refundable amount incurred are also included in the monitoring costs (Williamson 1985). If the trading partner does not act according to the agreement, ex-post bargaining and legal activities should be taken into account. The cost of these activities is referred to as enforcement cost (Dyer 1997; Dyer & Chu, 2003; Williamson 1985).

TCE contains two behavioural assumptions encapsulated in humans, which caused to generate TC (Dyer 1997, Nootboom, 2006; Williamson 1985). The former is bounded rationality. “*Human rational behaviour is shaped by scissors whose two blades are the structure of task environments and the computational capabilities of the actor*” (Simon, 1990, p. 07). Further, Simon (1997, p. 88) said, “*human behaviour is intendedly rational, but only boundedly so.*” According to Simon (1997), two kinds of limitations are contained in humans: limitations on cognition and perception and language limitations. Therefore, barriers and incapability in collecting, processing, and evaluating information and making knowledge for appropriate decisions about a business are referred to as bounded rationality (Zhang, 2009). Bounded rationality conceals possible alternatives to the transaction (Nootboom, 2006). Business transactions are structured in two ways based on the uncertainty caused by bounded rationality. Accordingly, strengthening the decision-making process is one way. The

other issue involves control structures, which then consider the cost of planning, adapting, and monitoring transactions, which in turn increases transaction costs. (Dyer, & Chu, 2003; Nguyen & Crase, 2011; Nootboom, 2006; Ranatunga et al., 2021b; Williamson, 1985).

Opportunism was defined as ‘*interest seeking with guile*’ (Williamson, 1981, p. 30). Nootboom (2006, p. 2) said, “*This includes actions against the interest of a partner, and against the letter or intent of an agreement, when the occasion presents itself, where necessary with the aid of lies or concealment of the truth. The opportunity for this follows from the unpredictability of conditions and asymmetric information.*” opportunism is “*thought of as taking advantage of adverse circumstances by adapting actions*” (Knight, 2015: 123). Simply, opportunism is the practice of trying to make a profit in a business transaction by distorting information, providing incomplete information, especially misleading information, and deliberately obscuring information. Opportunism can be expressed in two ways. The first is the post-transactional opportunism that arises from the covert activities of the leading business partner. The second is opportunism, caused by giving incomplete information before the transaction or misleading information. (Ranatunga et al., 2021; Priyanath & Premarathne, 2017). According to Hobbes (1996), entrepreneurs act opportunistically by concealing information from opposition partners or engaging in certain business activities to maximize their earnings and benefits. This tendency poses a risk to the business partner. They must either make a vertical integration or contact third parties such as contractors, arbitrators, or courts to avoid this situation. Because of this, opportunism has to bear a high cost (Gray & Boehlje, 2005; Hobbs, 1996; Priyanath and Premarathne, 2017; Ranatunga et al., 2021; Yousuf, 2017).

Uncertainty in transaction cost theory is a direct assumption, contrary to the assumption that perfect information circulates in an exchange from a neo-classical point of view (Williamson, 1981). Galbraith (1974, p. 1), uncertainty means “*the gap between the amount of information required to perform the task and the amount of information already possessed by the organization.*” Therefore, uncertainty can be expressed as incomplete knowledge of an event and its consequences, and it exacerbates problems with the above-mentioned bounded rationality and opportunism (Aubert & Weber, 2001). Uncertainty is divided into two types. Behavioural uncertainty concerns the intentions and competencies of transaction partners and environmental uncertainty of conditions that may affect the execution of agreements and cooperation outcomes (Jalonen, 2012; Williamson, 1985). As mentioned by David and Han (2004), behavioural uncertainty is personal involvement and befalls with the opportunistic behaviour of other transaction parties, especially on specific assets which should be supervised more on transactions. Conversely, environmental uncertainty is characterized by uncertainty concerning

technology, demand, local factor, supply conditions, inflation, etc., and shares this aspect with the bounded rationality and mentioned inability to obtain strategies to adapt the appropriate alternatives due to the lack of information and computational power (Jalonen, 2012; Williamson, 1985). Rindfleisch and Hide (1997) explain that the environmental uncertainty caused by adaptation problems and influences of behavioral uncertainty depends on a performance problem. Business partners implement steps to avoid uncertainty, such as applying contracting processes like planning, promises, and governance and sometimes using more costly approaches like vertical integration (Williamson, 1985). Therefore, uncertainty incurs more cost to business partners.

According to Williamson (1991: 282), “*asset specificity of a transaction refers to the degree to which the assets used in support of the transaction can be redeployed to ‘alternative uses and by alternative users without the sacrifice of productive value.’*” The high-specific asset contains a small value outside the particular investment (Rindfleisch & Hide, 1997). Williamson (1991) highlighted that six types of asset specificity have been introduced, including site-specificity, physical asset specificity, human asset specificity, brand name capital, dedicated asset, and temporal specificity. As asset specificity increases, the ability to reuse such assets decreases, which increases bilateral dependency between two transaction parties. Accordingly, contracting hazards between two transaction parties also increased (David & Han, 2004). As a result, maladaptation costs and more asset-specific transactions are pushed to more integrated control structures (David & Han, 2004; Williamson, 1991). According to the TCE, this situation will incur additional bureaucratic costs, which must be offset by bilateral adaptive benefits. Once a specific investment is made in a transaction, the partner (buyer) involved in the transaction may threaten to stop purchasing those products that begin with a relationship-specific investment. Therefore, the specific asset investor imposes the essential capital cost on the investment partner (Klean, 2007). Williamson (1991, p. 284) graphically illustrated those transactions done with low asset specificity use market mechanisms if it is in the middle level use hybrid forms and finally, with high asset specificity use hierarchical forms of governance to minimize the cost.

In the 1990s and 2000s, many institutions were active in directing foreign aid to a poverty eradication agenda to halve poverty stated in the Millennium Development Goals and improve global well-being by 2015 (Brocklesby & Fisher, 2003). It began with the Brundtland Commission Report 1987 (Solesbury, 2003). Accordingly, the resulting “*livelihood*” concept provides a new perspective for the study of rural poverty alleviation as well as rural development and environmental protection in developing countries. Robert Chambers inaugurated the concept of sustainable livelihood at the Institute of Development Studies (IDS) (Solesbury, 2003). They

provided a working definition, which the Department of International Development (DFID) later accepted. It mentioned, “A *livelihood comprises the capabilities, assets (stores, resources, claims, and access) and activities required for a means of living; a livelihood is sustainable which can cope with and recover from stress and shocks, maintain or enhance its capabilities and assets, and provide sustainable livelihood opportunities for the next generation; and which contributes net benefits to other livelihoods at the local and global levels and in the short and long-term*” (Chambers & Conway, 1992, p. 7). Chambers and Conway (1992) explained that the concept of “*livelihood*” refers to a means of ensuring livelihoods of people, and people’s livelihood activities, as well as their tangible assets (warehousing and resources) and intangible assets (ownership and access). Another widely used definition said a livelihood encompasses the capabilities, assets (including both material and social resources), and activities for a means of living (Carney, 1998). This DEID framework was further developed because it faced some criticism on operationalizing it in the conflict-affected livelihoods and vulnerable people. Therefore, the DFID framework was modified by adding political assets as another aspect (Kulatunga & Lakshman, 2010).

The widely adopted DFID sustainable livelihood framework has four strands. First, people have vulnerability contexts (sudden shocks, trends over time, and seasonal changes). Second, are the capital assets people use for their livelihoods (natural, financial, physical, human, and social capital). Third are people’s livelihood strategies (choices and methods), and fourth are policies, institutions, and processes held to form people’s access to assets and livelihood activities (Brocklesby & Fisher, 2003). Researchers who expected to examine the success of sustainable livelihood programs employed the capital asset-based approach since it is more influential for people’s livelihood (Carney, 1998; Priyanath & Habaragamuwa, 2020; Priyanath & Lakshika, 2020; Scoones, 2009). The above five types of capital have been included in the framework. Natural capital consists of land and produce, water and aquatic resources, trees and forest products, wildlife, wild foods and fibres, biodiversity, and environmental services (Priyanath & Habaragamuwa, 2020; Serrat, 2017).

People need various financial foundations and support for their livelihood success, and financial capital considered all the financial capabilities, including savings, credit, and debt (formal, informal), remittances, pensions, wages, subsidiaries, lumpy properties in this context (Devereux, 2001; Priyanath & Habaragamuwa, 2020; Serrat, 2017). According to the nature of requirements, physical capital can be divided into two: common infrastructure such as transportation, shelter, water, energy, communication production machinery equipment and tools; determining the household living condition including house infrastructure, appliances, and basic needs of living conditions. Apart from these agricultural hand tools and facilities such



as irrigation, land conditions, seed, fertilizer, and pesticides are also included (Ansoms & McKay, 2012; Priyanath & Habaragamuwa, 2020; Serrat, 2017)

Some researchers considered human capital to be one of the major driving forces of livelihood success (AvilaFoucat & Rodríguez-Robayo, 2018). Characteristics of people including household size, age, number of individuals engaging in earning activities in a household, health, nutrition, education, knowledge and skills, capacity to work, and capacity to adapt are used to determine the human capital (Avila-Foucat & Rodríguez-Robayo, 2018; Priyanath & Habaragamuwa, 2020; Serrat, 2017). According to Horsley et al. (2015, p. 376), “*Social capital refers to the social norms, rules, and institutions that regulate people’s lives.*” Some important facets of social capital which researchers mostly considered are cooperation among households (patronage, neighbourhoods, affiliation), formal and informal groups, institutional networks, relationships of trust, norms and reciprocity, collective representation, and leadership (Horsley et al., 2015; Mushongah & Scoones, 2012; Priyanath & Habaragamuwa, 2020; Serrat, 2017).

### **3. Hypotheses**

**Opportunism transaction cost and livelihood success:** Williamson (1985) principally concerned opportunism as a behavioural attribute embodied in transaction parties, and it is defined as self-interest-seeking by the exchange partners. Opportunism generates due to asymmetric information. According to the information processing power variations, the data attempts to mislead, distort, and disguise information also fluctuates (Williamson, 1985). Partner background was one of the aspects some researchers paid attention to (Rindfleisch et al., 2010). Transaction parties who obtain more information are capable of misleading the other party. Livelihood activities of people mostly consist of micro and small-scale industries, especially Samurdhi recipients in Sri Lanka. This study is especially concerned about micro creditors whom the Samurdhi Development Banks provided for livelihood activities. The TCE explains less information dissemination between transaction parties generates opportunism, and therefore, TC exists. Who has less information is misled by another transaction party who is enriched with more information (Nootboom 2006; Williamson, 1981). If opportunism exists, these micro industries encourage protecting them from opportunism by implementing costly approaches that are additional to the production cost. Those approaches include finding new partners, making agreements, make more attention to transactions, etc. These additional conditions, which are followed to avoid opportunism, generate TC and reduce the outcome of the livelihood activities (Knight, 2015; Priyanath & Butsala, 2017; Priyanath & Premarathne, 2017; Ranatunga et al., 2021a). Thus, the study predicted that;

*H1: Opportunism positively relates to the transaction cost of the Samurdhi Beneficiaries in Sri Lanka*

*H2: Opportunism negatively relates to the livelihood success of the Samurdhi Beneficiaries in Sri Lanka*

**Bounded rationality and livelihood success:** As Williamson noted in 1985, the company's lack of information about the contract reduces the likelihood of making the right decisions freely. Economizing businesses takes two forms based on bounded rationality. One concerns decision-making processes and the other involves formation of control structures. The bounded rationality thereby increases the cost. Limited rationality increases a supplier's ability to use alternative means of contracting because the business partner does not have the cognitive skills and rationality needed to identify the supplier's behaviour. As a result, TC may increase (Nguyen & Crase, 2011; Priyanath & Buthsala, 2017; Ranatunga et al., 2021b). In the face of bounded rationality, an exchange generates fear among the partners. Thus, the parties to the transaction seek to protect their transaction from the opportunistic behaviour of the adversary. Therefore, added cost to the production cost called TC is established as the costs of finding business partners, establishing transactions, monitoring, and enforcement for safeguarding from such unbalanced opportunism of the engaged partners (Dyer, 1997; Priyanath & Buthsala, 2017; Williamson, 1985). Bounded rationality creates barriers in gathering, processing, and assessing information for attending proper decisions affecting business success (Zhang, 2009). The unevenness of information processing in small industries relative to their business partners generated higher costs and negatively affected their business performance (Priyanath & Buthsala, 2017; Ranatunga et al., 2021b). Samurdhi recipients as micro-industry holders cannot realize the marketing behaviour of their business partners because most of them are not nourished with educational and business knowledge, and they should implement more safeguarding. It would have to incur a higher cost to balance the situation, and it leads to reducing their performance, which finally affects livelihood success. Therefore, the study predicted that:

*H3: Bounded rationality positively relates to the transaction cost of the Samurdhi Beneficiaries in Sri Lanka*

*H4: Bounded rationality negatively relates to the livelihood success of the Samurdhi Beneficiaries in Sri Lanka*

**Uncertainty, transaction cost, and livelihood success:** The TCE states that if an organization faces behavioural and environmental uncertainty over opportunism, a mechanism must be put in place to build a more credible basis for overcoming that uncertainty (Jalonen, 2012; Williamson, 1985). In order to avoid the impact of uncertainty on economic organizations, especially risk, the organization needs to use

higher security, which can increase transaction costs and significantly affect economic performance (Ranatunga et al., 2020; Yousuf, 2017). Ranatunga et al. (2020) and Priyanath and Premarathne (2017) confirmed that uncertainty negatively affects the performance of small businesses in Sri Lanka because the uncertainty increases the TC of the small businesses, and this TC reduces the income and, finally, performance. As Samurdhi recipients are largely micro-credit-driven micro-industries, they are affected by both behavioural and environmental uncertainties due to opportunism, and political, cultural, and social effects (Kulatunga & Lakshman, 2010; Priyanath & Habaragamuwa, 2020). Thus, the study predicts that:

*H5: Uncertainty positively relates to the transaction cost of the Samurdhi Beneficiaries in Sri Lanka*

*H6: Uncertainty negatively relates to the livelihood success of the Samurdhi Beneficiaries in Sri Lanka*

**Assets specificity, transaction cost, and livelihood success:** Asset specificity can be a major factor influencing the transaction costs of any business (Glaucio, et al., 2011; Williamson, 1985). The inability to easily non-re-deployable transaction-specific investments can cause problems for business entities and therefore generate potential costs on the need for protection (Dyer & Chu, 2003). Transaction partners are more troubled with protecting proprietary knowledge or technology from other business partners in the high asset specificity. When trading on asset specificity, it is necessary to plan and find trading methods in addition to the basic trading activities, which can lead to generation of TC as an additional cost (Furubotn & Richter 2010). When Samurdhi recipients are encouraged to be micro-entrepreneurs, they are directed to a specific production function. Microloans are also given to such specialized products, and training programs are also conducted to train them for particular production (Department of Samurdhi Development (DSD) 2017). Therefore, they are subject to asset specifications. As a result, they are less likely to replace their products and thus give into the opportunism of the raw material supplier as well as the buyer. To get rid of it, there are transaction costs for finding trusted people, entering into contracts, supervision, etc. Adding those costs to their product line reduces profits and impedes livelihood success. Thus, the study predicts that:

*H7: Asset specificity positively relates to the transaction cost of the Samurdhi Beneficiaries in Sri Lanka*

*H8: Asset specificity negatively relates to the livelihood success of the Samurdhi Beneficiaries in Sri Lanka*

**Transaction cost and livelihood success:** TC includes the cost before executing a transaction such as search cost, contracting cost, monitoring cost, and enforcement

cost that should be spent by the exchange parties and it will be added to the price of the production (Dyer, & Chu, 2003; Macher, & Richman, 2008; Williamson, 1985). TC reduces the performance of small industries because their profit margins are reduced by the TC, and its effect on the outcome of the business (Priyanath & Buthsala, 2017; Ranatunga et al., 2021b). Samurdhi beneficiaries engage in micro industries, and they suffer the effect of TC because of their bounded rationality in the face of uncertainty. Therefore, the study assumed that:

*H9: Transaction cost negatively relates to the livelihood success of the Samurdhi Beneficiaries in Sri Lanka*

**Mediator effect TC in the relationship between TC determinants and livelihood success:** This section explains the mediatory role of the TC in the relationship between transaction cost determinants and livelihood success. According to the hypotheses established in the above section, opportunism, bounded rationality, uncertainty, and asset specificity increase the TC of the micro industries of Samurdhi recipients. Samurdhi recipients have to incur additional costs based on the opportunism of other parties in making their livelihoods as micro-entrepreneurs. Although the additional costs are due to this opportunism, the parties act opportunistically because the Samurdhi recipients have limited rationality, they face uncertainty over individual behaviour and the environment, and their industry is directly or indirectly equipped with specific assets. These additional costs reduce the success of the Samurdhi recipients' livelihood activities. Additional costs include finding trusted business partners, maintaining contracts with them, checking whether they are doing the right thing, or otherwise influencing them. These can be taken as transaction costs as a mediating variable. Accordingly, transaction cost determinants have a negative impact on livelihood success, and transaction costs as a mediating variable exacerbate that negative impact. Therefore, this study assumes that:

*H10: Transaction cost has a mediating role in the relationship between opportunism and livelihood success of Samurdhi Beneficiaries in Sri Lanka*

*H11: Transaction cost has a mediating role in the relationship between bounded rationality and livelihood success of Samurdhi Beneficiaries in Sri Lanka*

*H12: Transaction cost has a mediating role in the relationship between uncertainty and livelihood success of Samurdhi Beneficiaries in Sri Lanka*

*H13: Transaction cost has a mediating role in the relationship between asset specificity and livelihood success of Samurdhi Beneficiaries in Sri Lanka*

The study focused on three theoretical aspects: TC determinants, TC, and livelihood success. TC determinants comprise four features: opportunism, bounded rationality, uncertainty, and asset specificity, and these four features act as the independent

variable of the model. According to the research objectives, research is expected to examine the relationship between these determinants and the livelihood success of the Samurdhi Beneficiaries in Sri Lanka. Therefore, livelihood success is considered the dependent variable, while TC is the mediating variable between TC determinants and the livelihood success of the Samurdhi Beneficiaries in Sri Lanka. According to the conceptual framework, 13 hypothetical relationships can be established between these variables, and Figure 01 depicts these associations among variables.

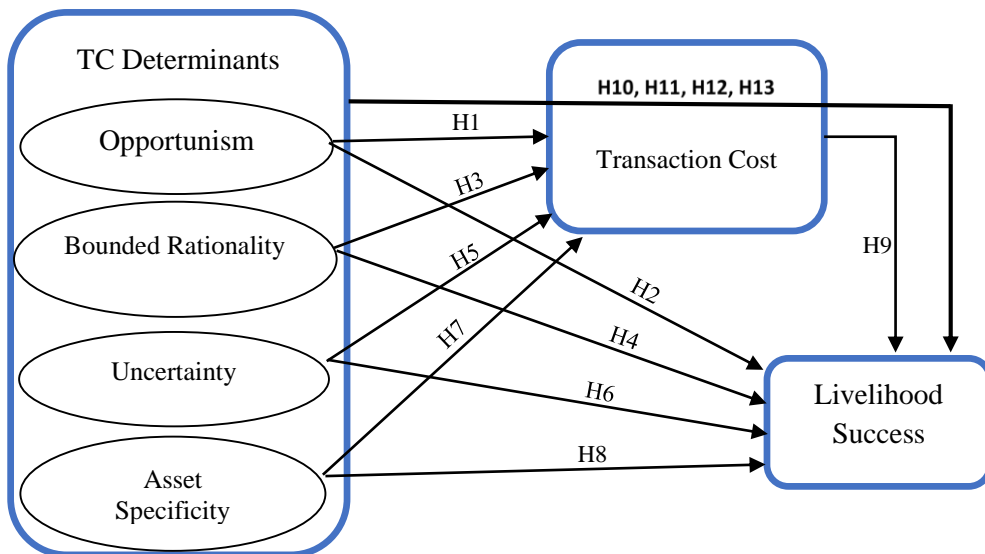


Figure 01: Conceptual Framework

#### 4. Methodology

Three components of the theories have been combined to solve the research problem through conceptually constructed relationships, and therefore the deduction approach has been used, thus the method is quantitative. The study selected Samurdhi beneficiaries as the unit of analysis in two provinces of Sri Lanka, Sabaragamuwa and Uva, as two clusters. All Divisional Secretariats were selected within these two provinces. The list of all members of each province engaged in income-generating activities obtained from the Department of Samurdhi Development was taken as the sample frame. Simple random sampling was utilized to select two villages from each DS Division and selected all Samurdhi beneficiaries engaging in income-generating activities as a cluster. The sample consisted of 1820 beneficiaries (Sabaragamuwa 1120, Uva 700). A systematically designed structured questionnaire administered by an enumerator to the individual respondents in the sample, was employed as the data collection tool.

Opportunism has been measured as buyer and supplier opportunism on examining dishonesty in dealings, cheating in dealing, less sincerity in dealing, overestimation, breach of agreement, and unreasonable bargaining when doing the transactions (Priyanath, 2017; Ranatunga et al., 2021c; Rokkan, et al, 2003). Bounded rationality, which is mainly concerned with information limitation, has been operationalized according to the three major themes: limitations in accessing information, assessing information, and the capability to make good decisions on such information (Priyanath, 2017; Ranatunga et al., 2021b). Uncertainty is measured as environmental and behavioural. According to the study context, environmental uncertainty is measured on technological demand and supply. Demand and supply uncertainty is measured by employing four items each, and technological uncertainty depends on the skills and application changes and is measured using two items (Chen & Chen, 2003; John & Weitz 1988; Ranatunga et al., 2020). According to Chen and Chen (2003), Kamyabi and Devi (2011), and Ranatunga et al. (2020), behavioural uncertainty is measured by employing another two items evaluating the performance of transaction parties and evaluating the risk of opportunism. Asset specificity refers to the investment in physical and human capital that is transaction-specific and loses value in other uses. According to Brouthers, et al. (2003), David and Han (2004), and Rindfleisch and Heide (1997), three aspects utilized to operationalize assets specificity include site-specificity, physical assets specificity, and human asset specificity. TC has operationalized by identifying costs related to the search for a party with whom to transact, costs incurred on making negotiations between exchange partners, the cost of monitoring the performance of the supplier, and addressing problems that might arise in the relationship with the supplier (Christian et al., 2011; Nguyen and Crase, 2011; Priyanath, 2017). Livelihood success was measured based on five dimensions, including physical capital, human capital, financial capital, natural capital, and social capital (Gunasekara et al., 2017).

According to the conceptual framework, Partial Least Square - Structural Equation Modelling (PLS-SEM) was recognized as the most appropriate analysis technique for multiple independent and dependent variables. The study used this technique, and the reliability and validity tests and the efficiency of the model was examined by multicollinearity issues,  $R^2$ , effect size ( $f^2$ ), and predictive relevance ( $Q^2$ ). The SmartPLS (version 3.0) software is used to analyse data.

## 5. Results and discussion

Considering the sample characteristics, out of the 1820 respondents, the majority (68.85%) were female while 31.16% were males. The descriptive data exhibited that the majority (72.1%) of respondents were aged between 40 and 69 years, 19.8% were between 30 and 39, 2.9% were below 29, and 5% were above 70 years. Furthermore, the marital status of respondents shows that 94.67% were married, 2.09% of

respondents were unmarried, and 3.24% were widows. In terms of education, 5.33% of the respondents were without any formal education. The most represented 60.44% of educational levels were those have studied up to the Ordinary and Advanced levels. This was followed by eight respondents representing 0.44% who were with bachelor's degrees. The majority of respondents 75.99% earned less than LKR 20,000 monthly income; 18.85% earned between LKR 20,000 - 40,000 monthly income; 4.51%, earned above LKR 40,000 monthly income.

Evaluating the validity and reliability of the measurement model are two factors that need to be considered in depth when obtaining the results of data analysis in PLS-SEM (Hair et al., 2012; Thatcher, 2010). Evaluation of reliability consists of indicator reliability and internal consistency reliability. Similarly, examining the measurement model's validity depends on convergent and discriminant validity (Hair et al., 2014). Appendix 01 shows the result of 17 first-order endogenous latent variables used in the study. Since the standardized factor loading values exceed the minimum threshold criterion of 0.7, those variables reached the indicator reliability at a statistically significant level of 0.05. Cronbach's alpha ( $\alpha$ ) and composite reliability were used to examine the internal consistency reliability, and, all indicators exceeded the threshold of 0.7 and confirmed the reliability. Average Variance Extracted (AVE) has been utilized to evaluate the convergent validity of the first-order constructs and all the AVE values of indicators are above the threshold of 0.5. Therefore, the first-order indicators satisfied the convergent validity.

The next step is expected to examine the discriminant validity, and according to Fornell and Larcker (1981), the square root of AVE in each latent variable is utilized. All inter-construct correlation values are lower than the square root of the AVE values. It indicated that the Six latent variables applied to the second-order had been formed in the first-order structural model.

Six second-order constructs were formulated on the latent variable scores of the first-order constructs, namely, Assets Specificity, Livelihoods, Opportunism, Rational Ability, Transaction Cost, and Uncertainty. Factor loadings which are higher than 0.7, and their t-statistics also significant at 0.05 level. Cronbach's  $\alpha$  and composite reliability evaluations are also greater than the recommended value of 0.7 on all constructs, and it indicates that those constructs obtained internal consistency reliability. All the AVE values are higher than 0.5. It depicts the second-order construct endorsed by the convergent validity. The study evaluated the discriminant validity of the second-order constructs. Square roots of all the AVE values are higher than the inter-construct correlation values, and it satisfies the criterion of the discriminant validity of the second-order constructs.

According to the given guideline by Hair et al (2014), the inner model was evaluated. First, collinearity issues are analysed, and VIF values are lower than the recommended value of 5. The tolerance levels are also greater than the recommended value of 0.2, and it depicts that the model does not contain any multicollinearity issues between the constructs.

Secondly, the PLS bootstrap process was used to assess the significance of the path coefficient ( $\beta$ ) values and t-statistics to identify the effect of TC determinants on TC and the livelihoods of Samurdhi beneficiaries. The estimated t-value should be larger than 1.65 for a significance level of 90%, 1.96 for a significance level of 95%, and 2.58 for a significance level of 99% in a two-tailed t-test (Hair et al., 2014). Table 01 reveals the results of the analysis. Eight out of the nine hypothesized relationships can be accepted.

**Table 01: Path Coefficient and Significance**

	<b>Relationship</b>	<b>Beta</b>	<b>t Statistics</b>	<b>Decision</b>
<b>H<sub>1</sub></b>	Opportunism -> TC	0.378	16.554	Accepted
<b>H<sub>2</sub></b>	Opportunism -> Livelihoods	-0.190	11.456	Accepted
<b>H<sub>3</sub></b>	Bounded Rationality -> TC	-0.200	10.599	Accepted
<b>H<sub>4</sub></b>	Bounded Rationality -> Livelihoods	0.532	31.875	Accepted
<b>H<sub>5</sub></b>	Uncertainty -> TC	0.288	12.905	Accepted
<b>H<sub>6</sub></b>	Uncertainty -> Livelihoods	-0.071	4.623	Accepted
<b>H<sub>7</sub></b>	Assets Specificity -> TC	0.037	1.509	Not Accepted
<b>H<sub>8</sub></b>	Assets Specificity -> Livelihoods	-0.076	4.250	Accepted
<b>H<sub>9</sub></b>	TC -> Livelihoods	-0.224	12.414	Accepted

Source: Survey data, 2021.

The third step is reserved for evaluating the correlation between independent and dependent variables (Hair et al., 2014). According to the given criteria, the model contains  $R^2$  as 0.67, 0.33, and 0.19 are considered substantial, moderate, and weak, respectively. The relationship between TC determinants and the Livelihood success



of Samurdhi Beneficiaries includes 0.671 (substantial), and the relationship between TC Determinants and TC contains 0.458 (moderate) correlations. Finally, another two steps were employed to determine the effect size and the predictive relevance of the TC Determinants and TC on all dimensions, according to Cohen (1988) and Chin (1998). These variables obtained large explanatory power. The bootstrapping of the indirect path in Smart PLS-3 has been conducted to evaluate the mediating role of TC in the relationship between TC determinants and livelihood success. Table 02 shows that the TC has a partial mediating role.

**Table 02: Mediating Role of TC**

<b>Hypothesis</b>	<b>Beta</b>	<b>t Statistics</b>	<b>P Values</b>	<b>Decision</b>
Assets Specificity - > TC -> Livelihood Success	-0.008	1.875	0.061	No mediation
Opportunism -> TC -> Livelihood Success	-0.085	9.327	0.000	Partial Mediation
Uncertainty -> TC - > Livelihood Success	-0.065	9.509	0.000	Partial Mediation
Bounded rationality -> TC -> Livelihood Success	-0.045	8.172	0.000	Partial Mediation

Source: Survey data, 2021.

The study predicts opportunism has a positive impact on the TC of Samurdhi beneficiaries and a negative impact on their livelihood success. The result exposed that opportunism makes a significant impact on increasing the TC of Samurdhi beneficiaries ( $\beta = 0.378$  and  $t\text{-value} = 16.554$ ). Opportunism reduces their livelihood success by 19.0% ( $\beta = -0.190$  and  $t\text{-value} = 11.456$ ). Therefore, H1 and H2 hypotheses were accepted. Although it is difficult to find similar studies done in this regard, according to Ranatunga et al. (2021a), opportunism negatively impacts the performance of Small and Medium Scale Industries in Sri Lanka by 23.0% ( $\beta = -0.230$  and  $t\text{-value} = 1.831$ ). Samurdhi beneficiaries are involved in micro-level livelihood activities, and the findings are relatively accepted. The result revealed that Samurdhi beneficiaries suffer the hazard from the opportunistic behaviour of exchange partners that discourage livelihood improvement by increasing TC.

The effect of bounded rationality on transaction cost and livelihood success of Samurdhi beneficiaries has been tested under H3 and H4 hypotheses. According to the results mentioned in Table 06, bounded rationality positively affects TC by 20%

( $\beta = 0.200$  and  $t\text{-value} = 10.599$ ), and the H3 hypothesis can be accepted. This result proved the recently conducted similar studies (Priyanath & Premarathne, 2017; Ranatunga et al., 2021b). Subsequently, the H4 hypothesis can also be accepted because bounded rationality significantly reduces livelihood success by 53.2% ( $\beta = 0.532$  and  $t\text{-value} = 31.875$ ). Studies on the direct relationship between bounded rationality and livelihood success cannot be obtained from the past literature. Few similar studies have been conducted in the Sri Lankan context. Priyanath and Buthsala (2017) mentioned that rational ability, which is the opposite of bounded rationality, has a significant positive impact on the performance of Small Industries in Sri Lanka. According to Ranatunga et al. (2021b) who revealed similar situations in Small and Medium Scale Industries in Sri Lanka, bounded rationality has a negative impact ( $\beta = -0.152$  and  $t\text{-value} = 1.795$ ) on performance. Samurdhi beneficiaries are low-income people with a low level of education and are mostly employed traditionally. This study underlines that traditionally, they have solely relied on buyers or sellers to manage their micro-level livelihood activities and could not acquire the knowledge needed to step out of that structure. As mentioned above, opportunism also has a counterproductive effect on developing these micro-level livelihood activities. That increase is also greatly influenced by bounded rationality.

Hypotheses H5 and H6 established the relationship between uncertainty and TC and uncertainty and livelihood success of Samurdhi beneficiaries, respectively. Results obtained in the study depicted that uncertainty can impact 28.8% to increase TC of Samurdhi beneficiaries ( $\beta = 0.288$  and  $t\text{-value} = 12.905$ ). According to the results, uncertainty has an insignificant influence on livelihood success as negative 7.1% ( $\beta = -0.071$  and  $t\text{-value} = 4.623$ ), which is an acceptable relationship. Therefore, uncertainty has a significant effect on the livelihood success of Samurdhi beneficiaries. The influence of asset specificity on both TC and livelihood success has been explored in H7 and H8 hypotheses. Hypothesis H7 was rejected since the  $t\text{-value}$  is below the required threshold ( $\beta = -0.037$  and  $t\text{-value} = 1.590$ ). However, Hypothesis H8 has been accepted since its coefficient is  $-0.076$  and the  $t\text{-value}$  is  $4.250$ . The study of asset specificity on livelihood success has not been studied in the past literature, especially in such micro-level livelihood activities. These micro-level livelihood activities do not depend on adequate specific assets, and mostly they have fewer and predetermined opportunities according to the government requirements for means of living (Carney 2003). The government instructs them to conduct their livelihood activities regularly, and no opportunity cost appears when they switch business activities. Especially most of them act as farmers in the agricultural sector, and they have more opportunities to use their land and human capital without spending more cost. On the other hand, most of them rely on the same buyer (government organization) as well as on the same supplier.

The H9 hypothesis concerned the effect of TC on the livelihood success of Samurdhi beneficiaries. TC has a 28.8% negative impact on livelihood success ( $\beta = -0.288$  and  $t\text{-value} = 12.905$ ). This study establishes the results obtained by Priyanath and Habaragamuwa (2020) who found that TC has a 75.5% powerful negative effect on livelihood success. However, Priyanath and Lakshika (2020) mentioned that though TC has a negative impact, it does not significantly affect livelihood success in the Sri Lankan context.

Further, to reinforce the study findings, Table 02 analyses mediating effect of TC among the determinants and livelihood success. It represents that TC acts as a significant partial mediator between opportunism and livelihood success ( $t\text{-value} = 9.327$ ). The mediating role of TC between bounded rationality and livelihood success also has been assessed. Hence, Table 02 shows that there is a significant partial mediating effect of TC between bounded rationality and livelihood success ( $t\text{-value} = 8.172$ ). Finally, the mediating effect of TC between uncertainty and livelihood success has been analysed. Table 02 generated data supported to reveal that there is partial mediating of TC between uncertainty and livelihood success ( $t\text{-value} 9.509$ ). However, according to the results, it is proved that the TC formed with the major determinants such as opportunism, bounded rationality, and uncertainty generate negative influences on means of livelihoods, and the TC acts as a mediating role between several determinants (opportunism, bounded rationality and uncertainty) and the livelihood success among the Samurdhi beneficiaries.

## **6. Conclusion**

This research aims to study the impact of TC determinants on the livelihood success of Samurdhi beneficiaries. Thirteen hypothetical relationships were established in the conceptual design to understand the direct relationship and the mediating effect. According to the results, 11 hypotheses have been accepted, and the other two are rejected. Uncertainty and asset specificity have made negligible effects though other determinants have a significant impact on the livelihood success of the Samurdhi beneficiaries. This study found that bounded rationality is the most important TC determinant factor in increasing Samurdhi beneficiaries' TC and reducing their livelihood success. It has a significantly higher negative impact on livelihood success as well as theoretically increases opportunism which again negatively affects livelihood success. This study depicts the empirical situation of the theoretical explanation of TC determinants on the Samurdhi beneficiaries. TC as the mediating variable also significantly reduces livelihood success. It tends to intensify the negative effect of TC determinants on livelihood success except for asset specificity.

The study uses two theoretical concepts as transaction cost economics and sustainable livelihood to achieve the research objective. It uses a substantially higher sample size

for the empirical investigation. These research designs and empirical findings are especially unique in two aspects. First, the past literature has not empirically investigated the TC determinant factors on livelihood success. The latter is that although the effect of TC on livelihood success has been studied in the context of government-aided recipients, its mediating effect has been studied in very few studies. Thus, this research provides a higher empirical contribution to the research literature.

This study reveals that policymakers can gain valuable insights by minimizing bounded rationality by facilitating them with proper information channels to minimize TC in the livelihood activities of Samurdhi beneficiaries. Consequently, it can be used to reduce the influence created by both supplier and buyer opportunism suffered by the Samurdhi beneficiaries. Traditionally, the information channels of these people depend on a few contacts. Therefore, they always try to survive their livelihood activities with these few contacts, regardless of whether they are profitable. This approach must be changed, and the government must open up more opportunities to release the bondage that results from intermediate actions. Thus, policymakers need to expand these channels to fill the information gap in addition to providing them with financial benefits. Further, to help increase these people's rationality, government authorities are recommended to establish common centres to inform them of the market, suppliers, buyers, and other stakeholders. Further, the study enables the policymakers and Samurdhi beneficiaries to develop strategies to mitigate TC by improving the rational ability and transaction frequency, both helping to avoid the opportunistic behaviour of exchange partners and decreasing the transaction uncertainty that leads to improving the livelihoods of Samurdhi beneficiaries.

This research operationalized the independent variable, TC determinants, as four dimensions and transaction frequency have not been tested in the relationships. It has not been empirically tested previously in the domain of low-income micro industries. As a point of departure, researchers can further apply the used indicators contextually, according to the development of micro industries. The research was conducted in the Asian region, especially in developing countries where sustainable livelihood success is widely used, hence, different regions with different educational, social, and cultural milieus can be researched to arrive at more specific conclusions.

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# Cultural Tourism Potential in the Northwestern Province of Sri Lanka

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## **Abstract**

*The Northwestern Province (NWP) of Sri Lanka has a rich cultural and agricultural diversity and is home to all three main ethnic groups as well as all four major religions practiced in the country. The province is largely known for its coconut related industries, besides the rice, vegetable, and fruit cultivations. Fisheries, animal husbandry, and industries, both traditional and modern, further enrich the diversity of the province. Ancient, medieval, and modern heritages showcase the prosperity of a bygone era. The remnants of Portuguese, Dutch, and British are proof to the past colonial rule. The culture in the province has evolved around natural, historical, economic and religious practices. The objective of this paper is to analyze the NWP cultural tourism potential for local and inbound tourists. Secondary data is mainly used for the analysis. Findings suggest that the NWP has a huge diverse, and versatile cultural resource base to meet the requirements of modern inbound and local tourists. Most of these resources are still untapped with regard to cultural tourism.*

**Key Words:** *Cultural Tourism, Heritage, Development, Northwestern Province (NWP)*

## **1. Introduction**

The NWP is one of the nine provinces in Sri Lanka, and it was demarcated as a separate province in 1845 when Sri Lanka, then Ceylon, was under the British.<sup>1</sup> The

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<sup>1</sup> The Portuguese and the Dutch managed to control the coastal belt of the island about three and a half centuries. It was only the British in 1815 who succeeded in bringing the entire island under their administration. They began to establish in Ceylon a modern centralized form of government to which they were accustomed in their own country and established a common

total land area of the province, including the inland water areas, is 7,888 km<sup>2</sup>, making it the 5<sup>th</sup> largest province in Sri Lanka. Administratively, the province is subdivided into two districts: Kurunegala and Puttalam. It is further subdivided into 46 Divisional Secretary divisions and 2158 Grama Niladari (GN) divisions, the country's smallest and lowest administrative division tier. In addition to those administrative divisions, the province has one municipal council (Kurunegala), three urban councils (Puttalam, Chilaw, and Kuliyapitiya), and 29 Pradeshiya Sabhas. (Ministry of Internal & Home Affairs & Provincial Councils & Local Government, 2018).

Village is the smallest traditional social grouping (traditional clustered human settlement) both in province and the country. Accordingly, a GN division may carry one or more villages most of the time, and the province has 5861 villages. The province has become home to 2,380,861 people, representing 11.7% of the total population of Sri Lanka in 2012. The population density was 308 persons per km<sup>2</sup> in 2012. Urban, rural, and estate populations in the Kurunegala district stand at 1.9, 97.7, and 0.5, respectively, while figures in their counterpart district -- Puttalam-- are 8.8, 91.0, and 0.2 in 2012 (DCS, 2012).

The provincial GDP was LKR 1,593 billion in 2018, making it the third largest provincial GDP in the country after the Western and Central Provinces. Agriculture contributed 10.5% percent to the provincial GDP, while the contributions of industry and services were 27.2 and 54.0, respectively. (CBSL, 2019). In 2016, the poverty head count, poor population, and contribution to total poverty on the island were 2.7%, and 7.7%, respectively (CDS, 2016). The overall unemployment and youth unemployment rates in the province were 3.7% and 15.2%, respectively, in 2017 (DCS, 2017).

Major agricultural crops in the Northwestern province are coconut, paddy, and other cereals; rubber; root crops; vegetables; fruits; and cashew nuts; while the province is well known for its poultry farming, cattle keeping and fisheries. Major mineral resources of the province are silica sand, graphite, clay, miocene lime stones, and beach mineral sands. The province carries moderately fertile tracks of cultivable lands, inland waters, beaches, and the sea. The industrial sector of the province is strong as it produces cement, dairy foods, textiles, coconut-based products, and cottage industrial items.

The province is among several tourism hotspots including the Western Province, the Central Province, and the North-Central Province. The province also has a vast

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system of law for the whole island, bringing all persons under the rule of law and making them all equal in its sight. By 1838 Colombo had become the capital city of the entire Island. At the end of the 19th century, the island had been divided into nine provinces for administrative purposes. See Mendis, pp.5 and 84.

tourism resource base for domestic and inbound tourists, which is untapped. There are a few isolated tourism inbound destinations in locations such as Wennappuwa, Marawila, Kalpitiya and Chilaw. Those destinations basically promote the sun, sea, and sand tourism on the coastal belt of the province. There are other opportunities in the province to develop such tourism products such as rural, agro, culture, and mountain tourism. The hinterlands of the province provide ample opportunities for cultural tourism for both domestic and inbound visitors.

The purpose of this paper is to analyze the NWP's cultural tourism potential. The paper focuses on cultural heritages that reflect physical artifacts and intangible societal characteristics. Therefore, areas such as inscriptions, ruins, ancient and medieval temples, visual arts, performing arts and entertainments, sports and games, ceremonies, and cuisines are mainly highlighted.

The concept of culture encompasses all aspects of human life from birth to death in a particular society in the past and the present. The culture in a social grouping includes its beliefs, behavioral pattern, archaeology, ethnography and ethnology, folklore, local dialects, rituals, art, and crafts, building and architecture, technology, attire and ornaments, cuisines, production, exchange, consumption, religious practices, political practices and economic systems. This study emphasizes the ancient, medieval, recent past, and present through material remains and practices of social groupings.

Data for this study is largely collected from secondary sources such as articles, book chapters, books, reports, and web sources. The mixed method is used to analyze the data. The historical monuments and remnants of the province are brought under chronological order as ancient, medieval, and modern periods, while other components of the culture are based on thematic analysis.

The first part of the remaining section starts with the heritage of the ancient period, starting from the 6<sup>th</sup> century BC to the 13<sup>th</sup> century AD. The Wijaya-Kuweni saga is important in this section. The other key heritages of the ancient period are Hathtikutchi Monastery, the Ras Vehera Buddha Statue, and the Panduwasnuwara remains of the royal palace and the old monastery. All three are popular tourist destinations in the province's dry region.

The second section explains the heritage of the Medieval period spanning from the 13<sup>th</sup> century AD to the 19<sup>th</sup> century AD. It starts with the Dambadeniya kingdom, the first center of administration after the island's civilization shifted from Pollonnaruwa due to the Magha invasion. Thereafter, the other kingdoms: Yapahuwa and Kurunegala, are discussed along with their remnants. Similarly, medieval cave shrines (*Len Vihara*), shrines on pillars (*Tampita Vihara*), native rest houses (*Ambalamas*), Munneswaram and other Hindu temples, the Dutch Fort at Kalpitiya

Peninsula, Robert Knox, the 17<sup>th</sup> century British open prisoner, the Kaffirs community, Catholic and Christian churches, and temples of deities are discussed.

The third section deals with the Modern period from 1830 onwards. It covers bungalows and rest houses, railroad stations, bridges, and culverts in the province. The fourth part elaborates on the traditional practices, including visual arts, performing arts and entertainments, sports and games, and *ceremonies*.

The fifth section is on the proposed culture and tourism products for the provinces. It consists of the Vijaya-Kuweni trail, ancient religious pilgrimage sites, visiting legacies of the medieval period, the legacies of British rule, and existing traditional practices and cuisines. The last section is the conclusion.

## **2. Heritage of Ancient Period (6<sup>th</sup> Century BC to 13<sup>th</sup> Century AD)**

It is a long-standing tradition to account for the history of Sri Lanka as commencing from 544 BC on the basis that Vijaya, the prodigal son of a royal Aryan family in Bengal, north-east India, made a quite unexpected but important arrival on the island (Brohier, 1982). Then there were, legends say, primitive people belonging to three clans. Vijaya captured the throne with the help of a clan queen called Kuveni after eliminating the clan chieftains. He had arrived with seven hundred of his followers and kept close contact with India after settling down in the country (*Mahavamsa*, 1950). This conquest brought a considerable number of people to the island from their ancestral land, possessing admirable skills, knowledge, and culture. The ultimate result of the settlement was to transform the island's society from a primitive into a civilized one (Wimalaratana, 2016 November 10).

There are scholars like G.C. Mendis who in accordance with the popular European model categorize the entire history of the island as ancient, medieval, and modern. They claim that each period has distinct characteristics of its own, even though the division into periods does not always correspond to European chronology (Mendis, 1948). The NWP has an unmatched heritage from the arrival of Prince Vijaya through the ancient, medieval, and modern periods, so that the rest of this work is mainly organized according to ancient, medieval, and modern periods.

In this long period, the kingdom is said to have shifted from its original site of Thammannanuware to Wijithapura, Anuradhapura, Magama, Sigiriya, and Polonnaruwa. The period is considered to have been the heyday of Sinhalese civilization on the island. This period is invariably referred to as the "ancient period," the "Rajarata," or the "Anuradhapura-Polonnaruwa" periods. The civilization of this period was essentially that of the Dry Zone of the country, and the people lived in

isolated villages, produced their own foods and most of their necessities, and depended little on the rest of the country (Mendis, 1948) <sup>2</sup>.

**Kudiramalai:** This is an important destination of the ancient period heritage in the province. It is considered as the location where prince Vijaya and his followers landed and rested for a while before they met Princess Kuweni 544 BC. After resting on the shore, they noticed that their palms were a copper colour due to the copper-colored soil. Therefore, they named the island "*Tambapanni*" because of the color. Guneratne (2016) posits that this name is still used by the locals in the area to refer to the location in the NWP.

Brodie (1853) recorded that the first capital of Sri Lanka, built by Vijaya, received the name of Tambapanni, Tammanna Adaviya, or Tammanna Nuwara. It was visible about six or eight miles to the east of Puttalam, where a few rough pillars and slabs scattered at random in a thick jungle were the only remains visible (Brodie, 1853). According to Guneratne (2016), this ancient city is in the northernmost part of the Puttalam district and is within the Wilpattu national park. It is a natural harbour opens into the Gulf of Mannar, then it was world renowned for the pearl banks and was named "Hipporus" harbour by the ancient Greeks.

"During the reign of Emperor Claudius, a Roman tax collector by the name of Annius Placamus was caught up in a storm while in the Red Sea and blown off the coast of Arabia landed at the Kudiramalai harbour. This is believed to be during the reign of King Chandamukasiva. It is possible that Prince Vijaya landed here as well. The Roman historian Pliny mentions about the "Hipporus" harbour and about a settlement in close vicinity to a hill, which is most likely the Kudiramalai Mountain. According to the Bible (Old Testament 1 Kings 10:22) during the reign of King Solomon, (around 1000.B.C.) ships came to Tarshish and took sandalwood, gems, ivory, gold, silver, and peacocks. French Biblical scholar Samuel Bochart is of the view that

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<sup>2</sup> Except for a short spell in the Southern Magama kingdom, the whole civilization and seat of government had been centered in the northern Dry Zone of the country during the ancient period. *Lekam-mitiya* or the Sinhalese registers keep the records of old Sri Lanka's villages and departments. King Pandukabhaya fixed the boundaries of villages in all parts of the country in 437 BC See: Reimers 1928: 18. The political division that existed in the ancient period consisted of *Rājadhāni* or districts under the immediate supervision of the kings, *Janapada* or districts under chiefs, *Nagara* or cities, *Patunugam* or seaport towns, *Gam* or village communities with heads of villages. In addition, there were *Batgam*, villages granted by the king to individuals for special services or as special marks of honor, *Ayagam* villages paid taxes to the king, *Gopalugam* villages were occupied by herdsmen. There were also *Anabim*, pasture grounds, *Dabim*, game preserves, *Vanantara*, forests. see: de Silva 1928:64.

Tarshish was Kudiramalai.” (Guneratne, 2016, p.23).<sup>3</sup> Broken bricks, pottery, building materials, and remnants of old buildings can be seen in the area and surrounding areas. Unfortunately, most of the ruins were washed away by frequent high waves.

**Kuweni’s Palace at Wilpattu National Park:** Princess Kuveni, a descendant of the Royal line of King Ravana, lived in Sri Lanka when Vijaya and his 700 followers landed on the island (Dhammavasa, 2017). She was the first wife of Vijaya, the first king of Sri Lanka and had a son named Jeewahatta and a daughter named Disala. <sup>4</sup> Vijaya became the king of Sri Lanka after eliminating all the native chieftains with the support of Kuveni. The legends suggest that Princess Kuveni lived in a palace and ruled Kali Villu, which is the present Wilpattu National Park area. A few rough pillars and slabs in a thick jungle park are all that is visible now. However, no archeological excavations have been done to confirm whether these ruins are of a palace (Guneratne, 2016). Vijaya and his followers eventually chased her away from the place along with two children and married an Indian woman. Legends say that Kuveni committed suicide by flinging herself from the top of the *Yakdessagala* mountain of the NWP leaving behind her two children at *Bambawa* area (presently a village).

**Thonigala Rock:** The location is also called Lathonigala; its literal meaning is the rock of lamentation. Legends say that Kuveni lamented at the bottom of this rock on the way to her relatives after being evicted from the place by King Vijaya. It is said that she was cursing Vijaya at this location for the unjust deed committed on her. The rock is located close to Anamaduwa town, off Puttalam town. There are two well-known rock inscriptions dating back to the 1<sup>st</sup> Century BC on the *Thonigal* rock, written in early Brahmi scripts. Those are about a grant of an irrigation tank and village to a Buddhist monastery by a king. The large rock and the protected inscriptions are visible at the location now.

**Yakdessagala Mountain:** A tourist attraction with a height of over 540 meters can be found in Gonagala, Wariyapola of the NWP. Disillusioned Kuveni returned to her relatives in the Gonagala area to share her grief and dismay with them. Instead, they insulted her and chased her away for conspiring with an outsider to betray the clan.

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<sup>3</sup> Kuveni is also known as Kuvanna and Sesapathi in the literature. Aborigines of Sri Lanka venerate her, and they use such different names Maha Loku Kiriamma, Indigolle Kiriamma, Unapane Kiriamma, Kande Kiriamma, Divas Kiriamma, Wellasse Kiriamma, Kukulapola Kiriamma and Bili Kiriamma to refer her fondly.

<sup>4</sup> Claudius’s reign covers 24 January 41 – 13 October 54 AD (13 years and 9 months) and he was born 10 BC and died 54 A.D. (He died at the age of 63 years in Rome, Italy).



Disappointed by the rejection of her own people, Kuveni climbed up to the top of the Yakdessagala mountain, cursed her disloyal husband, and plunged to death.

**Tomb of Vijaya:** Medagama hill (*Medagama Kanda*) locates just about 6 km south-east from Panduwasnuwara archaeological sites discussed above. At the top of this hill lies ruins of an ancient pagoda (*dagoba*) conserved by the Department of Archeology since 1986. There is a strong belief that this pagoda contains the remains of the King Vijaya. The Department of Archeology carried out carbon dating of the ashes found inside the pagoda during conservation work. Findings suggested that ashes were about 2,500 – 2,600 years old (Amazing Lanka, 2023). The tomb of Vijaya (*Vijaya Sohona*) site can be reached via two routes. One of them is through the *Nikasala* hermitage (*Nikasala Aranya Senasanaya*). The other route is through the Medagama Kanda Rajamaha Viharaya (Pradeepa, 2019).

**Hathtikutchi Monastery:** *Hathtikutchi*, or *Eth Kus Wehera* (an elephant stomach-shaped pagoda), is a 300-acre archaeological site dating to the 4th–3rd centuries BC. The name of the location has been given due to a large rock resembling an elephant's stomach. Now it is visible in the middle of the ruins. Archaeological evidence suggests that the site was built by King Devanampiyatissa (307-287 BC), who oversaw the proselytization of Buddhism on the island. The exiled King Sirisangabo (251-253 AD) offered his own head to a passing passenger at this site to save the innocent people of the kingdom.<sup>5</sup> This archeological site is located close to Galgamuwa town in the Kurunegala District.

**Rock-Cut Ras Vehera Buddha Statue:** It is also known as Sasseruwa 33m height standing Buddha, carved out from a huge granite. This 2<sup>nd</sup> century statue is somewhat akin to the famous Avukana standing Buddha statue located just 11 km from this site.<sup>6</sup> The statue is an incomplete yet fantastic artwork. The robe of Buddha, one ear,

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<sup>5</sup> Siri Sangabo was a highly devoted Buddhist monarch who ruled the Anuradhapura kingdom during 252-254 BC period. The saint like monarch never violated Buddhist principles as explained in the doctrine for personal comfort. His chief minister rebelled against him as he knew the weak point of the king. Siri Sangabo abdicated the throne by himself to avoid unnecessary bloodshed and lived as an ascetic in Haththikutchchi without divulging his identity. The chief minister, the new king, announced a big reward for the head of the former king to deter a possible future risk. Several innocent individuals had been killed by greedy soldiers and others to claim the reward. A passing peasant disclosed what was happening in the kingdom while partaking his lunch parcel with the ascetic one day. The ascetic divulged his identity to the peasant and asked him to take his head and claim the reward. The historical records suggest that ascetic decapitated his head by himself for this purpose. See Wimalaratana, W and Silva, DAC (2004)

<sup>6</sup> Legends say that Ras Vehera and Avukana Buddha statues are results of a competition between teacher (guru) and pupil (gola). The teacher carved out the Aukana image and the pupil made the Ras Vehera one. Both agreed that the first one to accomplish his job had to

ornament above the head and pedestal are not complete. This is an archaeological site cum temple consisting of a pond, ruins of pagodas, painted caves, inscriptions, moonstone, and a sacred Bo tree (fig tree) planted by king Devanampiyatiss (250-210 BC).

**Panduwasnuwara:** It is located 27 km away from the Kurunegala city. The roots of this ancient city can be traced back to the reign of the first king of Sri Lanka, Vijaya. This sub kingdom was first built by Upatissa, the chief minister of Vijaya in the 6<sup>th</sup> century.

This subkingdom was also known as Parakrampura of Dhakshinadesha (South Country) while it was ruled by Parakramabahu the Great (1123–1186), a sub-king of the region, before he moved to Pollonnaruwa as the monarch of the country. The ruins of the site are scattered across 20 hectares and the main attractions among others are monasteries, a palace, shrines, pagodas, living quarters for priests, carved pillars, guard stones, inscriptions, moats, and brick ramparts.

### 3. Heritage of Medieval Period (13<sup>th</sup> century AD to 19<sup>th</sup> Century AD)

This period runs from 1235 AD until the whole island became a British colony in 1815. The invasions from southern India and the civil wars forced the Sinhalese rulers to leave their ancient irrigation civilization in the northern parts of the country and to establish themselves in the south-west, the "wet zone," of the island, which was the least developed area during the ancient periods. This is sometimes considered the dawn of the medieval period of the island's history (Mendis, 1948). The power of the Sinhalese monarchy was greatly reduced with the shift to the south-west, and several princes began to control the various parts of the island (Rajaratnam, 1961). Throughout this period, except for a brief interlude during the reign of Parakramabahu VI (1412–1468), the country had more than one monarch. It was during this period that the strengthening of feudal bondage, the decline of ancient prosperity, the mushrooming of small kingdoms, and the European invasions took place.

**Dambadeniya Kingdom:** This kingdom lasted from 1232 to 1293 AD, just over six decades. Several kings reigned in this kingdom beginning with King Vijayabahu the Third, and he built the fortress in the kingdom. The visitor will enjoy seeing the remains of the fortress, palace, temple of the tooth, six ponds, granite staircases to the

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notify it to the other by ringing a bell. The teacher finished the job earlier and signalled it by ringing the bell. The pupil stopped his work once he had heard the bell without finishing the work as he lost the competition.

top of the rock, and paintings and images of the temple at the bottom of the rock. The site is located just 26 Km away from Kurunegala city.

**Yapahuwa Kingdom:** A short-lived citadel built by King Buwenakaba (1273-1284 AD) in the aftermath of a South Indian invasion on a massive, 90-meter-high rock boulder in flat land. The medieval period Buddha statues, remains of a pagoda, a tooth relic house, caves used by priests, paintings, carved staircases leading to the top of the rock, moats, ramparts, and a lion stone sculpture are great attractions for the visitors. The site is located close to Maho city in Kurunegala district.

**Kurunegala Kingdom:** Kurunegala, the current capital of the Northwestern Province, is also alternatively known as Hathi Shayla Pura, Athugal Pura, and Ethagala due to the elephant-shaped rock (the city of Elephant Rock) in the middle of the city. As the capital of the island, this kingdom was ruled by five kings. The main ruins of the kingdom are a stone staircase leading to the top of the rock and nearby old tanks.

**Medieval Cave Shrines (*Len Vihara*):** A cave is a natural chamber protected by an overhanging rock from rain and other natural forces, as well as from creatures. Sometimes drip lines are carved to keep the interiors dry. These chambers were converted into Buddha image rooms as well as living quarters for Buddhist priesthoods in the ancient and medieval periods in Sri Lanka. In addition, some of the caves were dedicated to local deities. One of the most famous cave temples dedicated to Buddha in Sri Lanka is located at Dambulla (1st century BCE), in the Central Province. The Northwestern Province has nearly a hundred such medieval cave chambers with images, murals, paintings, and carved wooden entrances (Sugathananada & Sumana, 2018).

**Medieval Shrines on Pillars (*Tampita Vihara*):** A Buddha image house hanging on raised rock pillars, usually not more than 3 or 4 feet in height, is referred to as a "*Tampita Viharaya*" (shrine on pillars). Pillars are in an exposed state, and the chamber built on them carries a wooden platform and wattle walls supporting a timber-framed roof. The inner walls are decorated with murals and paintings, and the inner chamber is for Buddha images. The roof is two-pitched and covered with flat tiles. One entrance with a carved, thick door frame with decorated doors and a wooden ladder are common features. There are some occasions where such shrines have narrow verandas encircling the main courtyard. The medieval *Tampita Viharayas* are visible in some parts of the island, even though most of them are in the Northwestern Province. It is maintained that there are nearly 50 such shrines visible in this province (Sugathananada & Sumana, 2018).

**Medieval Native Rest Houses (Ambalama):** Ambalama is used to refer to a simple structure meant as a resting place for those who were passing the village. It is mostly used by peddlers, travelers, and those who are on pilgrimages through perilous footpaths. It was built and maintained by villagers, and resting facilities were provided free of charge. The *Gam Sabhava* (village tribunal) is also assembled in Ambalama. The famous 13th-century Panavitiya Ambalama is located near Dambadeniya, on the road between Dambadeniya and Naramamala.

Most males spent their free time in the *ambalama* discussing matters pertaining to agriculture and court affairs. Transport and communication in the countryside were very limited, and it was not found necessary to develop those facilities (Wimalaratana, 2000). There are three more *amabalamas* located in Karagahagedara, Delvita and Katupilagolla in the NWP (Sugathananada & Sumana, 2018).

**Munneswaram and other Hindu Temples:** This temple complex is in Munneswaram village, a mixed community neighbourhood of Sinhalese and Tamils in Chilaw city. It has existed for at least 1000 years, although legends suggest that its roots go back to King Rama of India. There are five temples in the complex, including its Buddhist temple. The central temple is dedicated to the god Shiva, and others are dedicated to Ganesha, Ayyanayake, and Kali. Annual festivals of the temples are conducted in August–September.

In addition to the above temple, there are many other Hindu temples both in Kurunegala and Puttalam districts. Among others, the Sri Muththumari Amman Temple of Mawatagama, the Sri Selva Vinayagar Temple of Kurunegala, the Sivan Temple of Rajakandaluwa, the Sri Thirowpathai Amman Kovil of Mundel, and the Sri Raakkurushi Amman Kovil of Mundel are well known (Kiriella, 2019 October 05).

**Dutch Fort at Kalpitiya Peninsular:** In 1544, the Portuguese invaded the Kalpitiya area and built a chapel and maintained a small garrison. In 1659, the Dutch captured the area from the Portuguese. This fort was built by the Dutch during the 1667–1676 period while they were controlling certain coastal areas of the island. The fort is four meters high and built with coral and limestone gathered from the area. It is maintained that the yellow bricks at the entrance were brought from Holland. In 1795, it was captured by the British. A church, a large hall, two old wells, and two blocked tunnels are still visible inside the fort (Explore Sri Lanka, 2019 July 10).

**Robert Knox, the 17<sup>th</sup> Century British Open Prisoner:** Robert Knox was an English sea captain employed by the British East India Company. He was taken prisoner by the men of the Sinhalese king while he was on shore with another fourteen people, including his father, after their ship had dropped anchor in Trincomalee's natural harbor, the Eastern Ceylon, after being damaged in a storm. He lived as an

open prisoner (1660–1681) of the Kandyan kingdom and mostly lived at Bandarakoswatte, close to Wariyapola town in Kurunegala District. His father died nearly one year after the captivity. Knox's book, 'An Historical Relation of Ceylon' written with the help of his cousin, Rev. John Strype, after his return to England, was first published in 1681. The book was an immediate success, and Dutch, German, and French translations soon followed. Knox lived in the Kandyan kingdom as a villager for nearly twenty years. (Hulugalle 1976: 106–107). The visitor can first read Knox's *An Historical Relation of Ceylon* to get a sense of 17th-century culture in Sri Lanka, and then visit Bandarakoswatte, the village where he lived, to understand the cultural changes that have occurred in the society since that time.

**Kaffirs Community in Sri Lanka:** In Portugal, black Africans were called *Negros* and *Pretos* even though they had borrowed the Arabic term *Cafre* when they came to the East. The Dutch and the British used its adapted version, *Kaffirs* or *Kaffers*, and the Sinhalese and Tamils used it as *Kaapiri* and *Kaapili* respectively. They were first brought to the island in small numbers during the Portuguese period to work as mercenary soldiers, domestic laborers, and to do other menial tasks as needed. The Dutch and British also brought some other Kaffirs, again in small numbers (Arachchige, 2017). All three European nations involved in the rule of the island employed Kaffirs in one way or another. At the same time, some of them defected to the Sinhalese controlled areas during the Portuguese and Dutch periods. There were 255 *Kaffirs* on the island in 1921, and 155 of them were in the NWP (Puttalam District had 135). The others were living in the Western, Southern, Central, Northern, and Eastern Provinces (Jayasooriya, 2008). The *Kaffir* concentration, numbering twenty-five families, is now visible in Sirambiadya in Puttalam District. They still perform their inherited music and dance. Their traditional dance, the *kaffiringa*, and songs are in Portuguese Creole, a mix of Portuguese and Swahili. Two drums, tambourines, metal spoons, coconut shells placed on a wooden box, and an empty bottle with coins completed their musical instruments (Saldin, 2011).

**Catholic and Christian Churches:** Sri Lanka received direct European cultural influence, including Christianity, with the arrival of the Portuguese in Colombo in 1505. They established a chapel in the same year and spread the new religion mostly in the coastal belt of the island. The coastal belt of the Northwestern province received much influence not only from the Portuguese but also from the Dutch and the British, in that order. The churches built in the 17<sup>th</sup> century in Wennappuwa, Marawila, Chilaw, and Puttalam testify to the emerging European culture along with Christianity. There are many beautiful and well mainlined churches along the coastal belt of Puttalam district as well as the hinterlands of the same district and Kurunegala district.

**Temples of Deities:** There are Sinhalese, Tamil, Buddhist, and Hindu and Veddha deities either locally or nationally believe by some people. There are even female deities, even though most deities are male. Four deities—Vishnu, Saman, Kataragama, and Vibhishana—are regarded as the guardians of Buddha-sasana (Buddha's doctrine and practice) on the island.

#### 4. Modern Period Since 1830

Britain successfully captured the entire island in 1815, paving the way for the country's modern era. Sri Lanka's economy was basically still overwhelmingly feudal in nature, so economic stagnation continued in the country until the 1830s, when the gradual success of coffee culture revolutionized the economy (de Sliva, 1977). It is from this point in history that the decay of the medieval economy becomes most apparent (Vandendriesen, 1960). The 1840s were a period of progress and the beginning of economic diversification (Karunatilake, 1971). The expansion of the coffee plantations in the country from the 1840s to the 1870s created profound changes in the economy and society of the island. New towns, roads, bridges, and the sheltered port of Colombo came on the rising tide of the coffee culture; and a banking system, engineering workshops, hotels, department stores, and a flood of imported goods followed. (The Ceylon Chamber of Commerce). The modern 'export economy' was fully established in the country before the end of the nineteenth century with the growth of the coffee industry (Corea, 1975). The coconut plantation expanded into large, medium-sized, and large-scale estates during the British period in the NWP. A new production, distribution, processing, and exporting culture emerged because of the coconut cultivation. In many parts of the NWP, modernization forces have infiltrated even the villages.

**Bungalows:** There are many bungalows built during the British period, even though a few of them date back to the pre-British period. Mathawa Bungalow (Kandy Period); Madampe, Gadigamuwa, and Puttalam Bungalows (Dutch Period); Government Agent Residence of Kurunegala, Rajapihilla Rest House of Kurunegala, Mahabaddegama, Pannala, Dodangahapitiya, Katuwapitiya, Malagamuwa, and Giriulla Bungalows (British Period).

**Rest Houses:** There were no restaurants or hotels when Europeans arrived on the island. When the British officials travelled in the hinterland, they did not have facilities for refreshments, meals, and accommodation, so British rule established restaurants throughout the country. There are several such old restaurants still visible in the NWP.

Special accommodation facilities were developed for migrant Europeans in Sri Lanka, especially in the hinterlands, as there were no such facilities for travelers except in *Ambalamas* on the island. As places for travelers to rest for the night, they

were developed by the British colonial administration by extending the network for travelling officials begun by the Dutch. Rest houses were usually built in superb locations, each within a day's horseback ride of one another (Ellis, 2010). The Dutch administration started rest houses in the coastal belt, and the British administration expanded those facilities to be close to important locations, especially in every small city center that emerged during the period.

## **5. Traditional Practices**

In any society, traditional practices and customs are ingrained and have evolved for centuries. People have practices and beliefs that are learned since birth and passed down from generation to generation. Traditional practices and customs are fundamentally creative aspects of the achievements of any civilization. The NWP province has its own unique practices in addition to the common practices on the island.

**Visual Arts:** The scope of this area encompasses craft, architecture, sculpture, painting, drawing, photography, filmmaking, graphic design, fashion design, fashion, and decorative arts. Traditional drums and other musical instruments; coconut and palmyra leaf based traditional products; clay and wood based traditional products; cane and bamboo-based products; traditional handloom products; lacquer products, coconut shell and timber-based products; aquatic grass-based products, etc. are practised and visible in the NWP.

**Performing Arts and Entertainments:** The theme of performing arts covers a range of disciplines such as music, dance, theatre, and circus. The province is home to folk lore, folk dance, and folk music; traditional healing practices (such as Kem); and traditional dance rituals (such as Shanthikarma, Yaksha Pelapali, Kohomba Kankariya, Bali Shanthikaramaya, Gammadu, Pandam Dolaha, Devatha Pasdena Pideeme Shanthi Karmaya, and Sarwadosha Niwarana Shanthikarmaya) are still visible in NWP.

**Sports and Games:** Physical activities are involved with games and sports. There are plenty of traditional as well as modern such activities in the province. Puttalam district, especially the coastal belt, is famous for soccer, *Elle*, volleyball, etc. at the school level as well as at the club level. Similarly, at the school and club levels, Kurunegala district is well-known for cricket, *Elle*, netball, and *Angampora*. During the traditional new year period of the second half of April, many traditional games are played.

**Ceremonies:** The most important ceremony, which is widely celebrated in the province, is the Sinhala-Hindu traditional new year, falling in the middle of April. It carries both secular as well as religious components, though the former is more

dominant. It is a cluster of ceremonies and sports, so nearly a week-long celebrations are held.

Vesak (Buddha Poornima) is celebrated grandly in the province on the full moon in May, with many decorations, observing precepts at temples, giving food and blood donations, lighting candles, and illuminating religious places as well as city centers and private houses. Going on pilgrimages, singing carols, and participating in religious processions are some of the other important aspects of the ceremonies. Two-to-three days are set aside for the ceremonies, depending on the attraction of the location.

A similar function is held the following month, on the full moon day, to commemorate the introduction of Buddhism to Sri Lanka by the son of Indian Emperor Ashoka. In addition, on every full moon day, there are small gatherings and ceremonies visible at Buddhist monasteries. A few Buddhist monasteries also host processions or pageants at various times of the year. More religious ceremonies are visible during and at the end of the Buddhist priests' retreat period of the year.

There are numerous household-level ceremonies, ranging from conceiving and delivering children to first feeding, first hair cutting, first time reading letters, puberty, traditional weddings, new house construction, burials, and cremations, transferring merits to departed ones, and ceremonies related to fresh rice harvest, among others.

**Cuisines:** There is a rich and diverse culture of cuisine in the province. It has been shaped by historical, cultural and external factors. More traditional vegetable varieties and delectable fish-based cuisines can be found in Kurunegala and inner Puttalam districts. The coastal belt of the Puttalam district is famous for meat and fish-based cuisine with Portuguese and Dutch influence, especially among Christian communities. Similarly, the Hindu and Muslim communities in the province practice their own delicious cuisine.

Rice and curry together are considered the staple diet in the province, although there are also different types of yams, bread, hoppers, string hoppers, and flat bread (rotti and parata) made from wheat flour as well as finger millet flour that are available in the province. As a centuries old practice, when dishes are prepared, coconut milk, coconut oil, and lots of spices are added. Kee Rotti, a kind of dessert made from rice flour, coconut milk, and sugar; Thelkola Embula, a kind of creeping green leafy vegetable; yellow-colored coconut salad, a kind of half boiled grated fresh coconut with spices to eat with string hoppers; and baby cashew nut curry are unique cuisines mainly confined to the province.



## **6. Cultural Tourism Products for NWP**

Cultural tourism encompasses archaeological sites, culinary activities, events, or heritage sites such as monuments and religious venues such as monasteries, temples, and churches. Any culture creates its own authenticity and distinctiveness for the visitor. Cultural tourism arouses tourists' desires to discover, learn about, and enjoy the tangible and intangible cultural assets offered in a destination.

**Vijaya-Kuweni Trail:** Tambapanni, now Kudiramalai, is a cape on a mountain range in the Wilpattu National Park. It is an ancient port town located on the northernmost west coast of the park. The distance from Colombo to this location is approximately 180 kilometers. It takes nearly four hours and 30 minutes to travel from Colombo to Kudiramalai; from Puttalam, it is one hour and 10 minutes. There is one hotel in Kudiramalai and many hotels in nearby towns, including Vankalai, Nanattan, Kovvankulam, Mannar, Puttalam, Mahawewa, and Negombo.

The legends suggest that Princess Kuveni lived in a palace and ruled Kali Villu, which is in the present-day Wilpattu National Park area. A few rough pillars and slabs in a thick jungle park are all that are visible now. The location is one hour's drive from Kudiramalai (Wijesinghe, 2019 October 7).

Thonigala Rock, where Kuveni lamented on the way to her relatives after being evicted from the place by King Vijaya. The distance from Puttalam to Thonigala is 24 km, and the travel time is 30 minutes. The travel time from Wilpattu to Puttalam is 1 hour, and the distance is 52 km.

Records suggest that disappointed by the rejection of her own people, Kuveni climbed up to the top of the Yakdessagala mountain, cursed her disloyal husband, and plunged to her death. The distance from Puttalam to Yakdessagala is 79 km, and the travel time is 1 hour and 45 minutes, depending on the traffic congestion.

The tomb of Vijaya is located at Medagama Hill in Paduwasnuwara, just 6 km away from the Panduwasnuwara archaeological site. The distance from Puttalam to this location is about 74 km, and the travel time is around 1 hour and 40 minutes.

It will take a traveler nearly 3 days to cover the Vijaya-Kuweni trail if he covers Wilpattu National Park and climbs up to Yakdessagala. Accommodations, resting places, and quality food supplies are available in and around the cities and on the way for the traveler. Colombo-Puttalam, Kurunegala-Puttalam, Anuradhapura-Puttalam, and Mannar-Puttalam are the key access roads to the Vijaya-Kuweni trailer.

The Wilpattu tour, including Kudiramalai and Kuweni Palace, is either a one-day or half-day tour. The visitor can select either a private or group safari, which is provided by the private tour operators in Wilpattu. A half-day tour is also available, but it will not be sufficient for the traveler to get the best value for his money, so it is better to

go for a one-day tour. Visitors should leave their hotels in Negombo, Chilaw, Puttlam, or Anuradhapura early in the morning. The Wilpattu Park is open from 6 a.m. to 6 p.m.

**Ancient religious pilgrimage sites:** The roots of Panduwasnuwara date back to the reign of the first king of Sri Lanka, Vijaya, in the 6<sup>th</sup> century BC. The distance from Colombo to Panduwasnuwara is a little over 100 kilometers via the Katunayake expressway, or nearly one and a half hours of travel time. It will take nearly three hours to cover the site. From there to Haththikutchchi, it takes nearly one and a half hours, and the distance is nearly 70 kilometers. The visitors will find many ancient ruins in this location. The distance from Haththikutchchi to Sasseruwa or Ras Vehera is about 24 kilometers, and the visitor will take forty minutes to reach the site from Haththikutchchi. The site is in Kudakathnoruwa village. It is an attractive, scenic place with a colossal granite Buddha statue and a pond nearby. It will take an hour and a half to cover those three sites. There are a few hotels, restaurants, and resting places close to each site in the region.

**Visiting legacies of medieval period:** The medieval period roughly extends from the 13<sup>th</sup> century AD to the dawn of the 19<sup>th</sup> century AD. The ruins of Dambadeniya Palace and the nearby royal temple are important to the visitor. The distance is nearly 75 kilometers via the Katunayake expressway. It will take nearly 4 hours to cover all sites. The distance from Dambadeniya to Yapahuwa is nearly 67 kilometers. The visitor will need 5 hours to see all the ruins at this site. Panavitiya Ambalama is on the way from Dambadeniya to Yapahuwa, nearly 9 kilometers. One hour would be sufficient to cover this important location. One day is sufficient to visit all three locations if the visitor leaves Colombo early in the morning.

From Colombo to Munneswaram, the distance is 86 Km. Just one hour is sufficient to visit this Hindu temple. From there to Kalpitiya, this distance is 89 Km. It is a tourist peninsula with an attraction and developed facilities for inbound tourists. Medieval shrines on pillars, and cave shrines are scattered in several locations in the province. Medieval Catholic churches as well as mosques are also visible in the province.

**Visiting the legacies of British rule:** The visitor will pass through the coconut groves of the province for most of the travel time, except for the northern dry areas of the province. While traveling the province, he will come across the bungalows built during the British period, and most of them have been converted to hotels and restaurants now. Similarly, there are British period rest houses, administrative buildings, and railroad stations scattered throughout the province.

**Experiencing the Traditional Practices and cuisines:** There are villages in the province famous for visual arts, performing arts, and entertainments. However, the visitor can see sports and games, ceremonies, and cuisines that are widely available throughout the province during different seasons. In more remote areas, the visitor may find traditional practices in pristine form to a great extent, although modernization forces have changed many characteristics for a considerable period in the past.

## **7. Conclusion**

The NWP Province has a huge, untapped cultural resource base that can be promoted among locals and inbound tourists to develop the provincial economy. The community-based cultural tourism products will generate new livelihoods for educated people and markets for local products. Similarly, there will be demand for transportation, accommodations, and local products. There is a possibility to tie up cultural tourism with other tourism products such as rural tourism, mountain tourism, wellness tourism, agritourism and spiritual tourism. The overall economic implications by way of creating new jobs, investments, demand for local products, etc. will be high if overlapping tourism products are promoted.

With regard to cultural tourism, the Vijaya-Kuweni trail, which deals with popular stories about the origins of Sri Lankan society, will be in high demand among local tourists. This tourism product will certainly overlap with the adventure, mountain, and rural tourism products as the Vijaya-Kuweni trail passes through forests, sanctuaries, rural areas, mountains, etc. The inbound tourists will be interested in experiencing the traditional practices such as ceremonies, cuisine, visual arts, etc.

It is possible to introduce a few more packages reflecting the different cultural aspects of the province. Three specific tourism attractions would be ancient, medieval, and modern period related packages. Similarly, products related to NWP cuisines, ceremonies, and religious places can also be promoted. Many tourists do not have sufficient knowledge about the culture and tourism resources inherited by the province.

The major local and inbound tourism flows, such as those to Anuradhapura, Sigiriya, Habarana, Polonnaruwa, Trincomalee, and Jaffna, pass through the province mainly by roads and rail roads. Still, the province has not exploited its vast tourism potential in general or its cultural tourism potential. Now, a few private tour operators are promoting cultural tourism in the province in a small way. Similarly, various volunteers and organizations offer limited web-based information to prospective visitors. A concerted effort, however, has not been taken officially, either at the national or provincial level, to promote tourism in the province.

The promotion of tourism, including cultural tourism, will bring a welcome relief to the province by way of generating employment and livelihoods and improving the tax revenue of local governments, the Pradeshiya Shaba, and the provincial council. Household income in the province will increase directly and indirectly, and it will increase the standards of living while reducing poverty. Interactions with the tourists will open doors for the local people to explore new economic opportunities within their neighborhood. The expansion of tourism will help increase the provincial GDP as well. The dependency on government subsidies will also go down with the growth of new economic opportunities. There will be negative implications such as environmental degradation, growing crimes, and erosion of local cultural values if the industry is not properly managed.

Cultural tourism potential in the province is basically in rural areas. This potential showcases the heritage, old structures, traditions, rituals, cuisines, values, and lifestyles of rural communities. A participatory approach in cultural tourism has more potential for promoting it in rural areas. Communities in the countryside still guard their cultural heritages, so participation in local societies can be considered a step toward the realization of self-reliant sustainable development and a reasonable distribution of economic opportunities among tour operators and local communities. Participatory planning to promote cultural tourism builds trust between policymakers, tour operators, and community members. This trust can be considered a steppingstone for future tourism development in rural Sri Lanka.

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# Factors Affecting Fintech Acceptance: A Qualitative Case Study in Sri Lanka

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## Abstract

*With the COVID-19 outbreak, an increasing trend to shift toward cashless transactions in Sri Lanka is witnessed. With the emergence of JustPay, LankaQR, Genie, etc. most of the barriers in the local Fintech industry have been removed. However, empirical studies have revealed that even though there has been a strong implementation of digital payment methods in the country, their adoption by consumers is relatively low. This study analyzes the experience of Fintech industry players in Sri Lanka in promoting Fintech solutions in the country, particularly identifying the factors affecting Fintech acceptance by consumers. This study employed a qualitative case study approach with five CEOs from Fintech firms in Sri Lanka. Semi-structured interviews were conducted, and data was analyzed thematically. The findings of the study revealed that consumers' awareness about Fintech services, Fintech's ability to serve the real-life needs of consumers, consumers' trust, availability of digital infrastructure facilities of the country, the convenience offered by the products are the main factors that directly affect Fintech acceptance. All the CEOs who were interviewed highlighted the importance of building consumer trust and awareness.*

**Keywords:** *Cashless, Fintech acceptance, Digital payments, Qualitative study*

## 1. Background of the study

Fintech is the ellipsis for Financial Technology, which implies the application of innovative technologies in financial services (Vives, 2017). Furthermore, this can be identified as a separate business segment comprising innovative startups who

extensively use technologies to build more efficient financial systems (McAuley, 2015). On the other hand, it is a separate business model which focuses on providing financial services by using mobile devices or software. In consequence, both new startups and incumbent players in the Fintech industry offer the fastest, most inexpensive, and customer-oriented products and services. Thus, the existing players in the financial services sector, including commercial banks, investment banks, finance companies, insurance companies, and leasing companies have been threatened due to disruptive challenges brought down by these innovators. This development in the financial services sector is widely known as the “Fintech Revolution” and can be seen as the convergence of Technology and Finance to reshape the industry.

Since 2015, Fintech services have seen an increase in awareness as well as adoption<sup>1</sup> globally (EY Fintech Adoption Index, 2019). In 2015, the year in which the first EY Fintech adoption index was published, the global Fintech adoption rate stood at 16%. Then the rate increased to 33% in 2017 and to 64% in 2019. Further, 96% of global consumers are aware of at least one alternative Fintech service available and, 3 out of 4 global consumers use a money transfer and payments Fintech service (EY Fintech Adoption Index, 2019).

Andriole (2017) also highlighted that Fintech adoption speed varies across nations. This is because those countries that have a well-developed digital infrastructure can leverage Fintech very fast. Thus, a high correlation between highly developed digital countries and Fintech adoption can be seen. Further, people tend to adopt these tech-savvy products in those countries as most of them can work with digitally driven applications easily. However, this is not the case in developing nations where there is a lack of digital infrastructure capabilities such as broadband network connection, cloud, big data, and cybersecurity and people lack with required technological literacy. However, there is a lot of potentials for Fintech startups to launch their products in developing nations as most of the developing nations believe Fintech is a suitable means of reaching their expected level of financial inclusion and resulting in inclusive growth.

When considering the Sri Lankan situation, compared to regional peers Smartphone ownership in Sri Lanka, the age group of 15-65 is at just 54% and others use basic phones with no internet connectivity (Kemp, 2022). As a result, a significant proportion of the Sri Lankan population is still unconnected. Further, investigations

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<sup>1</sup> Fintech Adoption is used here to refer to the widespread use of a new application, product or process (Frost,2020).

have revealed that limited skills, lack of digital literacy, lack of awareness, and relatively unaffordable services are the root causes of this situation.

When compared with the regional peers, there is a high bank penetration in the country as there is a wide range of financial service providers. Thus, most people have access to conventional physical bank branches. However, due to formal and transparent procedures applied by these conventional service providers, a large section of the population is excluded from the formal financial system. As a result, mainly the poor households from rural areas are in the informal financial sector relying much on cash and physical assets which are very much riskier and costlier (Kelegama, 2014). Further, Thennakoon (2021) highlighted that the mere existence of many financial institutions may lead to some adverse effects if it is driven by unregulated entities.

With the technological revolution, both the unbanked and underbanked populations received greater access to financial services. For example, peer-to-peer (P2P) payment services allow individuals to directly pay others through apps without cash or checks. P2P lending services or social lending connects borrowers directly to investors. Thus, those who need money can easily access funds without complying with the rigid processes of formal financial institutions. In this backdrop, Fintech can be used to better serve those living in rural areas.

Several studies have been conducted in identifying the factors affecting Fintech adoption intention using quantitative research methods. However, there is a dearth of studies that applied qualitative research methods by taking Fintech industry players' concerns into consideration. Thus, this study aims at identifying factors affecting Fintech adoption intention in Sri Lanka from the industry players' perspectives by applying qualitative research designs. The application of the qualitative approach in this study is worthwhile as it enables the revealing of the industry players' perspectives in the context of the research as extant quantitative research has considered only the consumer perspectives.

Since Sri Lanka is still at its early stage of Fintech adoption, this area was not much attractive for researchers to carry out their studies and to add their constructive findings to the field. However, due to the current COVID-19 pandemic and subsequent difficulties faced by households due to the lockdown, consumers are increasingly looking at alternative ways to access their financial services. Thus, the finding of this research may help both potential start-ups in the field of Fintech and incumbent players in the financial service industry to identify the factors affecting Fintech acceptance in Sri Lanka and thereby enable them to design more customer-oriented products. It may also lure the users for frequent use and attract non-users to do their first online financial transaction. Further, consumers of the financial services

industry will also benefit at large as their primary concerns are well communicated to the service providers, which in turn shifts them towards a more consumer-centric approach. Further, policymakers including the Central Bank of Sri Lanka (CBSL), relevant ministries, and departments will be informed on designing policy framework.

Section Two and Three of the paper present the current theoretical and empirical undercurrents and the methodology respectively. Section 4 presents the knowledge gathered from the industry participants in the Fintech sector, followed by the conclusion.

## **2. Literature Survey**

Increased levels of digital transformation in the financial services industry resulted in the emergence of Fintech all around the world. Given the widespread of Fintech products and services across the world, there is a growing number of Fintech consumers entering the market. However, the survey results of eminent consultancy firms show that the rate of 'Fintech Adoption' varies across the countries significantly (for example, EY Fintech Adoption Index (2019), PWC Global Fintech Survey (2017). Adoption is referring to reflecting the extensive use of new applications products or processes. King and Nesbitt (2020), also confirmed that Fintech is being adopted across markets worldwide unevenly. In their analysis they highlighted that in developing countries adoption is driven by unmet demand for financial services and in other economies, adoption can be related to high costs of traditional finance services, supportive regulatory environment, and other macroeconomic factors.

EY Fintech Adoption Index (2019) revealed that Fintech has captivated the world by entering the mainstream of all the markets they surveyed. Emerging markets are leading the way. For example, survey results revealed that both China and India showed a high adoption rate of 87% and Russia and South Africa, both with 82%. Among developed countries, the Netherlands, the UK, and Ireland lead in adoption. Further, when comparing the statistics provided in the EY Fintech Adoption Index (2015), the adoption rate of Australia, Canada, Hong Kong, Singapore, the UK, and the US have pitched from 16% in 2015 to, 31% in 2017 to, 60% in 2019. Survey results also confirmed the rapid growth of global Fintech adoption than anticipated as 64% of the global adoption rate in 2019 which exceeded by 12% the expected growth rate of 52% predicted in 2017. In the same way, between 2013 to 2018, Global investment in Fintech doubled more than six times, from USD 18.9 billion to USD 111.8 billion. Junger & Mietzner (2020), conducted a survey to investigate the adoption of new technologies and services in the financial services industry by German households. Their findings revealed that 31% of survey respondents could imagine moving away from traditional service providers to Fintech indicating that

these new providers are capturing a significant market share from the incumbents. Although this accelerating pace of growth in Fintech firms can be mainly highlighted in both developed markets, such as emerging markets, different to that of developing countries.

Further, consumers show a remarkably high rate of awareness of Fintech services as globally, 89% of consumers are aware of the existence of in-store mobile phone payment platforms and 82% are aware of peer-to-peer payment systems and non-bank money transfer services driven by Fintech (EY Global Fintech Adoption Index, 2019). However, when considering the global adoption rate of Fintech services only money transfers and payments have a higher adoption rate of 75%, and other Fintech categories such as savings and investments, budgeting and financial planning, insurance, borrowings are shown a less adoption rate of less than 50% (EY Global Fintech Adoption Index, 2019). Further, the Small and Medium Enterprises (SMEs) survey also revealed that 56% of SMEs use banking and payment Fintech services. These statistics clearly show that there is a selective adoption of Fintech services by both global consumers and SMEs. More importantly, this dichotomy has put forward the potential barriers of Fintech adoption in several Fintech service categories (Singh et al., 2020).

A significant gap between consumer awareness in Fintech and their adoption of Fintech services was also investigated through a survey carried out by CGI Group Incorporation in 2016<sup>2</sup>. Accordingly, they found that an average of 72% of consumers are aware of Fintech with an average of 33% of consumers reporting current and planned behavioral intention to adopt Fintech services. Further, the survey results show that consumers overwhelmingly prefer their current financial institutions. Thus, consumers expect their current players to provide them with value-added digital services they required mainly for reasons of trust, value, and convenience. Further, the survey results show that consumers prefer other traditional service rating them as their second choice and leaving non-traditional service providers or the Fintech firms as their third choice. Thus, from the Fintech firms' point of view, consumer attraction is a significant challenge.

Sukaris et al. (2021) highlighted that although there is a rapid growth of Fintech in Indonesia, adoption or the utilization of those services is fairly low. The reason for the situation is that a significant percentage of people still use bank transfers, internet banking, and Cash on Delivery (COD) even for digital trading transactions. It is expected that while payment using E-Wallets and E-money are less a significant growth can be expected as there is an increasing trend among people to use

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<sup>2</sup> <https://www.theglobaltreasurer.com/wp-content/uploads/2018/03/CGI-Transaction-Services-Survey-2016.pdf>

smartphones. Even though Fintech firms have been popular in developed and emerging markets it is not the case in developing countries (Buckley & Webster, 2017). Sarma and Pais (2011) highlighted those countries that exhibit a high level of per capita income, literacy and have better access to information and tend to be more financially inclusive than those experiencing low levels of such factors. Based on a systematic study, it was revealed that as of now the availability of cross-country data on Fintech investments and adoption is patchy but the data available is improving. Using the data from the World Bank, International Monetary Fund (IMF), and other market research, Frost (2020) observed that Fintech adoption is significantly varying across countries. The study also revealed that different countries tend to show a varying level of adoption among different Fintech products. For example, Both UK and the US have achieved significant growth in terms of credit platforms whereas mobile payments have been picked up in most of the emerging and developing countries such as India and Bangladesh. The study also highlighted the availability of significant variance of Fintech adoption among certain cities in the same country. Frost (2020) also argued that while Fintech markets are larger in developed markets it is more important for developing nations as it tailors to the people without access to formal banks. This indicates that Fintech firms can leverage their business into developing countries while serving well for the larger potential consumer base in those countries.

As a whole a significant portion of the population in developing countries are still unbanked and thus, is excluded from the formal financial ecosystem. A key reason for this is the presence of a large portion of the rural population. In general, these people treat Fintech with suspicion due to a lack of awareness. As a result, inequality between unbanked people and people with a bank account is still significant in these economies. This gap is widening with regard to rural areas. Key barriers to financial inclusion include a lack of personal documents and credit history, poor financial infrastructure, logistical and delivery challenges due to lack of necessary infrastructure, restrictive regulations, and financial products offered by banks in main cities that are more appropriate for an urban population. The large unbanked/underbanked population of developing economies makes it an attractive region for Fintech companies to develop solutions and to go to market.

Since the Fintech industry is rapidly growing in both developed and emerging markets, this has been an attractive field for researchers. As a result, several studies report findings in different areas of Fintech in these advanced economies (eg. Shiau et al., 2020; Singh et al., 2020; Hasan et al., 2022). Due to the availability of sufficient empirical studies and evidenced-based assessments, Fintech firms in advanced economies are already familiar with the business environment, regulatory conditions, and more importantly consumer characteristics which enable them to develop new

products on this basis. Yet, developing economies present a far more challenging environment. Since the experience of obtaining financial services is vastly different these differences need to be accommodated for Fintech to thrive in developing markets. This is because of lack of studies carried out mainly in identifying the consumers' desires. Further, as discussed above, developing economies present common characteristics pertaining to consumer perspectives on Fintech products and services. However, inadequate attention has been paid to scholarly work in developing a suitable framework that can be applied in identifying the important factors that affect Fintech adoption intention of customers in these economies. Thus, this study mainly focuses on developing a framework specifying such important attributes.

Chen (2016) explains that a massive growth of Fintech adoption in Asia was witnessed due to the phenomenon called 'Scenarization of Finance' which elaborates the concept of integration between finance and real-life needs. As per Chen (2016), it is the shift from 'Fintech' to 'Finlife'. He highlighted that the purpose of technology is not to make finance better, but to make finance serve the real-life better. As the world's second largest economy, China records the fastest Fintech growth well above the United States. China has achieved this success merely through integration between technology and real-life needs. Chen (2016) has initiated the concept of senarization of finance through deeper analysis of the Fintech success story of China. The concept of senarization of finance is useful for financial inclusion as it shows how fast consumers can obtain access to finance through new technology. Further, the long-lasting success of Fintech innovations depends not on how complicated the technology is, but by how well they satisfy real-life needs. Accordingly, this study is focusing on assessing the Fintech players' point of view on their business model and its integration with consumer's real-life needs.

### **3. Methodology**

In this study, the social constructivism research paradigm is used as the researcher aims to understand a phenomenon from the perspective of those experiencing it. Yin (2009) stated three key reasons for selecting the case study method as; answer "how" or "why" questions, the investigator must have little control over events, and the focus of the research must be on a contemporary phenomenon within a real-life context. Yin & Cohen (1984) stated three types of case studies: exploratory, descriptive and explanatory. Of them, the exploratory case study method is selected as the appropriate qualitative research design to answer the research question.

The purpose of establishing the reliability of a qualitative study is to ensure to which extent the researcher can ensure that the findings of the study are consistent with the raw data he collected (Lincoln & Guba, 1985). Therefore, before analyzing the data

the author ensured that the transcripts of each five respondents are free from errors by confirming that those are transcribed as reported by the participants. Also, an inter-coder agreement was established consensually by checking the agreement of coding with the independent coder and reconciling the thematic sets (Wong & Cooper, 2016).

With respect to validity, both descriptive validity and interpretive validity were established. As per Christensen et al. (2014) descriptive validity refers to accuracy of the descriptive information reported by the researcher. 'Investigator triangulation' helps the researcher establish descriptive validity (Wong & Cooper, 2016). Accordingly, descriptions of the researcher were cross-checked with an independent coder's descriptions of the interview transcripts, and finally come up with valid descriptions of the analytical results. Interpretive validity was established to ensure that the researcher accurately understands the participant's viewpoints (Altheide & Johnson, 1994). The interview transcripts were checked by the participants to get their feedback and thereby established interpretive validity.

The researcher conducted semi structured interviews with Chief Executive Officers (CEOs) from Fintech companies to explore the strategies that they follow to attract more consumers. The purpose is to answer the research questions: how Fintech Firms can drive the Fintech adoption intention in Sri Lanka? and what are the suitable strategies that can be applied by industry players to promote Fintech products in the future? These interviews were conducted online on the Zoom Video Conferencing system. Exploratory case study is used as the research design and thematic analysis was applied in analyzing the qualitative data obtained from five cases in the study.

Thematic Analysis (TA) is used as the data analysis method under the exploratory phase of the research. The purpose of selecting TA is to identify the patterns across the viewpoint of different participants in answering the research question as the rigorous thematic analysis can produce trustworthy and insightful findings (Braun & Clarke, 2006). The themes were developed inductively from the raw data. Consequently, this study employed a data-driven inductive way of thematic analysis. The following process was applied in analyzing the data (Nowell et al., 2017).

- Familiarizing with the data
- Generating initial codes
- Searching for themes
- Reviewing themes
- Defining and naming themes
- Producing the report

Familiarization involves critical engagement with the data (Braun et al., 2016). The purpose of getting familiarizing with data is to get a deep understanding of the data



and to familiarize with the content. Thus, to get familiarized with the data author was involved in transcribing the audio files through listening participants' responses several times. After preparation of the transcripts the author took up reading and re-reading of the transcripts to ensure that the data is known. This stage helps identify the data that addresses the research questions (Belotto, 2018).

Coding is a key step in TA as it provides basis for the theme development. At this stage the author has identified and highlighted the key areas of interest which are helpful to achieve the research questions. Inductive coding was used in this study. Accordingly, the codes were developed based on the insights received from the interviews when reviewing the data. Inductive coding is very useful when researching novel and under researched topics. Microsoft Office Word was used to code the data and develop the thematic framework. Accordingly, relevant text has been tagged with different codes using Microsoft Office Word functions. A systematic coding process took place in two rounds to ensure a set of systematic, coherent, and robust codes. Consequently, the following codes were identified.

**Table 1: Examples of Associated Codes**

<b>Advanced Technologies in FS</b>	<b>Financial Inclusion</b>	<b>Protection against theft</b>	<b>Expand the Fintech business Presence</b>
Areas to be improved	Consumers' Real life needs	Digital literacy of the population	Ease of use
Electronic Know Your Customers	Consumer Experience	Preference for cash	Value creation
Authentication of Transactions	Cost of the services	Suitable Strategies	Venture capital requirements
Digital Infrastructure	Fair treatment for consumers	Fintech Awareness	cultural values
Drawbacks of Traditional Financial System	Building trust	Possible opportunities	Make consumers Aware
Convenience	Time saving	Collaboration with incumbents	
Supportive environment	Regulators Push	Bchest strategy	
Competing with incumbents	Fintech adoption	Unique features of Fintech	

Source: Author Compiled

These three phases involved the core analytic work in TA: organizing codes and coded data into candidate themes, reviewing, and revising those candidate themes, and developing a rich analysis of the data represented by the finalized themes (Braun et al., 2016). The process of theme development began with the codes identified in the previous phase. Based on the shared meanings of the different codes identified, they were grouped into a meaningful theme. Once the possible themes were identified the author reviewed the themes to ensure that each theme has a central organizing concept to capture all raw data, whether each theme has different meaning, to assess the interconnectedness of themes and to assess whether all themes collectively can show the overall story about the research context. The authors were engaged in multiple rounds of coding, categorization of codes into themes and refinement of themes and subthemes before the final phase. In phase six, we selected the most representative examples of these themes and subthemes and generated the final analysis of these extracts in relation to the research questions as shown in Table 2 below.

**Table 2: Themes with the Definition**

Main Theme	Sub Theme	Definition
Drivers of Fintech acceptance	Fintech awareness	Participants highlighted the importance of building awareness among consumers to promote their products and services.
	Digital Infrastructure	Participants emphasized the availability of digital infrastructure to boost the Fintech among consumers.
	Building Trust	Consumers tend to adopt Fintech services when those services offered secured way of transactions.
	Convenience	Consumers tend to accept Fintech services when they feel the convenience offered by the products.
	Consumers' Real-life needs	Consumers find it beneficial to accept Fintech services when those services serve for their real-life needs.
	Cultural values	Consumers decisions to accept Fintech services if largely depend on the cultural values of the country.

Source: Survey results

#### **4. Drivers of Fintech Adoption: Thematic Analysis Results**

##### ***Fintech awareness***

As per the theory of perceived behavior, awareness is an external environmental factor that inspires a person's intention towards taking a certain action (Ajzen, 1991). Bickford and Reynolds (2002) highlighted that awareness is a form of social change, which rises an individual's likelihood of participation in certain issues. These explanations on consumer awareness indicate that when a person is aware of the importance of FinTech, it will create a positive attitude and as a result his keenness to use the platform.

Participants highlighted that building awareness among consumers is helpful to enhance the acceptance of Fintech. This is because that people in rural area is still not connected, and they do not know what Fintech is and the real benefits offered by the Fintech products. As a result, they are still highly connected with the traditional financial service providers and informal sector. Highlighting this fact participant 04 said that,

*“Even now there are a smaller number of consumers who have already embraced the digital payments and acceptance. It's very low. That's a big challenge. A lot of awareness needs to be created for people to change the perception through educating them. The benefits of Fintech are to be known”. (P#4)*

Further, they highlighted that it is important that both consumers and small businesses should be made aware of Fintech services. Most of the SMEs which are in rural areas to be empowered to use these Point of Sale (POS) machines to encourage card payments, mobile money services, app-based payment systems etc. Participant 1 emphasized that,

*“There are some hotels that still don't accept card payments, online payments, they don't have credit card machines in the rural side, and they don't know where to go and take it. They don't know what they need to see in a product. So, we must create such awareness.”. (P#1)*

In building awareness all industry players, regulators and policymakers have responsibilities to educate about the overall aspect of the Fintech while each Fintech firm has a role to promote their own brand through educating people on the special features and benefits of their products and services. This is also helpful for them to build trust among consumers and thereby accept Fintech as a secured means of doing transactions.

Participant 02 also highlighted that all these responsible parties shall spent huge amounts of money to build Fintech awareness in the country. However, Participant 02 admitted that building Fintech awareness all around the country is a somewhat challenging task.

*“To create awareness and change the perception and adoption of the consumers. It takes lot of money. Because you need to educate them. The benefits of Fintech should be known to them. And that demands a lot of energy, time, money. So, that is a big challenge.”. (P#2)*

Thus, as per the insights received from the participants of the study it is confirmed that even though the building awareness is challenging consumers are likely to be interested in Fintech products when they are aware that the system will help them. Several prior studies have confirmed that there is a direct impact of consumers’ awareness on Fintech adoption (see, for example. Saksonova & Kuzmina-Merlino 2017; Ramdhony & Munien, 2013).

### ***Digital Infrastructure***

To cope with the rapid pace of technology advancements financial services industry today shall focus mainly on startup Fintech initiatives to provide alternative financial services via digital platforms developed through the emerging technological innovations. The key cutting edge technological developments in this context include Internet of Things (IoT), Artificial Intelligence (AI), Facial Recognitions, Data Analytics, Data Mining, Robotic Process Automation (RPA), Natural Language Processing (NLP) and many more. These platforms are helpful for companies to provide comprehensible solutions to the customers via these state-of-the- art technologies which enrich productivity and fast accessibility from anytime and anywhere.

However, participants were in the view that Sri Lanka required digital infrastructure to be developed in order to take the real benefit of the Fintech for the country as a whole.

Participant 01 highlighted that the industry becomes more lucrative when the required digital infrastructure is developed in the country. Especially, digital mechanisms such as Electronic Know Your Customers (EKYC), biometric authentication, multifactor authentication need to be developed in Sri Lanka which enable the parties to conduct real time transaction through Fintech without any delay.

*“There are certain things that must be basically streamlined to facilitate the full implementation of Fintech in Sri Lanka. We still do not have the EKYC processes in Sri Lanka, which is a huge drawback as it is the last mile of any financial transaction.*

*Maybe on-boarding of a client using Fintech. How to get to know about your customers. How to basically authenticate the customers? How to authenticate the transaction? That last mile is missing and as a result, Fintech cannot basically go to its preferred extreme. Also, biometric authentication, multifactor authentication possibilities are weak in our country. Here we don't have the biometric databases even if we have such, we use that for very specific purposes like immigration for our passport. But those databases are not shared databases. Because of that, we have a little bit of slowness in completing the full transaction cycle". (P#1)*

When considering Multi Factor Authentication (MFA), it is an authentication method which requires more than one verification factors. Therefore, dependence only on username and password is high. MFA requires additional verification method such as; finger print verification, facial recognition, One Time Password (OTP) etc. Hence, MFA helps in building the trust among consumers. So, these advanced technological methods should be brought into the financial services sector of the country.

Participant 04 was also in the view that to promote the Fintech services in the country digital infrastructure mainly the internet connectivity should be developed. Here in Sri Lanka a grave issue is the speed of the internet connectivity, which intensifies when it comes to rural areas.

*"Internet is very slow. That brings down the transaction processing speed to a longer time to processing transaction compared to other markets in which the time taken to process transaction is a few second". (P#4)*

Further, most of the people do not have access to these digital services as they do not have necessary devices. Thus, making everyone accessible for the financial services is another key challenge for the industry. With this rapid pace of digitalization respective authorities shall take necessary steps to establish proper digital infrastructures in the country and thereby ensure the equality of distribution of these services among both urban and rural community. Thereby, as a whole country would be able to unlock a higher level of financial inclusivity and resulting financial health of the country.

### ***Building Trust***

Lee and Turban (2001) assumed that trust is a belief, expectancy, or feeling about certain items, certain antecedents will increase or maintain the degree of trust that will affect the trust of both parties on the transaction. Participants were in the view that consumers generally look at the security of their transaction when engaging in online transactions. Thus, to build the trust factor among people several initiatives need to be taken by financial services providers, regulators, and policy makers. First,

customers need to be made aware of the security features of these digital applications including the mechanism for safeguarding them. However, in Sri Lanka this digital authentication and verification process are yet to be implemented.

*“Because of the non-availability of these biometric databases and non-availability of the Certification Authority (CA) We don’t have the country CA. If we have this digital certification, country certification or the central CCS then even CBSL could have implemented this EKYC process faster but unfortunately, that is where even the CBSL is also struggling how to make sure that the authentication and verification is done perfectly. (P#1)*

Participant 1 particularly highlighted the fact that most of the consumers are now considering digital way of transaction as a secured way when compared to the traditional financial services. This is because that the number of fraudulent cases reported with conventional service providers are high compared with the digital banking options.

*“People have started trusting the digital banking because more frauds, injustice may have happened in the traditional system than in the digital system. if you look at past many years of digital banking implementation in Sri Lanka the number of cases reported on fraud are very manageable and minimal” (P#1)*

Participant 02 was also in the view that in Sri Lanka it is difficult to establish the trust among rural area people. This is mainly because they are more attached to the public banks and they trust them considerably. Further, they do not have surplus cash and because of that they are afraid of losing their money. Also, in rural areas people are deeply entrenched in culture and its values and difficult to make them convince about these novel technologies. Especially, unlike other digital products like Facebook, WhatsApp etc. this is difficult to take to the people as they are highly worried about the security of their money.

*“Trust factor which comes with cybercrimes, the law of the country when there is a transaction fraud happens whether there is immediate action taken on that” (P#2)*

In this backdrop the law enforcement authority of the country has the key responsibility to build new regulations and update existing regulations to formalize the processes as required. Further, they shall educate the people about the regulatory framework exists in the country to safeguard themselves against the possible threats from engaging with digital transactions. All the participants were in the view that CBSL as the regulatory authority of financial services sector of the country has taken necessary steps to develop the suitable regulatory framework in the country. But still the same need to be updated and fine-tuned to capture the latest developments in the industry with the rapid pace of technology development.

*“When considering the security, a body like the Central Bank needs to assure that every system is checked and certified and that’s how it goes to market and that has to be communicated to the end consumers” (P#4)*

Previous studies have confirmed that there is a direct impact of consumers trust towards Fintech adoption. Stewart and Jurjens, (2018) confirmed that the decision to use Fintech services for financial transactions is strongly determined by the level of customer trust. Duffield and Grabosky (2001) stressed that a trusted transaction process is key to success of internet-based financial transactions. Through these businesses an atmosphere shall be built enabling potential customers to feel contented and confident to switch into Fintech products.

### ***Convenience***

The participants were in the view that most of the consumers prefer digital way of transacting due to convenience. In the traditional banking system consumers had to spend more waiting time. There also some officials practiced discrimination, leading to unpleasant experience for consumers. Unlike conventional banking services digital banking services enable consumers to take more pleasurable banking experience as they can do their transactions instantly by themselves without wasting time.

*“You know how difficult and cumbersome it is to go to a bank, bank branch and wait to take a token and wait for an officer to get service and the interaction or the attitude of the person who offers the customer that changes from person to person like if you are a corporate customer where you give a lot of business to the bank and then the treatment you get is different to that of another small customer” (P#1)*

More importantly Participant 1 highlighted the role of Application Programming Interface (API) in Fintech services. Especially, API enable Fintech services are more convenient for the consumers as API allows different systems to talk to each other. When financial transactions take place in digital form API enable data access among different parties involved in financial transaction, including banks, consumers, websites and third parties.

*“When you get your app or the wallet you can get other services because API are available now. Banks are now getting connected with other service providers. If you are looking for a housing loan if you go to a bank or use your app probably through the app you can even apply for a loan and even find another architect to get your design done. Or maybe you know a contractor who can do the construction part and then all the payments can be basically channeled through the same app” (P#1)*

Participant 2 also held the view that most consumers tend to adopt Fintech due to the convenience offered by those services. Mainly the 24-hour services or the extended banking hour experience is offered in digital financial solutions.

*“Before 2014 we came to the market. If you have cash in your hand and if you want to deposit, you must deposit before 3:00 pm. There was a solution that came from some of the banks. I think initially it was NTB, Commercial came up with these extended banking hours in Arpico supermarkets and some other locations they had this mini branches. So, that was the solutions that the banks had. They have a branch which will be open till about &7:00 O’clock or 6:00 O’clock. There were super branches with some big banks such as, Seylan bank, they had a solution where they had the head office open 24X7. But all the branches cannot be opened till 6:00 or 7:00 pm. So, what we did was, we came up with the machine-to-machine technology where people would interact with a machine and deposit money, and you can do it 24X7” (P#2)*

### ***Focus on Consumers’ Real-Life Needs***

Chen (2016) argued that the success of Fintech in China came not because of the technology advancement but due to better integration between technology and real-life needs. Further, he highlighted that to design the growth path for Fintech, there should be a better link between technology, finance and real life needs of consumers which he highlighted as the theory of senarization of Finance.

All the participants highlighted that Fintech firms shall be focused on catering to the real life needs of the consumers. Even though the firms trying to introduce new technologies day by day, adoption of those products by the consumers heavily depend on the degree at which those products serve the real life needs of the consumers.

*“To attract more consumers Fintech must create value for their product so that the consumers or the business will find it difficult to operate without it. Especially the firm shall focus on the real-life needs of the consumers and shall produce products to cater them” (P#4)*

Especially in a country like Sri Lanka Fintech firms usually find it difficult to compete with the incumbent players mainly because they have an established market. However, Fintech firms can easily approach consumers through satisfying their basic needs by allowing them to complete their transaction through the basic devices they owned.

*“Whatever the technical jargon we are talking about, there is so much technology that we have innovated over the past 10 to 15 years. I mean every 2 months you see new*



*technology is coming in. However, we must understand one thing that the peoples' core needs have not changed; the core need of the people is the same.'* (P#1)

Thus, Fintech firms shall mainly be focusing on catering to the core needs of the consumers including depositing, borrowing or transferring money. Highlighting this fact PWC's Global Fintech Survey (2016) has also emphasized that new entrants in the Fintech firms shall focus on meeting evolving consumer needs with dynamically different products and delivery. The extensive growth of Ali Pay, Apple Pay, M-Pesa, Yu'E Bao etc. are evidenced mainly due to their ability to satisfy real-life needs of the consumers.

### **Cultural values**

More importantly through the participants' comments received it was revealed that cultural values of the country also have significant impact towards Fintech adoption in our country. Although there are no previous studies carried out to confirm the impact of cultural values on Fintech adoption the specific findings can be treated as a new finding in the Fintech adoption research context. Current context, most of the companies in financial services industry in Sri Lanka shows slow response to change, hierarchical structures, cautious risk appetite, focused on the product. On the other hand, Fintech firms are said to be more agile, collaborative, distributed organizational structure, with a daring appetite for risk, Customer focus. Also, in consumers' perspective, they are also driven by more cultural values as they are reluctant to accept risky products, more attached with the traditional ways of doing transactions.

Participant 4 was in the view that rapid pace of technology transformation in financial services industry in the country cannot be seen due to the cultural values and beliefs of the consumer base.

*"Transformation embracing the change is not happening in our country. That is driven basically along with our culture and our believes. So, it is the biggest challenge any Fintech has when it comes to launching a product in Sri Lanka"* (P#4)

Thus, basically based on the cultural values of the people in the country Fintech firms shall focus more on the security feature of the products as people usually less likely to accept risk. Further, Fintech firms shall consider the Junger -conscious nature of people when they decide the pricing policy. Also, when promoting the product Fintech firms shall focus on advertising their products considering the social influence the consumers have as they tend to refer to the opinion given by others.

## 5. Conclusion

When considering the insights received from industry players, they are also in the view that consumer awareness of Fintech services, Fintech's ability to serve real-life needs of consumers, consumer trust, availability of digital infrastructure facilities of the country, convenience offered by the products are the main factors which directly affect Fintech acceptance. All the CEOs who interviewed highlighted the importance of building consumer trust and awareness would be the key considerations. This is because that when consumers are aware of the benefits Fintech products offer, they tend to be familiar with these products and with the continuous engagement of the products may lead to establish their confidence with the products and ultimately leads to word-of-mouth marketing confirming the extensive promotion of their brand. Once the consumer feels secured when conducting transaction using Fintech services their trust can be established and thereby, they will tend to accept Fintech more. Also, the novel findings of the study are the cultural impact on Fintech acceptance.

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# Impact of Non-economic Factors on the Development of the Apparel Sector in Sri Lanka

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## Abstract

*The Sri Lankan apparel industry has transformed itself into a high-end value chain manufacturer within a short period of time. This study explored the influence of non-economic factors on productivity, competitive and comparative advantages as the influencing factors on the development of the sector. A thematic assessment of nine leading apparel exporters was conducted. The findings reveal that the productivity, competitive and comparative advantages were effectively synergized by focusing on external (non-economic) factors, such as: physical and psychological wellbeing of employees, buyer loyalty, quality of ancillary and supporting services, industry attitude, social responses, ethical supply sourcing, and organizational culture. Further, the success story of the apparel industry began when the journey was turned around from the brink of disintegration and collapse owing to the ingenuity of a few industry leaders who showed courage, innovativeness, and developed strategy to fight back as a collective body. However, there has not been an adequate support from policy establishments. The study envisages that the findings will be helpful for future developments in the apparel industry as well as for designing appropriate policies supporting the industry.*

**Keywords:** Non-economic factors, Productivity, Leadership, Organizational culture.

## 1. Introduction

Growth in the apparel sector having driven by supply protection under the quota system gradually faced global competition once the quotas were eliminated under the

World Trade Organization (WTO) rules<sup>1</sup>. While the industry gained much needed productivity advantages, first, due to transfer of labour from informal sectors and later through the learning curve backward initiation, it managed to evolve into new horizons of productivity dynamics in the post quota periods where trade was almost entirely governed by the principles of international trade and the competitive advantages that the sector has managed to harness.

As the WTO rules brought in a new era of global trade, the Sri Lankan apparel sector underwent a phase of transformation within the period 1995-2005. This dramatic transformation was led by a new strategy of productivity enhancement where the industry reorganised its production structures while enhancing its position in the value chain. Empirical evidence reveals that foreign direct investments created opportunities for countries to acquire a knowledge of liberalisation policies, acceleration of privatisation programmes, advanced technology and a higher level of trade and exports (Alfaro & Chauvin, 2016). However, adoption of inconsistent policies by different political regimes, resumption of hostilities between the LTTE<sup>2</sup> and the government, resulted in a significant retardation of the productivity growth (Bandara & Karunaratne, 2010).

One of the strengths of the apparel industry is its ability to produce high-quality goods at competitive prices, combined with a flexible industry structure, which is capable of servicing world-famous brands. Sri Lankan apparel industry is also admired for its exemplary standards of social compliance. Low productivity in Sri Lanka has been one of the main concerns of policymakers (Bandara & Karunaratne, 2013). Therefore, it is important to analyze the present level and past trends of productivity by evaluating the factors of productivity in the apparel industry in Sri Lanka. Since non-economic factors have been overlooked in the literature, findings of this study may bridge the information gap.

Productivity is the only meaningful measure of industrial competitiveness (Khurana & Talbot, 1998), especially in the manufacturing sector, due to its vital link to the organizational profitability (Dresch et.al., 2018). Therefore, a study of productivity and its sources can provide vital inputs to a firm for improving its competitiveness

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<sup>1</sup>The World Trade Organization (WTO) is an intergovernmental organization that is concerned with the regulation of international trade between nations. The WTO officially commenced on 1 January 1995 under the Marrakesh Agreement, signed by 124 nations on 15 April 1994, replacing the General Agreement on Tariffs and Trade (GATT), which commenced in 1948. It is the largest international economic organization in the world.

<sup>2</sup> Tamil Tigers, byname of Liberation Tigers of Tamil Eelam (LTTE), guerrilla organization that sought to establish an independent Tamil state, Eelam, in the northern and eastern Sri Lanka. The LTTE was established in 1976 by Velupillai Prabhakaran as the successor to an organization he had formed earlier in the 1970s.

(Joshi & Singh, 2010). As key parameters of the competitive sustenance and the growth of the sector, the discussion of non-economic factors for growth in the apparel sector is embarked upon in this research study.

The apparel sector is the only manufacturing export sector in Sri Lanka, with an earning capacity of over US\$ 5 billion per year. The common belief is that this sector has so far failed to achieve its true potential where Sri Lanka was expected to increase its export revenue of apparel to US\$ 8.5 billion by 2020 (EDB, 2015). Vietnam planned to reach its textile and apparel export income of US\$ 50 billion by 2020 (Akter, 2018), while Bangladesh intended to reach US\$ 50 billion by 2021.

Sri Lanka was one of the few countries, outside East Asia, to have embarked on a clear policy shift from an import-substitution-based industrialization to an export-oriented one. “Given the decisive policy shift in 1977, and the policy continuity during the ensuing years, Sri Lanka provided a test case for the impact of policies inducing a transition from inward to an outward orientation based on industrial growth and adjustment” (Atukorala & Rajapathirana, 2000, p. 543). “However, the policy shift lost momentum in the early 1980s, first because of an ‘unfortunate’ shift in policy priorities toward ‘politically appealing’ investment projects and, subsequently, due to escalation of the ethnic conflict” (Atukorala & Rajapathirana, 2000, p. 546).

About 70 per cent of industrial exports, which is around 46 per cent of the total export earnings, is covered by the Apparel sector in Sri Lanka while import of textile and textile articles only account for 12 per cent of total imports (CBSL, 2015). Advance technical and managerial skills together with the access to low-cost land and the skilled and literate workforce provide the industry with a comparative advantage in the region. Higher levels of English language proficiency among the managerial levels and moderate levels of language ability among the lower grades, are usually greatly appreciated by foreign investors.

Since the setting up of the WTO, the growth of the apparel sector has been mainly driven by the initiatives of the industry without adequate support from the policy establishments. One possible reason for this policy apathy could be attributed to inadequate objective research and knowledge on the crucial dynamics of the sector. Hence, this study is undertaken with an intention of identifying non-economic factors affecting the productivity of the apparel sector as one such vital area for future policymaking and development.

Apparel industry in Sri Lanka had to transform itself gradually from an essentially supply-push based structure to one that had to compete in a highly competitive globalized market. Evidently, Sri Lanka’s apparel industry had the benefit of the, then prevailing, quota system and state support, in certain instances being declared the key

manufacturing sector by the policymakers. The 200 Garment Factory Program<sup>3</sup> (GFP) in the 1990s is an example of an outcome of such policies. However, the institutionalization of the WTO in 1995 followed by the transitional phase of 10 years until 2005 exposed the Sri Lankan garment industry to be self-reliant in all aspects as any other trade competing sector. The proposition considered in this research is to explore the contribution of non-economic factors to the survival of Sri Lankan apparel industry despite the adverse predictions and not having the economies of scale compared to its Asian counterparts.

The study focuses the characteristics and the determinants of the growth with specific focus on productivity as a principal explanatory variable that could shed light on the historical trends, including the reported resilience, displayed by the apparel industry.

The objectives of the study are to analyze the non-economic factors that have led to productivity growth in the apparel sector with evidence of emerging structural and organizational characteristics that could be identified with the period of distinct structural shifts and discuss the industry insights that could be used in formulating policies for the growth of the apparel industry to achieve the status as a principal value chain cluster in South Asia.

The rest of this paper is organized as follows: presenting the theoretical and empirical literature in Section 2, the conceptualization in Section 3, the methodology in Section 4, findings and discussion in Section 5, and Section 6 is the conclusion and recommendations.

## **2. Literature and theories**

Sri Lankan Apparel industry has been subject to much discussion by many researchers and a lack of publications on various outstanding aspects of the industry particularly about the determinants of the composition of total factor productivity is a grave concern. Literature reveals that the productivity of the garment sector in Sri Lanka has been examined on the basis of partial productivity, for instance in terms of labor productivity and capital deepening. Total Factor Productivity (TFP) entails all the inputs which measure the ratio of aggregate output to all inputs. Increases in TFP usually result from technological innovations or improvements which are a part of non-economic factors not taken into account in general. According to Solow (1956), the importance of TFP in the long-term growth of an industry is well documented in theoretical and empirical studies done over the years.

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3 In 1992, the BOI offered an attractive incentive package to promote the establishment of new apparel factories and entice existing apparel producers to move to the rural areas of Sri Lanka under the government's '200 Garment Factory Programme'



Broadly speaking, productivity can be defined as the amount of output produced per unit of input. The three commonly used primary measures of productivity are: Labor Productivity - the amount of output produced per unit of labor input; Capital Productivity - the amount of output produced per unit of capital input; and TFP also known as multi-factor productivity (MFP) - the amount of output produced per unit of a mix of inputs. In general, TFP is defined mostly as the portion of output not explained by the number of inputs used in production.

Isaksson (2007) indicates education, health, infrastructure, imports, institutions, openness, competition, financial development, geographical predicaments, and absorptive capacity (including capital intensity) to be the most important non-economic factors influencing the TFP. Low productivity in the manufacturing sector of the South Asian region is often attributed to labor unrest, poor working attitudes, and inefficient organizational culture/management in the literature. They are considered as non-economic factors influencing labor productivity. Ineffective use of resources, poor information flow and non-productive activities prevalent in the Sri Lankan manufacturing industry have been identified as the key factors which are hindering the productivity (Vilasini et al., 2014). Thereby it is imperative to analyze the contribution of each variable towards productivity.

Isaksson (2007) stated that in the long run output growth depends entirely on knowledge creation or technological progress. The nexus between TFP and knowledge is particularly weakened by a few factors; the institutional quality, the amount of openness and flexibility. The belief of modern growth models is that endogenous knowledge creation allows for continuous growth. Joseph Schumpeter (1942) has expressed similar views of 'creative destruction', applying it to the Swedish textile and wearing apparel sector and has found results that support the notion.

Small economies such as Sri Lanka do not produce state-of the-art technology themselves but mostly acquire from elsewhere. Technology is mainly transferred through trade in goods or hiring specialized expatriates who transfer knowledge while working alongside the local workforce. This was evident in primary interviews which reveal that top companies often hire specialized expatriates or enter into strategic partnerships in product development mainly to acquire such knowledge. Technology is 'appropriate' only for countries with similar capital-labor ratios (capital intensities) as per Basu and Weil (1996). TFP does not solely mean technological improvement but also improvement in quality of inputs such as Human Resource Development (HRD) and Human Resource Management (HRM).

A well-educated and healthier population is in a better position to acquire and absorb knowledge. Hence, apart from institutional or organizational settings, human capital

and R&D are imperative to enhance country's absorptive capacity. Henceforth, according to this view, Benhabib and Spiegel (1994) state that the level of human capital impacts a country's capacity to develop its own technological innovations, which in turn is an element of TFP growth. Human capital, in the form of education, has an important effect on TFP for its role as a determinant of an economy's capacity to carry out technological innovation (Romer, 1990) for developing countries, in particular, to adopt (and adapt and implement) foreign technology. A well-educated and well-trained population helps to acquire relevant knowledge. While higher education is important for technological innovation basic education is important for learning-capacity and utilizing information as revealed in the literature. Further, Black and Lynch (1996) demonstrate the significance of educational quality for productivity in manufacturing and non-manufacturing sectors, based on 1,600 manufacturing and 1,300 non-manufacturing plants in the US.

The major content theorists A H Maslow, C P Alderfer, F Herzberg and D McGregor seek to determine the individual's choice of goals and hence why certain things are more important to some people than others. Most influential of all the proponents of Maslow's approach is of the view that individuals are motivated by five levels of need: physiological, safety and security, social, esteem or ego and self- actualization which is arranged in a hierarchical order. According to Maslow (1942), the first levels (physiological and safety) had to be satisfied before the next level of social need and that would motivate employees to work hard and increase productivity.

The second theory of motivation is the two-factor theory developed by Frederick Herzberg (Herzberg, 1966). Motivators or intrinsic factors such as drive for achievement and advancement, being treated in a caring and considerate manner and receiving positive recognition are inherent in the job itself. The hygiene factors relate to the conditions of work rather than the work itself and improvement of hygiene factors prevent dissatisfaction, but do not increase satisfaction in the long run. The factors responsible for creating satisfaction (motivating factors) mainly sense of achievement on completing work, recognition, responsibility assumed, varied work, prospects for promotion etc. encourage better quality work thus increase in the strengths of motivating factors would significantly improve effort and performance which subsequently lead to higher productivity.

Given all of the above determinants, it would be of no use if organizations do not have a flexible organizational structure. As cited by Isaksson (2007), Fagerberg acknowledges that a flexible production structure (in other words, the ability to undertake structural change) is an important element in productivity growth because it allows an economy to quickly redistribute its resources to take optimal advantage of changing patterns of technological progress, and that structural change provides an

important impetus to growth. This structural change has been occurring in the Apparel sector, i.e. from labor intensive to capital and technology.

Hence, an effective innovation system is important for productivity growth. Chen and Dahlman (2004) define it as “a network of institutions (for example, universities, public and private research centers as well as a policy think-tanks), rules and procedures that influence the way by which a country acquires, creates, disseminates, and uses knowledge”. The main role of an innovation system is to foster R&D that, in turn, leads to new products, processes, and knowledge. Studying a sample of 136 large Taiwanese firms for the period 1994-2000, Wang and Tsai (2004) found that R&D investment was a significant determinant of productivity growth. Investment in R&D has been found to be positively correlated to the productivity growth as shown in the studies done by Hall and Mairesse (1995) on 197 French firms between 1980 and 1987 and Dilling-Hansen et al. (1999) on 226 Danish manufacturing firms in 1993 and 1995. Nevertheless, somewhat contradictory results are identified by Bartelsmann et. al. (1996), in the case of the Netherlands, in terms of the importance of new technology for productivity growth. An important factor behind labor productivity growth was instead shown to be capital deepening. Comin (2004) questions the impact of R&D on TFP growth. The world’s leading country in R&D, the US, finds that less than 3-5 tenths of one percentage point of TFP growth can be attributed to R&D, a result very much contrary to the view that R&D is the main source of long-term growth.

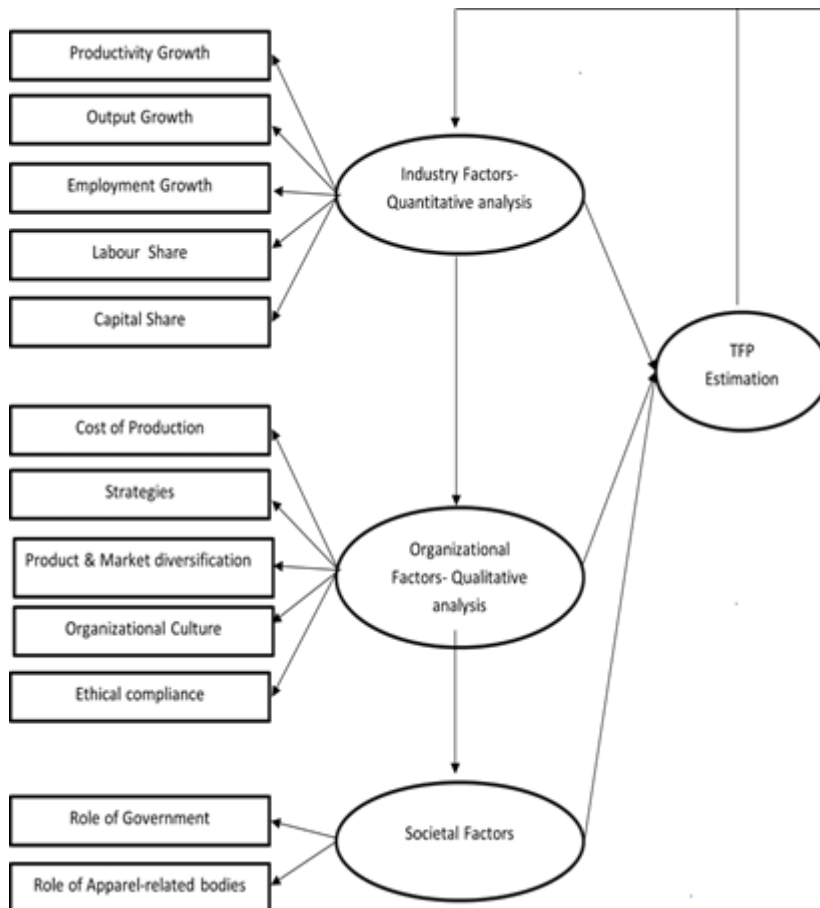
Ahn (2001), it is not innovation input (in other words, R&D investment) per se that counts for productivity, but the actual use of innovation output - in other words, use of advanced technology. However, there is an interesting inference by Geroski (1991) which shows that innovations have a far greater impact on the productivity growth of the end user of the particular innovation than on the innovator itself. A study done with 2,800 micro, small and medium privately-owned firms in Sri Lanka in 2008, by de Mel, et al. (2009) shows that owner ability (more educated individuals, higher logical ability), conditioning on firm size and other firm characteristics, have a significant and substantial impact on firm innovation and higher profitability. This was measured using both education and business training to assess the relationship between education, skills, and innovation.

Gullstrand (2005) indicates that a higher degree of competition from domestic or foreign producers is related to a growth in the industry especially by focusing on non-economic factors related to human capital. Gorodnichenko, et al. (2008) identify robust evidence of a positive relationship between foreign competition and innovation using enterprise-level data. Dutz & O’Connell (2013) hypothesize that foreign competitors not only pressurize local firms to innovate to maintain competitiveness but also to introduce new ideas, products and business practices

centered around non-economic factors which may spill over to local firms via market interactions. Barro (2001) emphasizes that labor quality is an important factor of productivity growth.

### 3. Conceptualization

#### Variables in the Qualitative Analysis



**Figure 1: Conceptual framework: Micro Approach**

As given in Figure 1, Cost of Production refers to all of the payments or expenditures necessary to obtain the factors of production of land, labor, capital and management required to produce a commodity (Guthrie & Wallace, 1969) while Strategy is a plan of action design to achieve a long-term or the overall aim. Product and Market diversification –Market diversification means extending one’s business offering to new market segments not previously targeted. Product diversification means adding new products or services to expand the business offering within existing markets. Organizational culture - organizational culture includes an organization’s expectations, experiences, philosophy, as well as the values that guide member

behavior, and is expressed in the member self-image, inner workings, interactions with the outside world and future expectations. Culture also includes the organization's vision, values, norms, systems, symbols, language, assumptions, beliefs, and habits. Simply stated, organizational culture is "the way things are done around here" (Deal & Kennedy, 1983). Ethical compliance - A policy of ethical compliance helps to create a workplace culture where all employees are treated with respect. The employees are given equal access to advancement opportunities, and the workplace becomes a positive and nurturing environment, which will create strong working relationships between the staff and the management. Apart from the organizational factors it is important to investigate the societal factors such as the role of government and the role of apparel-related bodies.

The role of the state is to ensure socio political and economic stability in the country, maintain law and order, avoid inconsistencies in development policies, develop the social and physical infrastructure especially education, simplify complex regulations, remove other disincentives and offer incentives for the business firms to operate competitively with the rest of the world by adopting social market economic strategies.

The role of apparel-related bodies and the leaders of various firms is to collaborate with the state and the people of the country to undertake the creation of a conducive environment for business to operate successfully as mentioned above, while undertaking, the improvement of productivity and global competitiveness of their individual firms to enlarge profit margins, mostly for the purpose of expanding investment, employment opportunities and export earnings in a more efficient manner.

#### **4. Methodology**

Several determinants were identified for qualitative analysis based on empirical evidence in the literature review. These competitive factors were especially important in the context of the post-MFA period where rivalry among apparel producing countries was intense. Hence, industrialists were interviewed to get their hands-on experience about different aspects of the organizational settings and workings namely, (1) cost of production, (2) strategies, (3) product and market diversification, (4) organizational culture, (5) ethical compliance, (6) role of government, and (7) role of apparel-related bodies. These factors are also considered as the most vital factors for the export performance of the garment industry in the prevailing literature (Ahmed 2009; Serra, et al., 2012).

Relevant officials of nine apparel manufacturing companies and industry associations were interviewed based on a discussion guide that was sent to them before the interview so that they would be fully equipped and aware of the information required.

The main reason for the sample size of nine (9) was to limit the study to the industry leaders who usually are the trend setters in the sector.

The study used the qualitative method of thematic analysis to analyze the data obtained from the interviews. It is about identifying, analyzing, and reporting themes within data (Braun and Clarke, 2006). Questions relating to the discussion guide were prepared on the basis of these themes. The participants provided their responses based on these themes that correspond with the literature and theory. However, some of the responses contrasted with themes that vary with literature and theory. Therefore, thematic analysis is of use for illustrating the similarities as well as differences across data and to provide novel insights (Braun & Clarke, 2006).

**Table: 1 Operationalization of Variables**

Concept	Variable	Identifiers
TFP – Organizational Factors	Cost of Production	Cost related labour, process, utilities, capital, and material Sourcing
	Strategies	Considered as strategies, innovation & design, sustainability & ethical practices, and customer centricity
	Product & Market diversification	Market diversification means extending one's business offering to new market segments not previously targeted while product diversification is adding new products or services to expand the business offering within existing markets.
	Organizational Culture	Organizational Culture is organization's expectations, including its vision, values, norms, systems, symbols, language, assumptions, beliefs, and habits
TFP- Societal Factors	Ethical compliance	Ethical supply sourcing
	Role of government	Type of government support experienced and expected
	Role of apparel-related bodies	Level of satisfaction with relevant regulatory bodies

Source: Developed by the researcher based on the literature

Organizational and social factors such as cost of production and strategies stated in the conceptual framework in Figure 1 have been operationalized in Table 1.

## **5. Findings and discussion**

Apparel industry has moved up on the value chain to create the largest manufacturing and exporting business in Sri Lanka with a substantial product complexity. In this process a number of economic as well as non-economic parameters have reflected its progression.

The transformation from “sweatshop” state to what it is now against many odds and predictions gives an idea of the kind of authentic leadership qualities the industry leaders have displayed. Clearly the individual and the collective leaderships based on strategic thinking of the entrepreneurs have made a difference between perishing or prevailing. It can be suggested that this human quality could be harnessed to create a further dimension of advantage especially by introducing new entrepreneurial blood into the industry. It can further be highlighted that the market is so vast that new entrepreneurial inroads will further enhance the country’s national competitive advantage to achieve new vistas of success.

Whilst identifying the importance of individual factors in optimizing performance, the apparel manufacturing companies were seen adopting a combination of these factors depending on the nature of the competition. In particular, it was learnt that labor and machinery are not influential in isolation in enhancing productivity when it is not complemented by adequate technical know-how and communication among the participants in the supply chain.

The study depicts human resource development as a key factor in maintaining the status-quo, minimally speaking, and it is a key strategy in the expansion of the industry. It recognizes the employees, not as ‘tailoring girls’ but as a vital contributor to the economy. Therefore, it is easing the pressure of employees with flexible working days (from 6 to 5 days), medical facilities, personal hygiene workshops, beauty culture workshops, outward bound training, team building exercises, and day-care facilities for working mothers.

The study reveals factors such as buyer loyalty, quality of ancillary and supporting services, worker attitudes, learning by doing, industry attitude and social responses, ethical supply sourcing, good relationships which are commonly referred to as non-economic factors, have a significant bearing on productivity leading to an enhanced competitive advantage.

The respondents divulged the effects of a continuous transformation of the range of products, their production processes and their quality reflecting the dynamic product complexity as a character that provided its sustenance to levels it has elevated itself and the potential for higher export earnings and profitability at national and firm levels.

Authentic leadership qualities and forecasting abilities of founders and top management contribute to higher productivity. The study reveals the success of the apparel industry was turned around from the brink of disintegration and collapse owing to the ingenuity of a few industry leaders who showed courage, innovativeness, and strategy to fight back as a collective body. This displays a genuine class of entrepreneurship that Sri Lanka badly needs. Non-economic factors contributing to sustainable competitive advantage in a challenging global environment are also identified in Thematic Networks.

Smaller enterprises could be clustered around larger enterprises through appropriate backward linkages. Medium scale enterprises can focus on specialized and customized segments with enhanced capacities to shift between different orders at relative ease. They could be encouraged to work together to achieve economies of scale in production by creating a “pseudo value chain” process or something similar. Different sized factories could be within the same group of companies too. Key informant interviews revealed that promoting Middle Range Garment Factories will help the growth of the industry much faster.

The Sri Lankan apparel sector has been awarded the Global Effie Award, which is the equivalent of Oscars, in the movie industry, in the advertising world, in 2009, for its brand “Garments without Guilt” for public relations and marketing effectiveness. This was an epic opportunity to build the image of “Sri Lanka Apparel” to establish an ethical positioning. Apparel related bodies should continuously maintain the ethical credibility by effective communication mechanisms.

Further, conducive labor laws as a driver for Productivity Development and sustainable HRM practices that can enhance participation of women in the labor force and encouraging and facilitating manufacturing input material, including fabric manufacturing can also be recommended as enhancers of competitive advantage in the global market (Barney, 1991).

## **6. Conclusion and recommendations**

Apart from economic factors there is a gamut of non-economic factors contributing to this transformation. The impact of non-economic factors on gaining a competitive advantage is explained by the answers given by the managers and employers, especially for the questions under the topics such as ‘strategies’, ‘product & market diversification’, and ‘organizational culture’.

The industry appears to suffer from logistical gaps such as labor shortages, a national identity as a global supplier of apparel in international marketing, investment locations with adequate physical access, lack of administrative support from the state, the functional authorities, and the political establishment to create efficient delivery of regulatory and procedural approvals, especially a lack of an attitude, to resolve the



inordinate delays in granting various permits. The responses proved further that large companies possess organizational competencies namely multi skilled workers, technological know-how, superior quality raw material, a worker friendly organizational culture, service levels, compliance standards and effective communication which were widely recognized by the respondents as enablers of productivity through which the operational performance is enhanced.

Currently Sri Lanka has a few designer schools providing training and degrees. The need is to realign these curricula and degrees to create designer strength and complex operations that meet the needs of the industry. As such, a way forward would be that the industry and apparel designer schools work jointly to develop the supply of top-quality designers while the industry creates a demand for such manpower. The country can no longer drive growth simply through labor augmentation. Hence, innovation and R&D will have to play a crucial role in driving it. It has to be said that this area of intervention could not be handled by the industry alone as the issues are macro dimensional. Thus, government intervention with industry participation in an innovative way is much needed. The government should improve on the programs that have been launched to support the export sectors to make them capable of expanding their exports to the EU and other markets. The areas that have to be improved on are granting of loans for technology upgrading and innovation, targeted support for market development including digital marketing, skill training and labor attraction schemes, support for quality and standards improvement, and fast-tracking approvals and certifications to enable the sector to stand on its own and be a market leader. One way to achieve these goals is to establish an entity, ideally as a state industry partnership, that undertakes specific tasks such as innovative technological developments that the apparel sector should be equipped with, within the medium and the long-term. Therefore, future studies related to higher education initiatives catering to R&D and innovation in the apparel sector together with studies analysing the effectiveness of the policy structures would be helpful in improving the productivity of the sector.

Stakeholders in the system consist not only of manufacturers and buyers, but also of the suppliers, small and medium businesses, regulatory agencies, packaging and shipping, designers and trendsetters, professional bodies representing the industry, and the policymakers. Transformation of the apparel industry in Bangladesh under the theme 'safety first' in terms of workplace safety and worker rights, increasing the annual revenue from US\$19 billion to US\$ 34 billion within six to seven years is a unique example of systems leadership in action collaborating between Governments, employers, workers, buyers, and donor agencies. It can be said that a diverse array of non-economic factors has influenced the progression of the apparel industry, with their impact even surpassing that of economic factors.

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## **Appendix**

### **Details of the Thematic Networks**

The researchers have quoted the oral responses of the respondents where necessary to explain the themes that appeared during the process of data analysis. The outcomes are presented under such themes as the global organizing and basic theme where the researchers have briefly explained the meaning of each theme.

**Table A1: Profile Details of Key Industrialists**

<b>Res.No</b>	<b>Designation</b>	<b>Company</b>	<b>Years of experience</b>
R1	Chairman	A	25 years
R2	Director	B	22 years
R3	Director	C	25 years
R4	HR Manager	D	7 years
	Finance Manager	D	15 years
	Planning Manager	D	15 years
	Production Manager	D	15 years
R5	Group General Manager	E	35 years
R6	Managing Director	F	30 years
	General Manager	F	20 years
	Vice-Chairman	G	
R7	General Manager – Marketing	H	30 years
R8	Group HR Manager	I	25 years
R9	Manufacturing Director	J	23 years

Source: Developed by authors

Table A1 provides a profile detail of the research respondents. As evident above, a sample size of nine organizations was chosen for the study from the top Apparel companies where some of them are cluster companies who have been operating for over twenty years employing a minimum of 3,000 workers. Each respondent has work experience of over 15 years in the Apparel sector though not necessarily in the same organization. However, six of them have over twenty-five years of Apparel sector experience. Most of them have started their career at a lower position and subsequently had come up the ladder to the topmost positions in their respective organizations. Hence, they have wide-ranging experience in every aspect of their organization as well as an in-depth knowledge of the industry. At least two individuals in strategic and tactical management level were interviewed but taken as one individual in the overall profile, using a discussion guide.

# Sri Lankan Fruit Exports: Potentials, Barriers and Prospects

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## *Abstract*

*With regard to the fresh and processed fruit export industry, Sri Lanka has not tapped its full potential as only a speck of the total production reaches offshore markets. The study analyses potentials and barriers of the fruit export industry in Sri Lanka. Purposive sampling technique was applied to select the sample from export-oriented fruit farmers, collectors, and fresh and processed fruit exporters. Both qualitative and quantitative analyses were used. Weighted Average Score Analysis and the Augmented Gravity Model were employed to estimate the export potential, while descriptive analysis was used to analyze the barriers. The results depicted that pineapple has the highest potential for export. The Gravity Model found that the American region was the preferred destination for Sri Lanka's major fresh and processed fruit exports, followed by the Middle East and South Asia. High transportation cost, no continuity in supply of quality raw materials, strong international competition and a lack of governmental support in export marketing and promotion were identified as barriers. This study suggests formulating a long term and consistent export policy, in consultation with relevant stakeholders in the industry. A comprehensive study on export potential of vegetables in Sri Lanka is recommended.*

*Key Words: Export Barriers, Fruit Exports, Gravity Model, Weighted Average Score Analysis*

## **1. Introduction**

It is predicted that the world's population will reach 10 billion by 2050. Invariably, the rising population leads to a rise in demand for better quality fresh food all around the world (Bell, 2007). The processed food and fruits and vegetables sectors have

been identified as sectors with high potential due to increasing demand from end consumers and for value-added products in the world market. Changing consumer preferences and fast-growing consumption of fruits in developed and developing countries continued to be the predominant factors that led to an expansion in global shipments of fruits (FAO, 2019).

Latin America and the Caribbean constitute the world's most important exporting region for banana and four major tropical fruits; mangoes, pineapples, avocados, and papayas. India, the second largest producer of fruits after China, ranks first in the production of mango, banana, lime, and lemon (Kusuma, 2014). Global production of tropical fruits has been increasing over the years due to growing demand in the major producing areas. Developing countries account for nearly all tropical fruit production, which is dominated by small-scale farmers (Altendorf, 2017).

Sri Lanka has high potential for cultivating fruit crops for domestic and export markets (Dahanayake, 2015). Compared to certain other countries in the region, given the favourable climatic and soil conditions, Sri Lanka has high prospects for fruits (Dahanayake, 2015). Moreover, specialties associated with Sri Lankan products, such as superior flavours, vicinity and organic yield, have enhanced the industry's prospects (Export Development Board, 2019). For instance, tropical fruits in Sri Lanka such as pineapple, rambutan, mangosteen, and passion fruit are highly popular around the world for their unique flavour, aroma, and colour (Export Development Board, 2019).

At present, the government of Sri Lanka hails export promotion as a key strategy to capture the international market. Further, the current local agricultural policy framework is aimed at modernizing Sri Lankan agriculture to draw a lucrative income from export crops. In this context, identifying and addressing the issues looming in Sri Lanka's fruit export subsector despite the rising global demand is a positive step (Perera *et al.*, 2015). With the recognition of proper niche markets, Sri Lanka may have the potential to develop exports of fresh and processed fruits (Department of National Planning, 2019). Therefore, scientific research directed at revealing the underlying reasons for market changes and potential niche markets is needed (Ministry of Agriculture, 2017). Previous literature provided substantial evidence on the use of the gravity model to identify export potential but not on estimating export potential as well as untapped potential of major fruits in Sri Lanka. Similarly, challenges for fruit export industry in Sri Lanka (Hathurusinghe *et al.*, 2012; Dissanayake, 2012; Madanayake, 2016; Gamage *et al.*, 2020) have been found but no substantial study has investigated the issues affecting the grassroots level to export markets. In a similar vein, Shand (2002) underscores the need to study export crops' potential in international markets.



Hence, this study was carried out to identify the highest potential fruit crops for export from Sri Lanka, analyze the potential markets for Sri Lankan major fruit exports, and identify challenges of the Sri Lankan fruit export sector.

The rest of the paper is organized as follows. Section 2 literature review which provides the existing literature regarding fruit export potential and challenges for fruit export sector. Methodology section contents the materials and methods which were used to achieve the study objectives. Section 4 presents results and discussion, followed by the conclusion and recommendations.

## **2. Literature Review**

A comprehensive review of existing literature and relevant research gaps are identified subsequently. Sadeghi *et al.* (2019) analyzed Iran's export market potential using Gravity Model using date market data (1994-2013). It revealed the negative effects of geographical distance and landlocked location, and the positive effects on Iran's date export of re-export, political relations, social and commercial ties, and access to the high seas. The date export relative prices and per capita GDP of partners show that most of Iran's dates has been exported at low prices to countries with low per capita income. Moreover, on average, Iran's export has been close to its full export potential in Central Asia, Africa, and the Middle East, while it has exploited only 76 % of its export potential to European countries. More than half of the export potential to Germany, Italy, Denmark, and Sweden remained unexploited.

Wickramarachchi (2019) carried out a study to investigate the determinants of exports of Sri Lanka to estimate the potential exports for the period 2000-2013, using Augmented Gravity Model with stochastic frontier approach. Panel data for 56 major export destinations of Sri Lanka was used for this analysis. The study findings revealed that importing country's GDP and colonial relationship have a positive impact on Sri Lanka's exports. Further, the difference between the factor endowments of Sri Lanka and the importing country has a positive impact. However, the distance and trade resistance of the importing country have a negative impact on Sri Lanka's exports. Moreover, Sri Lanka's actual exports have achieved only 15 % of their potential during the period 2000 to 2013.

Challenges and weaknesses of the fruit value chains in Sri Lanka are as follows; 1) inadequate supply of raw material, 2) price increases year on year, 3) climate change, 4) poor application of Good Agricultural Practices (GAP), Good Manufacturing Practices (GMP) and Sanitary and Phytosanitary (SPS) issues at farm levels, low yields 5) Lack of good quality planting material and 6) Processing facilities do not conform to economies of scale with new-age processing technology to be accepted (Venkatprahlad & Wijeratnam, n.d.). As stated by Gamage *et al.*, (2020) a lack of

refrigerated transport, storage and handling facilities were identified as main issues in the Sri Lankan fruit supply chain.

Fragmented production by small and marginal farmers, inconsistency in supply, small land holding, lack of awareness in quality standards, lack of infrastructure, lack of quality supply, high cost of production, high cost of labour, packaging, transport, airfreight, and electricity, inadequate quality seed materials, high cost of investment in new technology, inadequate research, high-interest rates, and labour issues are certain hitches in the fruit sector in Sri Lanka (Export Development Board, 2019).

Hathurusinghe *et al.* (2012) stated the high cost of good quality packing materials, shortage of good quality fruits, shortage of skilled labour, high prices of fruits during the off-season, high freight charges, and air space limitations as the problems confronted by pineapple exporters.

### **3. Materials and Methods**

The secondary data was mostly collected from such sources as data bases at the Department of Customs, Export Development Board, Department of Census and Statistics, Central Bank of Sri Lanka, CEPII (Centre d'Etudes Prospectives et d'Informations Internationales), World Development Indicators (WDI) and publications in the Department of Agriculture and its affiliated institutions.

Questionnaire surveys and key informant interviews were used to collect primary data. Purposive Sampling method was employed in sample selection. Three questionnaire-based telephone surveys were conducted to collect primary data from farmers, collectors/intermediaries and exporters engaging in the fruit export marketing channel in Sri Lanka. The farmer survey covered 70 export-oriented farmers. In addition to the farmer survey, another questionnaire survey was conducted with collectors attached to fruit export marketing channel. The initial sample size was 30 but only 21 collectors responded to our telephone-based questionnaire survey. In parallel, another questionnaire survey was conducted with fresh and processed fruit exporters registered with the Export Development Board. There were 84 fresh and processed fruit exporters registered in the EDB in 2021. Further, key informant interviews were conducted with officials in the Export Development Board (EDB), Fruit Research and Development Institute (FRDI), Department of Agriculture (DOA), and Lanka Fruit and Vegetable Producers, Processors, and Exporters Association (LFVPPEA).

Weighted Average Score Analysis and Gravity Model Estimation were employed in the identification of potentials regarding the fruit export sector, while Descriptive Analysis was used to analyze the barriers and challenges.

Firstly, researchers used a quantitative matrix for ranking various fruits based on five major parameters - production, cultivated extent, the potential for processing, export value, and export volume. Banana, pineapple, mango, papaya, avocado, and lemons were among the major fruit exports considered. The fruit crops were screened and prioritized based on a Weighted Average Score Analysis. The process involved the calculation of the score of each crop for each selected parameter. The scores were calculated on a ranking basis, therefore the lower the score, the higher the potential of the crop.

Augmented Gravity Model was employed to analyze the export potential and potential markets for major fruit exports in Sri Lanka. Major fresh and processed fruit exports: banana, pineapple, mangoes, papaw, avocado, and lemon were considered. The major importing countries were selected for the sample based on Sri Lanka's fruit export value as well as data availability. Fruit exports to 19 major destinations in terms of export value can be modelled as follows from 2010 to 2020:

$$\log(X_{ijt}) = \beta_0 + \beta_1 \log(GDP_{it}) + \beta_2 \log(GDP_{jt}) + \beta_3 \log(POP_{it}) + \beta_4 \log(POP_{jt}) + \beta_5 \log(PCGDPD_{ijt}) + \beta_6 \log(DIST_{ij}) + \beta_7 \log(REER_{jt}) + \beta_9 (COL_{ij}) + \beta_{10} (TA_{ijt})$$

Where;

$X_{ijt}$  = Value of exports from Sri Lanka to country  $j$  in year  $t$ ,

$GDP_{it}$  ( $GDP_{jt}$ ) = Sri Lanka's GDP (country  $j$ 's GDP) in year  $t$ ,

$POP_{it}$  ( $POP_{jt}$ ) = Sri Lanka's population (country  $j$ 's population) in year  $t$ ,

$PCGDPD_{ijt}$  = Absolute value of per capita differential of Sri Lanka and country  $j$  in year  $t$ ,

$DIST_{ij}$  = Distance between Sri Lanka and country  $j$ ,

$REER_{ijt}$  = Bilateral Real Exchange Rate between Sri Lanka and country  $j$ ,

$COL_{ij}$  = Colonial link or relationship of Sri Lanka with country  $j$  (dummy variable),

$TA_{ijt}$  = Trade agreements of Sri Lanka with country  $j$  in year  $t$  (dummy variable)

Estimation was done using the stochastic frontier approach (SFA). Further, the ratio of Actual export (A) and export Potential (P) was obtained by the model. Then, (A/P) was calculated to analyze the export potential of Sri Lankan fruit exports. Sri Lanka has exported potential to countries whose values of (A/P) are less than one (Rahman, 2010). The value of  $[1 - (A/P)]$  is the unused export potential.

#### 4. Results and Discussion

Researchers analyzed the major fruits produced in Sri Lanka and calculated their individual scores based on the methodology and weightage provided. Table 1 displays the individual scores of the major fruits.

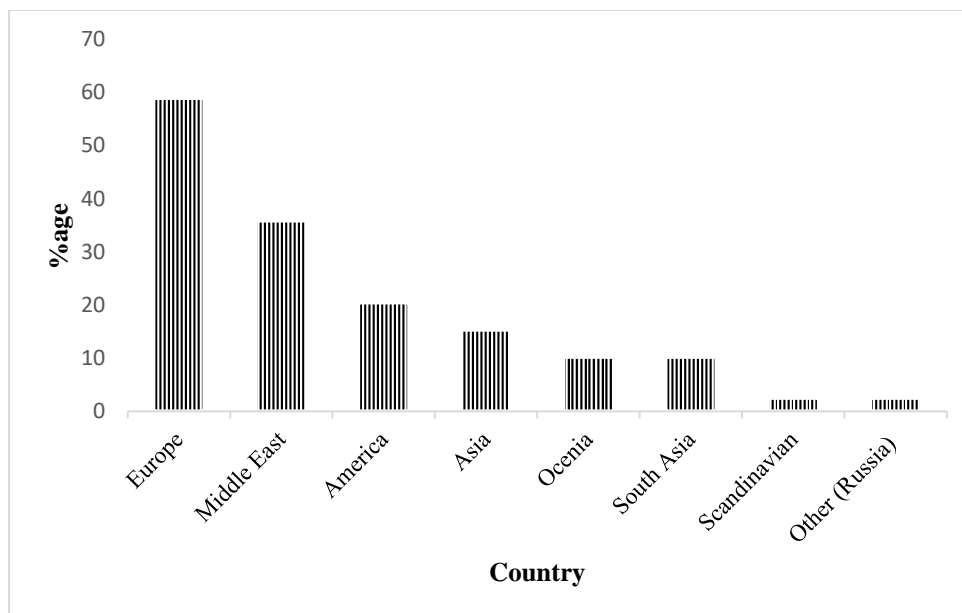
**Table 1: Individual Scores of Major Fruits**

<b>Fruit Crop</b>	<b>Individual Score Calculated</b>	<b>Rank</b>
Pineapple	7.72	1
Banana	8.12	2
Papaya	9.82	3
Mango	10.02	4
Avocado	10.32	5
Lemon	10.35	6

Source: Authors' Own Calculation Based on Agricultural Statistics, Department of Census and Statistics and Sri Lanka Customs

The scores depicted above are calculated on a ranking basis; lower the score, the greater the export potential of the crop. The results revealed that pineapple topped the list based on the scores above. This is also consistent with the results shown in ADB (2017).

As stated by key informants, China, Jordan, Singapore, Korea, Japan, and Russia are the potential new markets for Sri Lankan fruit exports. Figure 1 depicts the export regions that are believed to have export potential in the future for Sri Lankan fresh and processed fruits.



**Figure 1: Potential Markets: Fruit Exporters' View**

Source: Authors' Compilation based on HARTI Survey Data, (2021)

According to the majority of fruit exporters surveyed (58.97%), Europe has the greatest potential for Sri Lankan fresh and processed fruit exports, followed by the Middle East (35.90%), America (20.51%), and Asia (15.8%). A similar proportion (10.26%) of fruit exporters mentioned Oceania and South Asia as potential markets. However, 5 % of exporters indicated that Scandinavian countries and Russia could be potential future markets for Sri Lankan fresh and processed fruits.

Due to data limitations, the study is unable to use disaggregate level data for each fresh and processed fruit export. As a result, for the current analysis, aggregate data from major fresh and processed fruit exports such as banana, pineapple, mango, papaya, avocado, and lime were used.

All statistical tests regarding the gravity model were done using STATA version 15. All-time series variables were tested for unit root by employing the Harris-Tzavalis unit root test (1999). The results show that GDPit, GDPjt, POPjt, POPit and REERijt are non-stationary. As stated in empirical analysis it is common for GDP and population to have unit roots (Wickramarachchi, 2019). Therefore, another unit root test called Hadri (2000) was also employed. All variables of a time series nature were found to be stationary, and the results were also highly significant.

The gravity model is estimated using SFA. In this study, SFA was employed with a time-varying decay efficiency model. This is justified by the eta value of the output,

which is statistically significant ( $p=0.000$ ). The gamma value ( $\gamma$ ) is 0.63 justifies the use of a stochastic frontier model to estimate export potential as it implies that both behind the border constraints and the country-specific beyond the border factors of importing countries are responsible for a major portion of the total variation in the model (Wickramarachchi, 2019).

Table 2 summarizes the estimates of SFA. The GDP of Sri Lanka shows a negative sign, and it is statistically significant at 10 %. However, the GDP of partner countries shows a positive sign, though statistically not significant. Consequently, with the growth of GDP of partner countries the exports of Sri Lanka increased due to their higher income and demand. Both population parameters are positive, and only POPit was statistically significant.

**Table 2: Estimation Results for Major Fruit Exports**

Predictors	Coefficient	Standard Error	P value
Log (GDPit)	-1.855*	1.085	0.087
Log (GDPjt)	0.311	0.426	0.465
Log (POPit)	12.108**	5.229	0.021
Log (POPjt)	0.381	0.382	0.318
Log (PCGDPDijt)	1.788***	0.462	0.000
Log (DISTij)	-3.117***	0.403	0.000
Log (REERijt)	0.234*	0.132	0.075
Log (COLij)	-1.391***	0.513	0.007
No of Observations	165		
eta	0.113*	0.021	0.000
Gamma	0.628	0.430	

Note: \*\*\*Variables significant at 1% \*\*Variables significant at 5.0% \* Variables significant at 10.0%

Source: Authors' Estimates (2022)

As per the results in Table 2, PCGDPD is positive and significant. Hence, the Heckscher-Ohlin theory holds for the exports from Sri Lanka. Differences in income level and factor endowments with respect to partner countries have a positive effect on fresh and processed fruit exports of Sri Lanka. Distance is negatively correlated with Sri Lanka's fruit exports with a statistical significance of 1%, implying that even at present with modern transport facilities, distance plays a crucial role.

REER is positive and significant as per the existing literature (Hulugalle, 1989; Weliwita & Tsujii, 2000). However, this result is in contrast with some past studies (Wickramarachchi, 2019). High domestic inflation sometimes results in appreciations of the real exchange rates. Therefore, the results further indicate that the growth in Sri Lanka's exports is positively influenced by the growth in incomes in the importing countries. Devaluation has failed to play a significant role in boosting fruit exports from Sri Lanka, while the growth in the country's exports can be credited to effective export promotion programs and improvements in the production base (Weliwita & Tsujii, 2000).

The coefficient for COL has a negative sign and is statistically significant. Further, this depicts that Sri Lanka's fruit export performance is not supported by colonial relationships. Accordingly, most of the estimation results are in line with the existing literature, even though some variables were found to be statistically not significant.

**Table 3: Region-wise Fruit Export Results: 2010-2020 Average (LKR)**

<b>Region</b>	<b>Actual Exports</b>	<b>Potential Exports</b>	<b>Ratio of Actual to Potential</b>	<b>Unused potential (%)</b>
European	45103993.04	196375842.60	22.97	77.03
American	161368319.00	186889959.80	86.34	13.66
Oceania	25318532.27	122639462.10	20.64	79.36
Middle East	660469137.20	1164703305.00	56.71	43.29
Asian	39362308.27	123320699.40	31.92	68.08
South Asia	33867801.60	59793556.34	56.64	43.36

Source: Authors' Estimates

Maximum Likelihood Estimates from the gravity stochastic frontier model were used to estimate the region-wise potential of the fresh and processed fruit exports of Sri Lanka. According to the results in Table 3, the American region has been the preferred destination for Sri Lanka's major fresh and processed fruit exports followed by the Middle East and South Asia. The results depict that Sri Lanka has not tapped more than 50 % of its potential in the Oceania (79.36%), Europe (77.03%) and the Asian region (68.08%).

Issues related to input, labour, marketing, extension, and crops are the most common challenges for export-oriented fruit farmers. The majority (85.71%) of the surveyed fruit farmers lamented over lack of quality fertilizers while 58.57 % of farmers struggled to find effective pesticides. Further, 37.14 % of sample farmers indicated that land limitations forced them to obtain land on lease. About one fifth of farmers have faced problems in finding quality seed materials while around a same percentage do not have proper equipment. The rest (14.29%) were affected by water issues.

The majority (65.38%) of the respondent farmers are affected by high labour cost. A shortage of skilled labor is also cited as a major issue by 61.54 % of farmers.

Almost half of the fruit farmers considered (47.14%) said they had received low prices for their products. Some farmers stated that they have signed contracts with exporters and must sell their products at previously agreed-upon prices despite the high market price. Other significant issues included locating a suitable market for their products, dealing with delayed payments, and experiencing transportation difficulties. Fewer farmers have been impacted by price fluctuations.

A vast majority (91.89%) of the respondent farmers suffer from a lack of support from the government, while a sizable proportion expressed dissatisfaction over the existing extension services.

Pests and diseases are the most serious crop-related issues for the vast majority (96.23%). Banana farmers, for example, must contend with Sigatoka disease in their cultivation. Furthermore, mango seed weevil and scale insects harm mangoes, just as *kanda panuwa* harms the pineapple cultivation. Other pressing issues include animal attacks, erratic climatic changes, and a lack of storage infrastructure.

Loss occurred due to highly unstable prices is a major setback for majority fruit collectors (80.95%). Receiving low profits during the peak season, the high cost of labour, the skilled labour shortage, and pests damaging the crops were also daunting. Fewer collectors cited the fertilizer shortage and less availability of essential hormones that induce ripening and adverse effects of the pandemic as impediments.



Internal barriers faced by fresh and processed fruit exporters are twofold: company barriers and product barriers. Further, external barriers can be divided into three major categories: industry barriers, market barriers, and macro-environmental barriers.

*Company Barriers:* The majority of respondents (79.07%) stated that they have adequate information and knowledge about aspects of export activity, while 76.74 % stated that their company actively identifies and considers new market opportunities. Further, 67.44 % of surveyed fruit exporters indicated that their firm has employee strength for export planning and other activities. Therefore, these aforementioned factors do not act as barriers. However, 60.47 % of respondents admitted that the lack of market information is a constraint in market selection and development. The majority face difficulties in obtaining funds to finance their export operations. An increased number of fruit exporters lamented over the lack of finances for research and development such as value-added product development. It was revealed by many that funds are inadequate even for market research. Further, the majority (55.81%) mentioned that they did not receive assistance or collaboration from their clients.

*Product Barriers:* Most of the respondents (62.79%) indicated that it is difficult to comply with clients' requirements and a great majority (95.35%) said they ensure that their client specifications are met. Furthermore, majority of people rate products based on their quality. 72.09 % of the respondents mentioned that the existing international/national standards and regulations affect their business. Complying with standards is another challenge, as fruit exports tend to get rejected/returned due to non-compliance with the standards. Further, suppliers not meeting their requirements and hardships in accessing quality raw materials, as well as packaging and labeling issues have affected many.

*Industry Barriers:* Most of the surveyed fresh and processed fruit exporters indicated that the scale of the company is crucial to entering the export market; large-scale firms benefit more. Many have been hampered by a lack of knowledge about new technologies in the global market (55.81%), unstable raw material supply (81.40%), and high competition from foreign markets (79.07%). The vast majority have decided to face aggressive foreign competitors. As a result, approximately 69.77 % of them choose to participate only in markets where they have a competitive advantage. Furthermore, a large majority of respondents indicated that if their company had a competitive advantage in international markets, they would pursue those markets.

*Market Barriers:* More than half of the respondents stated that finding reliable foreign buyers, poor demand, fluctuations in demand at the export markets, and delay of payments/ delay in duty drawbacks are issues in export procedures. A vast majority agreed that if there was international demand for a product, they would be interested in pursuing it. However, more than half of respondents stated that they did not pursue

markets that only had their predetermined "ideal" characteristics. However, most of the respondents denied claims that language and cultural differences pose challenges in addressing customer preferences and the procedural complexity of paperwork.

*Macro-environmental Barriers:* A majority of the surveyed fruit exporters cited high transportation costs to the export market (95.35%) as well as lack of governmental support in export marketing and promotion (89.05%) as major issues. Foreign exchange restrictions and foreign currency fluctuations at export markets affected a similar percentage of respondents (76.74%). As a result, 60.47 % of respondents identified import tariffs at foreign markets as a problem. A similar proportion of respondents (65.12%) stated that there is a lack of gathering and dissemination of information on available export opportunities, and viewed the legal and regulatory framework they have experienced as impediments to their business growth. Further, more than half of the respondents expressed dissatisfaction over the existing government policies as being non-supportive. Furthermore, the majority of respondents (81.40%) stated that global economic recession and the current pandemic situation have had a negative impact on their businesses.

## **5. Conclusion and recommendations**

According to the Augmented Gravity Model, the importing country's GDP and population have a positive impact whereas distance has a negative and significant impact on Sri Lanka's fruit exports. In addition, the difference between the factor endowments has a positive and significant impact on Sri Lanka's major fruit exports, which is in accordance with the Heckscher-Ohlin theory. However, the real exchange rate has a positive and significant impact on Sri Lanka's fruit exports, implying that the exchange rate policy does not play a significant role in Sri Lanka's fruit exports. Therefore, the growth in Sri Lanka's fruit exports can be credited to effective export promotion programmes and improvements in the production base. The American region was the preferred destination for Sri Lanka's major fresh, and processed fruit exports followed by the Middle East and South Asia. The results depict that Sri Lanka has not tapped more than 50 % of its potential in Oceania (79.36%), Europe (77.03%), and Asian regions (68.08%). Therefore, the country can enhance its fresh and processed fruit trade with the above mentioned regions in place of the countries that have exceeded their trade potential.

The Weighted Average Score Analysis revealed that pineapple has the highest potential for export. The high cost of exporting is the most serious challenge for the majority (74.42%) of the fresh and processed fruit exporters in Sri Lanka, followed by other challenges identified as dis-continuity in the supply of raw materials (60.47%), strong international competition (50.00%) and quality related issues in raw materials (46.51 %). High risk due to unstable prices (81.00%) and low profits during

the peak season (71.43%) were the major challenges faced by fruit collectors in Sri Lanka. An inadequate supply of quality fertilizers (86.00%) and pesticides (59.00%) was the greatest challenge for fruit exporting farmers. Further, most of the fruit farmers (50.00%) have received low prices for their products.

Sri Lanka should prioritize the implementation of effective export promotion strategies in order to evolve and diversify the trade area in order to find prospective markets while also expanding existing markets. Sri Lanka can increase fresh and processed fruit trade with regions such as Oceania, Europe, and Asia in place of regions where trade potential has exceeded. Furthermore, Sri Lanka can increase its market share in the aforementioned markets by introducing trade representatives, establishing bilateral trade agreements, adhering to international quality standards, and expanding exporters' marketing and advertising knowledge.

A close linkage should be established between farmers and fruit exporters to guarantee reasonable prices to farmers and supply quality products to export destinations. For that, a database should be maintained for fruit farmers, export-oriented fruit farmers as well as collectors. The fruit farmers' database, export-oriented fruit farmers' database, and fruit collectors' database can be maintained by the Department of Agriculture, Export Development Board, and Ministry of Commerce, respectively.

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