

SUSTAINABILITY OF ORGANIC VEGETABLE SUPPLY CHAINS IN SRI LANKA

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Introduction

Organic farming is not a new concept in Sri Lanka. Indigenous agricultural knowledge and practices are beneficial for sustainable agriculture with minimum effect on nature. However, the country has been practicing inorganic farming for several decades. To reduce the impact of chemical usage, the government has taken several measures to reestablish good agricultural practices in Sri Lanka. The government of Sri Lanka ruled a few Acts related to the same. The National Agricultural Policy addressed thirteen key issues related to current agriculture, including food and quality management, the safe use of natural resources, and the assurance of ecosystem safety. Recently, there has been an increasing trend towards organic production in Sri Lanka. Despite a high demand for organic vegetables, there is a significant gap in the market. While some producers occasionally enter the market, they may struggle to sustain their business or achieve significant growth. Therefore, this study aims to uncover the challenges faced by organic entrepreneurs in maintaining sustainability and identify the type of government support required to boost organic vegetable farming in Sri Lanka.

Methodology

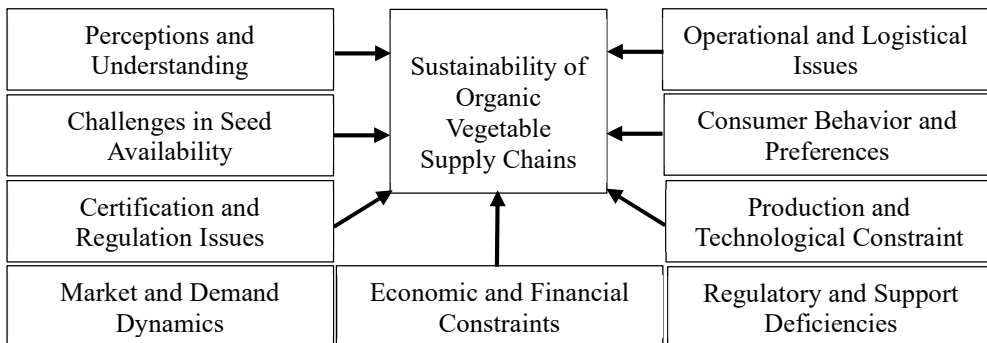
There are a limited number of key players engaged in the organic business in Sri Lanka and most of the producers are farmers who act as supply chain partners. Based on evidence from secondary sources, it was found that most of these key players are in the Colombo district of the Western province of Sri Lanka. Therefore, for the study, the population of organic entrepreneurs in the Colombo district was selected. The study focuses on a small and well-known population. However, there may be some hidden elements in the population that are difficult to identify. Since the research is qualitative, a purposive judgmental sampling technique was used to select the sample for gathering qualitative data. In this study, to collect qualitative data, the researchers used a focus group discussion method and interviews. Consequently, semi-structured interviews were used to collect qualitative data for this research. Further, the observation method was utilized for gathering qualitative data. These techniques help reveal hidden factors associated with the topic and help to conclude through mutual agreement. Secondary data were obtained from the annual reports of the Department of Census and Statistics, Sri Lanka in 2014 and 2023, the Central Bank Annual Report

from 2012 to 2023, and publications of the United Nations Food and Agriculture Organization. In this study, Thematic Analysis was used to analyze the qualitative data. The purpose of the Thematic Analysis (TA) is to identify, investigate, and provide interpretations of recurring meanings or "themes" in qualitative data.

Results and Discussion

After completing all of the interviews, focus group discussions, and observations the data was transcribed from audio to text. Coding the recorded text was a task that was completed by the researchers independently. Because the objective of carrying out the qualitative research was to uncover pertinent elements that influence the sustainability of the organic vegetable supply chains in Sri Lanka, an inductive approach is the most appropriate method to use because it entails extracting themes from the data that was collected. The researchers created their codebook, and once that was finished, it was inspected, reviewed, and amended. The following themes have been found to capture the various facets of Sri Lanka's organic vegetable market, based on the interview summaries that were provided.

Figure 1: Outcome derived from the Thematic Analysis



Source: Developed by the Authors (2024)

Lack of awareness of the consumers negatively influences the purchasing of organic fruits and vegetables. There is an opinion that organic vegetables are usually not only smaller but also not as beautiful as conventionally grown ones (Weerahewa et al., 2019). This misconception can reduce the demand and supply of organic products. However, the consumer is not fully informed of the merits, and attributes of organic products and underprices them (Samaratunga, 2007). People view organic fruits and vegetables with peculiar shapes and sizes as being substandard (Bhattarai, Lyne, & Martin, 2013). Raising the awareness of consumers regarding the real quality signs and the health effects of consuming organic products is vital to enhancing market penetration (Institute of Policy Studies of Sri Lanka, 2004). The regulation and control of the importation of untreated organic seeds in Sri Lanka is a major factor that limits access to quality seeds. These regulatory barriers reduce the chances of farmers to obtain important organic inputs (Karunagoda, 2010). Most of the economic factors discourage importers from importing organic seeds and organic seeds are hard

to find and costly for farmers to acquire (Weerahewa et al., 2019). Since there are no well-defined local laws on this matter, there is an inadequacy in protecting the consumers of organic products in the local market (Samaratunga, 2007). Organic certification of the supply chain to maintain quality is difficult. The current methods of farm inspections and tender grading of farms have failed to provide solutions to cases of mismanagement or fake organic products (Bhattarai, Lyne, & Martin, 2013). There are no specific labelling requirements that can be seen today, which weakens the credibility of organic products in the market (Institute of Policy Studies of Sri Lanka, 2004). The negative production and import of genetically modified organic foods are the factors that have led to a poor market for organic products in Sri Lanka. This situation is compounded by the fact that consumers are ignorant and have misconceptions concerning organic produce (Karunagoda, 2010). Supermarkets especially use their buyer power by imposing on the small farmer's unfavorable contractual conditions. Due to delayed payments and hidden charges, the suppliers of organic products struggle to meet their financial needs hence challenging their operations (Bhattarai, Lyne, & Martin, 2013). Sustainable farming practices in Sri Lanka are at a minimum level. This leads to poor outcomes and high costs among organic farming enthusiasts (Weerahewa et al., 2019). The above-highlighted challenges affect the ability of farmers to get the best results on their farms due to inadequate laboratory services to maintain the health of soils (Karunagoda, 2010). Since the consumers' awareness of the advantages of organic foods and the methods of their production is limited. There is a need to increase the awareness of the consumer to increase the acceptance and demand for organic products (Samaratunga, 2007). Organic consumers on the budget side believe that the price of organic foods should be equal to conventional food products, which creates a problem in how to encourage people to consume organic products (Bhattarai, Lyne, & Martin, 2013). Due to the requirements of processing and packaging smaller items and maintaining the freshness of the products, the management of the organic supply chains becomes a challenge (Institute of Policy Studies of Sri Lanka, 2004). Better cooperation and integration between the actors in the sector are crucial for boosting the sector's performance (Weerahewa et al., 2019). Organic farmers need professional advice and government assistance to tackle the problems they encounter (Samaratunga, 2007). Proper control and transparency of the organic products market are crucial for consumers' trust (Bhattarai, Lyne, & Martin, 2013). The delay of payments by the supermarkets to the suppliers intensifies the financial problems affecting the farmers involved (Institute of Policy Studies of Sri Lanka, 2004). Many of the organic producers suffer from lack of funds because there are no credit facilities available to them and the payment for the produce is sometimes delayed by the buyers (Weerahewa et al., 2019). Furthermore, the lack of government support in acquiring lands for cultivation and marketing organic products in upper-income level residential areas also negatively impacts the enhancement of organic fruit and vegetable supply chains in Sri Lanka.

Conclusion

Hidden Nodes of the Organic Vegetable Supply Chains: Based on the interviews and the focus group discussion, it was revealed that the main stakeholders in the supply chain prioritize their benefits and neglect other layers. This harms the sustainability of the organic vegetable supply chain, particularly affecting small-scale organic producers who struggle to survive in tough economic conditions. These ground-level issues are often overlooked, especially in rural areas where individuals have limited platforms to voice their challenges. Typically, organic producers sell their goods to organic suppliers who collect the harvest from their farms. However, the focus group discussion revealed that there are inconsistencies in the supply chain and an unreliable demand for organic vegetables. Suppliers are hesitant to collect harvests from remote locations when market prices are low or when there is already sufficient supply. Consequently, if farmers are unable to sell their produce on time, they are forced to sell to conventional vegetable supply chains at lower prices, leading to losses. As a result, some farmers are forced to leave the industry after experiencing continuous losses on multiple occasions.

Less Collaboration Among the Stakeholders: According to the results of the focus group discussion, it was revealed that there is very minimal collaboration among the community involved in the organic vegetable industry. This was further confirmed during the interviews as some of the interviewees directly complained to the other suppliers about the actions taken by them to get undue benefits. Consequently, most stakeholders are focusing on their benefits rather than developing the industry.

Less Proper Regulatory Coverage: The production of organic products is overseen by the Export Development Authority according to the Export Development Act No. 40 of 1979. However, there are limited provisions for the vegetable sector as the primary purpose of the Act is to regulate the large-scale production of minor crops, such as spices. There is no proper regulatory coverage for organic production for domestic consumption. Under the Ministry of Agriculture of Sri Lanka, there is a certification for Good Agricultural Practices (GAP). However, this certification covers only the best practices in the agriculture sector and does not include certification for organic practices.

Nish Market for Organic Vegetables: The organic vegetable market in Sri Lanka is still in its early stages. In the focus group discussion, it was noted that the general public is not fully aware of organic vegetables. This lack of awareness is heavily influencing the slow growth of the market and leading to less demand for organic vegetables. Some people think that organic vegetables are crops grown in an environment completely free from inorganic chemicals. However, this is not entirely accurate. In organic cultivation, there is a provision for the use of some inorganic chemicals, such as rock phosphate or dolomite, up to an accepted level to improve soil conditions.

Sales Outlets in Highly Commercialized Environments: To achieve a significant yield from the organic farm's final product of organic vegetables, the products must be sold at a considerably higher rate than conventional vegetables. This means that the product can only be afforded by a limited customer base, mainly located in the city center and other urbanized areas. Consequently, it is not economically viable for producers or suppliers to place outlets in highly commercialized environments.

Further research

Further study should be concentrated on the following areas; increasing public awareness of organic products through education, ways to reduce the price and complexity of organic seeds, creating a strong regulatory structure and certification procedure to ensure the quality of the organic products, investigating international best practices and technology to adapt them to enhance organic farming in Sri Lanka, putting in place a support system for smallholder organic entrepreneurs to overcome operational and financial barriers existing in the field.

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