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# Determinants of Conversion Decision from Conventional Tea to Organic Tea in Neluwa Sinharaja Buffer Zone, Sri Lanka

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**ABSTRACT**

Promoting organic tea farming is becoming popular as conventional intensive tea farming is facing emerging environmental and social problems. This study aimed to explore the determinants of farmers' conversion decision from conventional to organic tea in the Neluwa Sinharaja buffer zone of Sri Lanka. A questionnaire survey of 200 organic and inorganic tea farmers was done in the data collection. Descriptive analysis, Mann-Whitney test, and logistic regression were employed in data analysis. The majority of farmers in both farming systems was male and was within the 41-50 age group. Farmgate price of organic tea varied between 90-117 LKR $kg^{-1}$ while conventional tea prices ranged from 70-93 LKR $kg^{-1}$. Organic tea farming reported better economic performances: high product price, maximum utilization of on-farm/community resources, and low cost of production as well as better environmental performances like discharging non-polluted water, enhancing soil fertility, and reduced soil erosion, compared to conventional tea farming. Logistic regression revealed that, farming experiences (OR=0.218), training participation (OR=4.348), access to extension services (OR=7.509), size of households (OR=1.963), farm gate price (OR=1.829), yield (OR= -0.003), and total cost (OR=1.000) as determinants significantly ($p$<0.05) affecting on conversion decision from conventional to organic tea farming while the land extent (OR=0.096) was a significantly affecting determinant only at 10% significance level in Neluwa Sinharaja buffer zone. The study recommends focusing on the aforesaid significant determinants that motivate farmers to convert from conventional to organic tea farming in other potential areas in the country.

## 1. Introduction

Tea is the most popular non-alcoholic beverage produce in Sri Lanka. In 1867, James Taylor started the tea industry in Sri Lanka at the Loolecondera Estate in Kandy District. The major tea growing areas are Nuwara Eliya and Kandy in the Central Province, Badulla, Bandarawela and Haputale in the Uva Province, Galle, Matara, and Mulkirigala in the Southern Province, and Ratnapura and Kegalle in the Sabaragamuwa Province. Low-grown tea mainly comes from Southern Sri Lanka. These teas are grown from sea level to 2,000 ft (610 m) and under warm conditions. These areas spread across four main sub-districts, Rathnapura/Balangoda, Deniyaya, Matara, and Galle [1]. Low-grown tea is stronger and less subtle in taste and is produced in Galle, Matara, and Rathnapura areas. Ruhuna tea is defined as "low grown" because it contains topography of up to 600 meters from the sea level and borders the tropical forest of the Sinharaja in its widest Southern edges. Around the periphery of the Sinharaja Biosphere Reserve, a 3 km wide buffer zone has been established to reduce resource demand on the reserve and to help prevent human encroachments. The buffer zone includes natural forests, *Pinus caribaea* plantations, non-forested lands, private lands, and village home gardens. In this buffer zone, tea is cultivated as the main non-forest plantations. Low elevation and soil combination causes the tea-bush to grow rapidly, producing a long beautiful leaf. Full-flavored black tea is a distinctively unique Ruhuna specialty [1].

Organic tea farming is based on four principles; principles of health, ecology, fairness, and care [2]. Organic tea farming leads to enhancing

environmental biodiversity, natural biological cycles, and biological activity of the soil, through management practices. The organic tea sector is a very small part (1.11%) of the tea industry compared to conventional tea production. But the volume of organic tea traded and the number of tea producers has recorded high growth in the last several years.

The global organic tea market can be classified into North America, Europe, Asia Pacific, and the rest of the world. There is a high market share in the Asia-Pacific region, followed by Europe. The key players in the global organic tea market are Tata Tea Limited (Tetley), Unilever Tea Brands (U.K.), Associated British Foods (U.K.), Ten Fu Group (China), Taylors of Harrogate (U.K.), Bigelow Tea (U.S.), American Tea Room (U.S.), Alkaloid AD Skopje (Good Nature), R. Twining and Company Limited, Organic India, Ceylon Organics Limited, The Stash Tea Company, etc. China is the world's largest producer of organic green tea today. China is exporting organic tea to Japan, Europe, and the United States, and around 20 countries import 10,000 tons of organic tea from China. India is the world's largest producer of organic black tea. The produce is exported to the United Kingdom, Germany, the United States, Japan, and Australia [3].

Sri Lankan organic tea industry includes black, green, and silver tip tea in bulk and processed forms and, value-added teas with flavors. As a traditional agricultural country, Sri Lanka has a large potential for the organic tea industry. Tea contributes to 13% of export earnings in Sri Lanka [4]. The production is exported to UK, Australia, Germany, Japan, Netherlands, Italy, France, Canada, Singapore, Spain, and United States. Though the local demand for organic tea is now increasing the certification process is very costly for small-scale tea growers. According to the statistical data of the Tea Exporters Association (2017); 292,362 MT total tea production was reported in 2016, 307,080 MT in 2017, and 223,217 MT from January to September in 2018. Turkey, Iraq, Iran, U.A.E, and Azerbaijani were the leading buyers of Sri Lankan tea in 2016 and 2017.

Conventional tea farming has negative impacts on the environment, society, and economy in different ways. Large-scale tea monoculture leads to the reduction of biodiversity and natural habitats. Loss of natural habitats causes reducing the number of species in the ecosystem. Most of the hill and mountain areas are cleared for conventional tea cultivation due to the high demand from tea production. More than 50 percent of the land area used for growing tea is located on slopes of hills and mountains. Heavy rainfall is characteristic of most tea growing areas and subsequently, it leads to erosion of soil. Flat or gently sloping lands sometimes pose serious problems of disposal of surplus water under heavy rainfall conditions. Land clearances lead to an increase in soil erosion and water pollution. Large areas of the Sinharaja forest have been cleared to produce tea. Converting forest areas to tea lands reduces the biodiversity of surrounding environments. Continuous usage of a high amount of inorganic fertilizer degrades the fertility of soil [4].

Promoting organic farming has been widely accepted nowadays because conventional farming leads to emerging environmental problems such as surface water pollution and land degradation, loss of natural ecosystem habitats, biodiversity, reduction of land value, and affecting the health of human beings and other living organisms. Considering these adverse effects, organic tea cultivation has been introduced because it uses zero levels of inorganic chemicals. However, it also has been reported that it takes more time to convert conventional tea lands to organic tea lands [4]. Therefore, farmers in such areas show a lack of interest in this conversion.

The world market for organic food has grown during the last 15 years because consumers have considerable movement toward organic foods [5]. Consumers show more interest in the freshness and quality of food products they consume. Consumers purchase organic food for many reasons. Organic food is free from pesticides and insecticides. It provides fresh and high-quality food. Farmers can earn more profits from organic agriculture than from conventional farming mainly due to lower input costs of pesticide applications, inorganic fertilizer, etc., and higher market value than conventional products.

Today there is a high demand for organic tea in local and international markets. Though organic tea farming generates more benefits, the area under organic tea is still very low in Sri Lanka because of the lack of farmers' motivation, lack of institutional services, and lack of marketing setups. In the year 2012, the total extent of certified and in conversion to organic and biodynamic teas in Sri Lanka covered around 10,000 ha. Furthermore, organic and biodynamic tea extent has increased from 0.78 % in 2000 to over 5 % in 2015. Also, a 30-50% drop in yield is recorded with organic tea in the first 3-4 years in conversion than that of conventional tea. The production was in the range of 400-800 kg/ha/year in 2015. The organic and biodynamic tea production in Sri Lanka has recorded 268, 422 kg as of February 2016 [6].

 

Also, there is ample potential for organic tea farming in the Southern Province of Sri Lanka mainly due to suitable climate and soil conditions for organic tea cultivation. Hence, this study aimed to find the determinants of farmers' conversion decision from conventional to organic tea in the Neluwa Sinharaja buffer zone considering economic, social, and environmental prosperities of organic tea cultivation over conventional tea cultivation.

## 2. Material and Methods

### 2.1 Study Area

The Southern province of Sri Lanka is a small geographic area consisting of three districts: Galle, Matara, and Hambantota. The majority of people practices farming and fishing as their main source of income. Galle District is bounded on the North by the *Bentara* river, on the South and West by the Indian Ocean, and on the East by Matara and Ratnapura Districts. The Sinharaja rainforest which is the catchment for most of the rivers and lakes in the Galle District has a spread across these areas [7]. Galle District is divided into 19 divisional secretariats and Neluwa is one of them. There are 34 Grama Niladari divisions coming under Neluwa divisional secretariat [8]. Neluwa divisional secretariat division was selected for this study as most of the tea smallholders in the Galle District reside in this area. According to Neluwa Agrarian Services Center, about 2000 tea smallholders are engaged in non-organic tea farming while 547 farmers are engaged in organic tea farming in areas adjoining the Sinharaja buffer zone.

### 2.2 Sampling Method and Sample Size

A simple random sampling method was used to select organic and non-organic tea farmers in the Neluwa Sinharajaya buffer zone. In the sampling procedure, 100 organic tea farmers were selected representing 18% of the total organic farmers' and 100 non-organic tea farmers were selected representing 5% of the non-organic tea farmer population. Ihala Millawa, Pahala Millawa, and Panagoda Grama Niadari divisions were selected for the survey as the majority of organic tea farmers engage in cultivation from these Grama Niladari divisions. Registered cultivators in the Neluwa Divisional Secretariat (DS) division were the sampling frame.

### 2.3 Data Collection

Both primary and secondary data were used in the study. Primary data was collected through a field survey using a pre-tested, structured questionnaire. Questionnaires were designed to capture basic information on farmer's attitudes, socio-demographic characteristics such as the age of farmers, the gender of farmers, education level, and household size. Secondary data were gathered through the Tea Exporters Association of Sri Lanka, Rain Forest Rescue International (RRI), Kolanka, the internet, and other sources.

### 2.4 Data Analysis

Data were analyzed using descriptive statistics like mean, mode, percentage, frequency and standard deviation, and the logistic regression model. Descriptive analysis was used to analyze the socio-demographic factors/variables.

Farmers were expected to respond for different attitudes of organic farming based on knowledge of organic farming, environmental aspects, and economic aspects and were asked to rate their level of agreement on those attitudes using a Likert scale (1 = strongly agree, 2 = agree, 3 = moderate, 4 = disagree, 5 = strongly disagree). Perceived economic performance, social performance, and environmental performance of organic tea cultivation compared to conventional tea cultivation and attitude towards the organic tea farming Vs non-organic farming was analyzed by Mann-Whitney test. Significant variables that are affecting the adoption of organic tea farming in the Neluwa Sinharaja buffer zone area were identified using logistic regression.

## 3. Results and Discussions

### 3.1 Socio-demographic Characteristics

The majority of respondents whether they belonged to organic farming or non-organic farming were within the 41-50 year age category. Less number of respondents represented the 71-80 year age category. The mean ages of organic and non-organic farmers were 48.75 and 49.45, respectively. The minimum and maximum age levels of organic farmers were 24 and 76 years respectively while that for non-organic farmers were 24 and 77 years, respectively.

Further, the study revealed that 81% of the respondents were males and 19% were females in organic tea farming. In non-organic tea farming, 90% were males and 10% were females. It revealed that males were actively involved in organic as well as non-organic tea farming. According to the observation, tea farming is mainly man-oriented and the women were involved mainly in tea plucking and weeding tea lands. About 4% of the organic tea farmers had not received any formal education, 18% had received primary education, while 77% had received secondary education. Similarly, 18% of non-organic tea farmers had primary education,

 

78% had received secondary education and 4% had received tertiary education. As the majority (77%) of the farmers received secondary education, what the results indicate can be considered a positive trend in understanding the importance of organic tea farming over non-organic tea farming.

According to the results, 97% of organic farmers and 96% of non-organic farmers, respectively were married. Also, 46% of organic farming families had 4 to 5 family members and 37% of non-organic farming families had 4 to 5 family members.

Of all respondents, 61% of organic farmers had 2-3 years of experience in organic tea farming while only 1% of them had 6-7 years of similar experience. On the other hand, 37% of non-organic farmers had 11-15 years of experience in tea farming. Fewer numbers of farmers (2%) were in the 0-5 years' experience category in non-organic tea farming. Accordingly, non-organic farmers had more experience than organic farmers because organic tea farming was introduced to Neluwa recently. Results indicated that 65% of organic tea farmers had received training on organic tea farming. At the same time, it was revealed that 71% of non-organic farmers had no access to a training program on tea farming.

Thus it was confirmatory that the majority of non-organic farmers had no access to improved agricultural techniques while 25% of organic farmers had access to improved organic agricultural techniques. Since most of the non-organic tea farming lands were managed by old-aged farmers, they have hardly used any improved agricultural techniques for their tea cultivation such as cover cropping, mechanical tea plucking, maintenance of biodiversity, integrated pest management, and other related techniques related to tea farming. Further, the majority of respondents were tea smallholders who own limited land areas for tea cultivation. On the average, majority of the organic and non-organic tea farmers had 1 acre of land for their cultivation. In both farming systems, 0.25 acres was the minimum land extent and 5 acres was the largest. Both organic and non-organic farmers used their family members as labour for tea cultivation. Organic tea farmers used (44%) 2-3 family members as labour. Meantime, non-organic tea farmers used (47%) 2 family members as labour. Results confirmed that organic farmers used more family labour than non-organic tea farmers. Therefore, organic tea farmers can reduce their cost of production with the help of their family labour.

### 3.2 Economic Characteristics

According to table 1, the average monthly income from organic tea farming was lower than non-organic tea farming as organic farming was a recent introduction in the area.

**Table 1: Average income from tea cultivation (LKR/month)**

| Group | Mean | St Dev | Min | Max |
|---|---|---|---|---|
| **Average income from tea** | | | | |
| Organic | 21660 | 12872 | 4000 | 60000 |
| Non-organic | 44915 | 30519 | 2500 | 130000 |
| **Average household income** | | | | |
| Organic | 56620 | 21427 | 10000 | 180000 |
| Non-Organic | 75860 | 36595 | 5000 | 180000 |

*Source: Field survey data, 2020*

The average household income of organic tea cultivators was LKR 56,620. In non-organic tea farming, the average household income of farmers was LKR. 75,860.

Survey results revealed that most of the organic tea farmers obtained LKR 110 per kilogram of fresh leaves whereas it was LKR 101 per kilogram of non-organic tea leaves. The farmgate price varied from LKR 90 - 117 per kilogram of leaves of organic tea farming systems whereas it was LKR 70 - 93 per kilogram of leaves of non-organic tea farming systems. In non-organic tea farming, the farmgate price varied from farmer to farmer because the majority of non-organic farmers sell their harvest to different tea factories at competitive prices for one kilogram of tea leaves. Still, compared to non-organic tea farmers, organic tea farmers received a higher price for 1 kilogram of fresh tea leaves.

Yield variation was significant in both tea farming systems. Results revealed that 23% (majority) of organic farmers received a yield of 206 kg per month on average (600 kg maximum- 30 kg minimum). In non-organic farming, the average yield was 493 kg per month while it varied from 1500 kg to 35 kg per month. Results confirmed that the average yield of organic tea per month is less than in non-organic tea.

According to the results, the average cost of fertilizer for organic tea cultivation was LKR 258. The majority of organic tea farmers (73%) were not spending money on fertilizers. In organic tea farming, the cost for fertilizers varied from LKR 0–6,000. But in non-organic tea farming average cost of fertilizers was LKR 2,660 and it ranged from LKR 0 - 22,000. The average cost of labour for organic tea farming was LKR 1,401. The majority of organic tea farmers (59%) were not spending on hired labour. But in non-organic tea farming average cost of labour was LKR 1,1203. It ranged from LKR 0 - 50,000. Therefore, the cost of labour in non-organic

 

tea farming was much higher than in organic tea farming.

The average monthly transport cost in organic tea cultivation was LKR 429 and it varied from LKR 70 - 1,500. In non-organic tea farming average cost of transport was LKR 1,026 and it varied from LKR 100 - 3,000 per month. The monthly transport cost was low in organic tea farming than in non-organic tea farming. Results indicated that the average total cost of organic tea farming (acre/month) was LKR 2,089, and it varied from LKR 100 - 2,200. In non-organic tea farming, the average total cost was LKR 14,889, and it varied from LKR 350 - 65,000. The total cost of organic tea farming was less than non-organic tea farming probably due to the organic tea farming system mostly based on family labour and organic fertilizer.

### 3.3 Response to Knowledge on Organic Tea Farming

Table 2 shows the median values for each statement based on the knowledge on organic tea farming, of both organic and non-organic tea farmers. As shown in the results, the attitude towards organic farming was significantly different between organic and non-organic farmer groups based on the factor that organic tea farming needs clean/non-polluted water for irrigation. Both farming systems had a moderate idea (Median value=3) about easy conversion of non-organic tea cultivation to organic tea cultivation and simplicity of organic tea farming to non-organic tea farming. According to the results, both farmer groups had a strong idea (median value=2) that organic tea farming requires only organic fertilizers ($p$<0.05).

According to the Mann-Whitney test, the median value of each group in a separate column with a similar value has no significant difference at 95% and groups with different values have a significant difference.

### 3.4 Response to Environmental Aspects of Organic Tea Farming

Table 3 shows the median value for each statement based on the environmental aspects of organic tea farming, of both organic tea farmers and non-organic tea farmers**.** The results indicated that organic tea farmers had a strong idea about the environmental aspects of organic tea farming than non-organic farmers. Results also indicated that organic farmers strongly agreed with the idea that organic tea farming enhances soil fertility, does not pollute water resources, and does not harm the soil and other organisms (Median value=1).

**Table 2: Median values for perceived attitude towards organic farming based on the knowledge about tea cultivation**

| Knowledge about organic tea farming | Organic Tea farmers | Non-organic tea farmers | P-value |
|---|---|---|---|
| Organic tea farming is simpler and easier than non-organic tea farming. | 3 | 3 | 0.069 |
| Organic tea farming needs clean / non-polluted water for irrigation | 2 | 3 | **<0.001** |
| Organic tea farming requires only organic fertilizer | 2 | 2 | 0.066 |
| Non-organic tea cultivation can easily be converted to organic tea cultivation | 3 | 3 | 0.996 |

*Source: Field survey data, 2020*

**Table 3: Median values for perceived attitude towards organic farming based on the environmental aspects of tea cultivation**

| Environmental aspects | Organic tea farmers | Non-organic tea farmers | P-value |
|---|---|---|---|
| Organic tea farming enhances soil fertility | 1 | 2 | **<0.001** |
| Organic tea farming will not pollute water resources | 1 | 3 | **<0.001** |
| Organic tea farming does not harm soil or other organisms | 1 | 3 | **<0.001** |

*Source: Field survey data, 2020*

### 3.5 Response to Economic Aspects of Organic Tea Farming

Table 4 shows the median value for each statement based on the economic aspects of both organic and non-organic tea cultivation**.** Results indicated that there was no significant difference ($p$>0.05) of responses between both farming systems for the statements; high demand for organic tea farming and cost of production of organic tea farming is lower than the non-organic tea farming. However, organic tea farmers had a strong idea than the non-organic tea farmers about low yield in organic cultivation.

**Table 4: Median values for perceived attitude towards organic farming based on the economic aspects of tea cultivation**

| Economic aspects | Organic tea farmers | Non-organic tea farmers | P-value |
|---|---|---|---|
| There is a high demand for organic tea farming | 1 | 1 | 0.25 |
| The yield is low in organic tea farming | 1 | 2 | **0.008** |
| The cost of production of organic tea farming is lower than the non-organic tea farming | 3 | 3 | 0.15 |
| High demand for processors | 2 | 3 | <0.001 |
| **Social performance** | | | |
| Health product for consumers | 2 | 2 | 0.076 |
| Maximum utilization of on farm/community resources | 2 | 3 | <0.001 |
| Quality of the product | 2 | 2 | 0.12 |
| **Environmental performance** | | | |
| Environmental | 1 | 2 | <0.001 |
| Use of soil conservation | 1 | 2 | <0.001 |
| Reduction of soil erosion | 1 | 3 | 0.01 |
| Better soil fertility | 1 | 3 | <0.001 |

*Source: Field survey data, 2020*

### 3.6 Economic, Social and Environmental Performance of Organic Tea Farming

A similar approach was applied to assess farmers' attitudes towards the performance of organic tea farming. Farmers' responses are presented based on economic, social, and environmental performances. According to the results (Table 5), the economic performance of organic farming was significantly different ($p$>0.05) between organic and non-organic farmer groups due to better profitability, high product price, easy and better marketing, low production cost, and high demand for processors. Also, there was a significant difference in social performances based on the maximum utilization of on-farm/community resources ($p$<0.05) in both farming systems. Organic farmers strongly agreed to each statement based on the environmental performances. The environmental performances of organic farming were significantly different ($p$<0.05), between organic and non-organic farmers based on environmental protection, use of soil conservation methods, reduction of soil erosion, and better soil fertility.

**Table 5: Median values of economic, social, and environmental performances of organic tea cultivation**

| Performances | Organic tea farmers | Non-organic tea farmers | P-value |
|---|---|---|---|
| **Economic performances** | | | |
| Better profitability | 2 | 3 | <0.001 |
| Subsidies for production | 2 | 2 | 0.40 |
| Easy and better | 2 | 2 | 0.148 |
| High product price | 1 | 3 | <0.001 |
| Low production cost | 3 | 4 | 0.001 |

### 3.7 Determinants of Farmers' Conversion Decision from Conventional to Organic Tea Farming

**Table 6: Analysis of maximum likelihood estimates**

| Type | Odds Ratio | Estimate value | P-Value | 95% Conf. |
|---|---|---|---|---|
| Intercept | | 0.0693 | 0.5151 | |
| Age | 0.999 | -0.0015 | 0.9304 | 0.966-1.032 |
| Education level | | | | |
| $EL_1$ vs $EL_4$ | 0.007 | 1.802 | 0.3442 | <0.031-6.051 |
| $EL_2$ vs $EL_4$ | 0.015 | -1.04 | | <0.001-9.491 |
| $EL_3$ vs $EL_4$ | 0.032 | -0.003 | | <0.001-16.384 |
| Farming experiences | 0.218 | -1.524 | 0.0012* | 0.086-0.550 |
| Training participation | 4.348 | 0.735 | 0.0017* | 1.387-13.634 |
| Extension services | 7.509 | 1.008 | 0.0036* | 1.933-29.166 |
| Household size | 1.963 | 0.674 | 0.0083* | 1.90-2.2338 |
| Land extent | 0.483 | -0.728 | 0.096** | 0.204-1.141 |
| Average household income | 1.000 | 0.0001 | 0.4309 | 1.00-1.00 |
| Farmgate price | 1.829 | 0.631 | 0.0001* | 1.408-2.327 |
| Yield | 0.0003 | 1.000 | 0.0001* | 1.000-1.000 |
| Total cost | 1.000 | -0.0003 | 0.016* | 0.999-1.000 |

***Significant at 5% level ** Significant at 10% level*
*Source: Field survey data, 2020*

Logistic regression results revealed the determinants of farmers' conversion decision from conventional to organic tea in the Neluwa Sinharaja buffer zone (Table 6).

According to Table 6, framing experiences, training participation, extension services, size of household, farmgate price, the yield of tea, and total cost has significantly influenced ($p$<0.05) the conversion decision from non-organic tea to organic tea while land extent was significant at 10% ($p$<0.1) significant level. The odds ratios for the factors showed the increase or decrease in odds of converting to organic farming when the value of the predictor variable increased by one unit.

When farmers enhance their farming experiences in tea cultivation (OR=0.218), many non-organic tea farmers tended to have relied on organic tea cultivation. With increasing farming experience many tea farmers experienced the negative impacts of conventional tea farming like land degradation, soil erosion, and loss of soil fertility. Increased training participation (OR=4.348) and extension services (OR=7.509) connected with organic tea farming and organic tea farmers has influenced the conversion from conventional to organic tea. Therefore, it can be accepted that extension services and training participation helped to advance the knowledge on organic tea farming. Extension services play a vital role in the adoption of organic farming practices especially for farmers with less education and the illiterate [9, 10], 11]. More awareness about organic tea farming leads to convert conventional tea lands to organic tea. The results further substantiated that when farmers increase their land extent by 1 acre (OR= 0.483), non-organic tea farmers tended to rely more on organic tea cultivation. Similar scenarios have been reported with organic rice farmers in the Philippines [12], coffee farmers in Uganda [13], and rice farmers in Bangladesh [14] where organic farms are larger than conventional ones.

In the early stages of converted organic tea lands, the yields were low due to the cutting down of inorganic fertilizers. Therefore, farmers tend to rely on conventional tea cultivation (OR=-0.00034). Further, the odds of engaging in organic tea cultivation are higher with a higher number of household members (OR=1.963), higher farm gate price (OR=1.829), and the total cost (OR=1.17) of production. When farmers realize higher economic benefits, the probability of converting to organic tea cultivation is high. Further, Sarker and Itohara [14] identified that a direct economic benefit to be an important factor for conversion into organic farming in Bangladesh.

## 4. Conclusion

The study concludes that the majority of farmers in both farming systems were in the 41-50 age group and of them majority were male. Most of the organic farmers had only 2-3 years of experience in organic farming. Usage of organic fertilizers, manual weed control methods, soil conservation methods, and usage of liquid organic fertilizers are practiced among organic tea farmers. Comparative analyses showed that organic tea farmers have significantly better attitudes toward organic tea farming based on knowledge, marketing aspects, and environmental aspects. Farmers' expectations on the performance of tea farming were also different between the organic and conventional farmers. Organic tea farmers have significantly higher expectations of the economic performance of organic farming when compared to conventional tea farmers. The household size, farm- gate price, training participation, and extension services available for organic farming can be used as strong predictors for conventional farmers to convert to organic tea farming.

Further, the study recommends establishing a separate organic tea product promotion unit within the Agrarian Services Center of Galle District to facilitate the promotion of organic tea production in the Galle District. They should play an active role working collaboratively with the Ministry of Agriculture, Tea Board, and Tea Commissioner's Department for the development of organic tea cultivation. The Ministry of Foreign Affairs and Ministry of Trade can play major roles in exploring international market opportunities for organic teas, which is the key factor for successful organic tea production and converting more farmers to organic tea cultivation in the Galle District.

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