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An Examination of Cinnamon Farmers Entrepreneurial Behaviour in Sri Lankan Context

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Abstract

As the oldest and the longest form of economic endeavor, entrepreneurialism has become a key aspect in agricultural sector. As economic changes, the agriculture farmers need to focus on innovation, risk taking and the leadership. This study investigates the entrepreneurial behaviour of farmers, how entrepreneurial behaviour varies in terms of gender, education and experience, the link between entrepreneurial behaviour and farm financial success and the nature of the skills that farmers need to become entrepreneurs in agricultural sectors. The study was carried out with owners who have experience in the commercial cultivation of cinnamon crops in two districts in Sri Lanka. Primary data were collected through a survey using a self-administered structured questionnaire. In addition, qualitative research design was also used to investigate the nature of the skills that farmers need to become entrepreneurs in agricultural sectors. This study revealed a moderate level of entrepreneurial behaviour of the farmers. They have shown their attraction towards risk taking; however, practical issues were there that restricted farmers from change-orientation to utilizing opportunities. Further, there was a statistically significant influence of entrepreneurial behaviour to financial performance of cinnamon crop farms. According to the interviews, the farm owners who showed entrepreneurial behaviour are equipped with the skills of learning by doing, centralised decision-making, targeting and analyzing market trends. The study found that entrepreneurial behaviour seems to have its own characteristics in each context which can be varied in different countries. In this study, it is the combination of individual, behavioural strategies and institutional factors. Accordingly, the study discusses the implications and

providing a framework that will encourage to make effort on the complexity of entrepreneurial farmer.

Keywords

Farmer; Entrepreneurial Behaviour; Developing country; Agribusiness, Farm success

Introduction

It is identified that entrepreneurship is a possible path to move up the socioeconomic ladder (Ahlstrom 2010; Alvarez et al., 2015) through the transformational role that entrepreneur plays in creating economic values (Gries and Naudé 2010). It is arguable that the advent of entrepreneurs is critical to overcome poverty issues in developing countries because entrepreneurs focus on productivity and growth (Amin and Islam 2015), represent important sources of income and provide employment and livelihoods opportunities for people and allowing communities to raise their standards of living (Bruton et al., 2013).
As the oldest and the longest form of economic endeavor, the society as of today owes much to agriculture, thus entrepreneurialism has become a key aspect in agricultural sector (Adhikari et al., 2017; Yaseen et al., 2018). As economic changes, the agriculture farmers must be focused on innovation, risk taking and the leadership. In developed context, literature offers case studies, circumstantial evidences and empirical investigations to understand entrepreneurship in agricultural sectors (Alsos et al., 2011; Panagiota and Nastis, 2011; Bao et al., 2016). However, researches on entrepreneurial behaviour of farmers are scarce in developing context (Ridha et al., 2017; Rosairo and Potts, 2016; Yaseen et al., 2018; Yessoufou et al., 2018).

The agricultural sector provides a livelihood for a major proportion of people live in developing countries, specifically in rural areas. Because of the high population density, land is a restraining factor in many developing countries. As Rosairo and Potts (2016) indicate, land constraints limit the occasion for poverty reduction via the expansion of farms. As such, there should have programmes to enhance output, reduce production cost and expand the market opportunities. Then, it is arguable that the development of agriculture sector entrepreneurship is one of the vital pathways to obtain high economic growth, poverty reduction and environmental protection in developing countries (Adhikari et al., 2017).

Despite the importance of the emergence of farm entrepreneurs, gaps remain towards understanding the entrepreneurial behaviour of farmers in developing countries. This driven for research opportunity to underlies the formation of entrepreneurial behaviour of farmers, with a special attention on the development of farm entrepreneurship in developing context. Further, it is much required to link farmers' entrepreneurial behaviour to business performance in order to understand how entrepreneurial behaviour leads to financial success of the farm business. As Rosairo and Potts (2016) emphasised, research could be more benefit from analysis of the entrepreneurial skill of the farmers. Thus, the key aims of the study are to: examine the extent of entrepreneurial behaviour of farmers; identify the existence of differences in entrepreneurial behaviour of farmers with respect to gender, education level and commercial experience, examine the link between entrepreneurial behaviour and farm financial success and understand the nature of the skills that farmers need to become entrepreneurial in agricultural sectors.

Sri Lanka Cinnamon was historically attractive to the Western nations for its aroma and taste richness. Its importance is replicated in important contributions in terms of total agricultural exports as well as total minor agricultural exports to the economy in Sri Lankan. It is evident that Sri Lanka is the largest producer and exporter of cinnamon, contributing mostly 30% of global market share (Sachitra and Chong, 2015) and contributing 28.5% of total minor agricultural exports earning in Sri Lanka (Central Bank Report, 2017). Presently, cinnamon is widely used as a food ingredient as well as in pharmaceutical products and the cosmetic industry. As such, Ceylon cinnamon is exported in its primary form as well as in the value-added form such as cut pieces, powder form, oil, tablets, and crushed form (Spice Council of Sri Lanka, 2014). Due to the rising demand for spices in the world, farmers engage in cinnamon crops are increasingly feeling the gravity of boosting their production while preserving the quality (Sachitra and Chong, 2017; 2018). Further, Sri Lanka is expected to earn Rupee 100 million of cinnamon export earnings in the year 2020. However, according to the Spice Council of Sri Lanka, 40% of export orders could not be satisfied due to lack of crop management, crop protection and poor harvesting practices, causing failure to meet standard quality specifications such as smell, colour and the moisture content of crops. Hence, farmers' entrepreneurial behaviour becomes an essential component for the Cinnamon sector to achieve superior performance and meeting the desired targets of the country.

The remaining structure of the paper is as follows: A brief explanation of the entrepreneur farmer, methodology, results and discussion, and conclusions.

Literature Review

Davidsson (2009) defined entrepreneurship as a new venture's risk-taking endeavor looking for an opportunity. Fortunato (2014) highlights that the term new venture represents novelty which indicates new ideas or practice, new product or service or value addition. Fortunato and Alter (2015) indicate that entrepreneurship as an activity that involves the detection, assessment and exploitation of opportunities to introduce new goods and services, ways of forming, markets, process and raw materials through organizing efforts that previously had not existed. Therefore, entrepreneurship definitions share common characteristics such as change-oriented, opportunity seeking, innovative, risk-taking and value creating.

Entrepreneur Farmer

Farmer is a person who occupy on a part-time or full-time basis a range of activities such as cultivating the soil, growing crops and raising cattle as the main source of income. Vesala et al. (2007) highlight the three dimensions that can be considered when defining farmers as entrepreneurs, namely risk-taking, growth orientation and innovativeness. Risk-taking is the willingness to bear the state of uncertainties caused by failures. There are three types of risk involved, such as business risk, financial risk and personal risk (Liu and Fang, 2016). However, entrepreneurs do not accept all risks, rather they choose to accept the related risks relevant to their particular goal(s). Growth orientation refers to the aim to increase the business activities and growth of the firm. Innovativeness is the willingness to explore, develop and attempt new products, markets or methods. Thus, entrepreneurs seek change and innovation with respect of making new and sole processes, transforming raw materials into resources or using more productive ways to combine existing resources (Liu and Fang, 2016).

Further, Adhikari et al. (2017) bring the agricultural perspective into entrepreneurship research debate, define entrepreneur as a change-oriented and value creating unit that willing to embrace innovation to utilize opportunities. In here, authors argued that attitudes and behavior towards change-orientation, value creation, innovation and utilizing opportunities are key characteristics of entrepreneur farmer. However, this definition ignored the risk-taking feature of

entrepreneur. The authors believed that the farmers are risk averters than risk-takers.

Rosairo and Potts (2016) investigated entrepreneurial attitudes of vegetable farmers in upcountry, Sri Lanka. This study confirmed that the majority of vegetable farmers are characteristic with entrepreneurial in attitude, where such attitudes are strongminded more by farming experience than other socio-economic factors such as age, gender, extent of farmland, type of farming (part-time or full-time) and farmland ownership. On the other hand, Ridha et al. (2017) analyse the entrepreneurial characteristics and factors influencing the entrepreneurial intentions in the agricultural sector in Indonesia. The study revealed that external factors such as social pressure from partners, friends, family and consultants can increase the intention of an entrepreneur. The prior studies have also focused on knowledge and experience in individual perspective. Anderson and Eshima (2013) revealed that age of the firm would represent hypothetically meaningful boundary conditions on entrepreneurial orientation among small and medium sized enterprises. With regard to the knowledge, the entrepreneurs' personal educational level significantly influences the venture creation decision (Kor et al., 2007). Thus, prior studies point to the relevance of a number of additional factors towards entrepreneurship. The empirical investigation that follows will try to shed some light on the comparative importance of all these variables in explaining entrepreneurial behaviour.

The role of the farmer has been changed since in the last few decades agriculture has experienced significant structural changes (Adhikari et al., 2017). The changes such as increased use of information and communication technology, mechanization, product diversification, emergence of new market, rise of global value chain integration between supermarkets in developed and developing countries and rise of corporate agribusinesses inspire the farmers to develop new skills to be competitive, which in turns become more entrepreneurial (McElwee, 2006). Having said so, a main challenge for the agricultural sector is to enable farmers to enhance their entrepreneurial role, which in turns will enhance competitive advantage of farms. Yet, these studies were not being able to investigate how farmers perceive and exploit business opportunities to adopt entrepreneurship in agriculture.

Entrepreneurship looks like to have its own characteristics in different context (Yessoufou et al., 2018). It is argued that spatial, historical, professional, social, and institutional aspects of context can be differed in different countries

(Trettin and Welter 2011). Thus, the present study examines a less investigated entrepreneurial behaviour of farmers in developing context. In doing so, the study has been expanded the current debates on entrepreneurial behaviour.

Methodology

Population and Sample

The scope of this study includes farmers with experience in the commercial cultivation of cinnamon crops in Sri Lanka.

At present, cinnamon is grown in 7 districts[1] in Sri Lanka (Census and Statistics Department, 2014). Cultivation, in the sense of commercial purpose, is concentrated along in the highest growing districts, the study first identified the two highest growing districts of cinnamon, that is cinnamon in the districts of Galle and Matara (Spice Council of Sri Lanka, 2014). In total, Galle district consists of 19 District Secretarial Divisions (DSDs) and Matara 16. Next, the two highest growing District Secretarial Divisions (DSDs) of each of the two selected districts were determined. Based on the data from District Statistical Branches, Department of Census and Statistics, Karandeniya and Ambalangoda are the two DSDs which have the highest growing extend and the highest yield in Galle district. In Matara, Mulatiyana and Kamburupitiya have been identified as the highest growing DSDs. There are 17,362 households (farms) in the target population in the selected DSDs. According to Krejcie and Morgan (1970) and Sekaran and Bougie (2016), the sample size for this given target population is 370. The study selected 370 farms using the proportionate stratified random sampling technique. Two Grama Niladari Divisions of each DSDs were randomly selected. In each Grama Niladari Division, three to four villages were randomly selected based on the proportionate sampling technique. Finally, the desired numbers of farm owners were randomly selected from the population list of each village. At least seven farm owners were selected from each village. The farm owners constituted the units of analysis.

Data Collection and Analysis

The study aimed to examine the extent of entrepreneurial behaviour of farmers. On this purpose, the survey method was chosen to collect data from the farmers. According to Sekaran and Bougie (2016), the survey method is the most appropriate technique to collect data from a large population in terms of cost-effectiveness and timeliness factors. A structured questionnaire was designed

[1] Galle, Matara, Hambantota, Gampaha, Kalutara, Colombo and Ratnapura

acknowledging the prior studies (Ridha et al., 2017; Rosairo and Potts, 2016; Vesala et al., 2007) and it compromised a total of 15 questions. These included four questions, gathered demographic information from the farmers namely gender, cultivation experience, area of cultivation and education level. Nine items were used to measure the entrepreneurial behaviour (EB) of farmers. The items represented dimensions of EB viz risk taking, change-orientation, and utilizing opportunities. These items were measured on a Likert-scale (five-point) with end points named as strongly disagree and strongly agree. Such rating scale is frequently used in social science research (Sekaran and Bougie, 2016). Two items were used to collect data on the cost of production (per kilogramme of crop) and selling price of production (per kilogramme of crop) for last three years. Utilising these data, cost to sales price ratio was calculated to measure the financial performance of the farms.

Mean values were employed to examine the extent of entrepreneurial behaviour of farmers. Independent sample t-test was used to ascertain the differences in level of entrepreneurial behaviour of farmers with respect to gender, whereas One-Way ANOVA were employed to determine the differences in level of entrepreneurial behaviour of farmers with respect to education level and commercial experience. Further, multiple regression analysis was used to examine the impact of entrepreneurial behaviour on financial performance of the selected farms.

The qualitative research design was also used to understand the nature of the skills that farmers need to become entrepreneurial in agricultural sectors. In order to collect data, semi-structured interviews were conducted. The semi-structured interviews are an excellent method to elicit a wide range of views, perspectives or understanding of an issue (Braun and Clarke, 2013) and it allows people to talk with their real-life experiences. The interviews focused on the perceptions and interpretation of farm owners regarding the entrepreneurial behaviour. The questions were open-ended in nature, including the experiences, views, beliefs and barriers on the entrepreneurial behaviour. The study used a convenient group of farmers (20 farm owners) . The respondents included those with different gender (male – 12; female – 8), education level (below Ordinary Level – 6; Ordinary Level – 8; Advanced Level – 4; First degree – 1; post-graduate – 1) and experience (less than 10 years – 6; 10 to 20 years – 7; more than 20 years – 7). On average, 50 minutes were taken to complete the interview. Thematic analysis was used to analyse the qualitative data gathered from the interviews. Accordingly, the transcripts were observed and preliminarily themes were

identified. The patterns and similar themes were then reported, emphasising the relevance of literature (Thomas and Harden, 2007; Vaismoradi et al., 2013).

Findings

The survey was administered in December 2017 and completed in May 2018 once data was collected from the 152 farm owners located in four DSDs and 14 villages in Sri Lanka. Even though the data collection process was considerably expensive and time consuming, personally administered questionnaires provided the opportunity to accomplish 41.1% response rate which is satisfactory compared to the response rate of social science research (Baruch and Holtom, 2008).

Goodness of Measurements

Exploratory factor analysis was employed using Principal Axis Factoring method for data reduction and purification of the items under entrepreneurial behaviour (Kothari, 2004). The KMO values of three dimensions of entrepreneurial behaviour (Table 1) exceed the respective threshold value (0.50) ensuring the appropriateness of factor analysis. Composite Reliability (CR >0.7) and Average Variance Extracted (AVE >0.50) are used to ensure the convergent validity (Hair et al., 2012). The results presented in Table 1 further shows that both CR and AVE values exceed the respective threshold values ensuring the convergent validity. Under reliability, internal consistency is ensured through Cronbach's Alpha values (< 0.70) (Hair et al., 2012). The result in Table 1 indicated that the alpha values were greater than 0.70, hence, the data were reliable for further analysis. Further, the study assessed the discriminate validity of three dimensions. The discriminant validity was ensured as the square root values of all AVEs exceed the correlation values of the respective constructs (Table 2). The values of the square root of the AVE are as given in italic along the diagonals. Further, none of the correlation coefficient was above 0.85, indicating the absence of multicollinearity in the variables (Hair et al., 2012).

Table 1: Results of KMO, AVE, CR and Cronbach's Alpha

Dimension	Factor Loading	Cronbach's alpha value	KMO	Bartlett's test of Sphericity	AVE	CR
Risk taking	EB1 = .626 EB2 = .878	0.915	0.723	Chi-Square = 628.83 df = 3 sig. = 0.000	79.1%	0.88

	EB3 = .875						
Change-orientation	EB4 = .746		0.727	0.629	Chi-Square = 285.56	64.9%	0.82
	EB5 = .872				df = 3 sig. = 0.000		
	EB6 = .789						
Utilizing opportunities	EB7 = .828		0.780	0.698	Chi-Square = 357.55	69.7%	0.84
	EB8 = .857				df = 3 sig. = 0.000		
	EB9 = .819						

I do not avoid taking risk (EB1); I achieve success by taking risk (EB2); I am not fear with risk-taking (EB3); I am trying to expand my business (EB4); I expand our customer base than other farmers (EB5); I prefer to change the ways I am familiar with (EB6); I am trying to practice new cultivation method/s (EB7); I alter product offering to meet buyers' needs (EB8); I alter cultivation method/s to meet market demand (EB9)

Table 2: Discriminant Validity

	Risk taking	Change-orientation	Utilizing opportunities
Risk taking	*0.883*		
Change-orientation	0.762**	*0.811*	
Utilizing opportunities	0.622**	0.710**	*0.834*

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

Survey Respondents Profile

The results revealed that the majority of cinnamon crop farmers were more than 50 years old with 5 to 25 years of farming experience (Table 3). In terms of gender, 97 farmers were male and 55 were female. The majority of farm owners have more than 10 years of commercial cultivation experience (63). This empowers them to provide satisfactory and meaningful responses to the study. The majority of farmers owned a total land of cultivation of less than 5, thus farms are micro and small size in nature. In addition, most of the farm owners possess Ordinary Level (O/L) of education (53) or below (76). This is followed by those with Advanced Level (A/L) education (20). Only a very small number of them possess first degree (2) and postgraduate qualifications (1).

Table 3: Demographic Characteristics of Survey Respondents

Factors	Frequency (%)
Gender:	
Male	97 (63.8%)
Female	55 (36.2%)
Age:	
Less than 20 years	4 (2.6%)
20 to 30 years	5 (3.3%)
31 to 40 years	19 (12.5%)
41 to 50 years	49 (32.2%)
More than 50 years	75 (49.3%)
Cultivation Experience:	
Less than 5 years	35 (23.0%)
5 to 10 years	29 (19.1%)
11 to 15 years	42 (27.6%)
16 to 20 years	27 (17.8%)
More than 20 years	19 (12.5%)
Total Area of Cultivation:	
Less than 5 Acres	106 (69.7%)
5 - 10 Acres	40 (26.3%)
11 - 15 Acres	4 (2.6%)
16 - 20 Acres	2 (1.3%)
Education Level of Farm Owners:	
Below Ordinary Level	76 (50.0%)
Ordinary Level Pass	53 (34.9%)
Advanced Level Pass	20 (13.2%)
First Degree	2 (1.3%)
Postgraduate Degree	1 (0.7%)

Descriptive Statistics

The descriptive statistics on the extent of entrepreneurial behaviour of farmers with regards to risk taking, change-orientation and utilizing opportunities were provided in Table 4.

Table 4: Descriptive Statistics

Dimension	Item	Mean	SD	t value[a]	F value[b]	F value[c]
Risk taking	I do not avoid taking risk (EB1)	3.04	1.262	.946	.567	.001
(Mean = 3.33)	I achieve success by taking risk (EB2)	3.11	1.211	.711	.486	.001

	I am not fear with risk-taking (EB3)	3.85	1.065	.648	.686	.001
Change-orientation	I am trying to expand my business (EB4)	3.16	1.104	.757	.790	.001
(Mean = 3.16)	I expand our customer base than other farmers (EB5)	3.09	1.026	.310	.245	.001
	I prefer to change the ways I am familiar with (EB6)	3.22	1.168	.913	.688	.001
Utilising opportunities	I am trying to practice new cultivation method/s (EB7)	3.33	1.241	.676	.155	.001
(Mean = 3.38)	I alter product offering to meet buyers' needs (EB8)	3.20	.885	.083	.321	.001
	I alter cultivation method/s to meet market demand (EB9)	3.61	1.167	.661	.786	.001
	Overall	3.28	.976	.787	.536	.001

[a] differences among males and females; [b] differences among education levels; [c] differences among experience

Table 4 shows the overall mean value for the entrepreneurial behaviour is 3.28, with a standard deviation of 0.976. As the result, there was moderate level of entrepreneurial behaviour of the selected farmers in this study. As an individual item, the farmers have shown their attraction towards risk taking (Not fear with risk-taking (mean = 3.85); Achieve success by taking risk (mean = 3.11). Even though they showed an affinity for risk taking, practical issues were there that restricted farmers from change-orientation (Prefer to change the ways familiar with (mean = 3.22); Try to expand business (mean = 3.16)) to utilizing opportunities (Alter cultivation methods (mean = 3.61); Practice new cultivation methods (mean = 3.33) in agribusiness. Concerning the dimension, utilizing opportunities records the highest mean value.

Additionally, in order to identify the existence of differences in level of entrepreneurial behaviour of farmers with respect to gender, education level and commercial experience, Independent sample t-test and One-Way ANOVA were utilised. The significance level of t values and F values are recorded in Table 4. Accordingly, there were no significance differences in level of entrepreneurial

behaviour with respect to gender and education level among farmers selected in this study.

However, it is interest to note that all indicators of entrepreneurial behaviour showed differences among cultivation experience. In order to get more clarification about these differences, the study performed Tukey post-hoc test and identified that farm owners with 5 to 10 years of commercial cultivation experience showed the highest mean values. In other words, relative to more experienced farmers (more than 15 years of experience), farmers with less experienced (5 to 10 years) are showing high ratings on taking risk, making changes and utilizing opportunities of the EB.

Link between Entrepreneurial Behaviour and Financial Performance

The multiple linear regression analysis was used to examine whether entrepreneurial behaviour significantly influence financial performance of cinnamon crop farms. The financial performance of the farms was measured using the average value of cost to sales price ratio for last three years. Data was also collected on the cost of production (per kilogramme of crop) and selling price of production (per kilogramme of crop) from the farms. According to the data, average cost of production was Rs.302 per kilogramme and average selling price was Rs.1,199 per kilogramme. Utilising this information, cost to sales price ratio was calculated. This is based on the study of Dziwornu (2014) which used benchmark analysis on per unit cost of production to measure financial performance. The mean value for cost to sales price ratio was recorded as 5.01. The results of the regression analysis are presented in Table 5 and 6.

Table 5: Regression Analysis Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	F	Sig.
1	.508[a]	.259	.234	2.06366	10.017	.000[b]

Table 6: Regression Analysis Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF

1	(Constant)	2.975	.400		7.434	.000		
	Risk taking	.241	.181	.124	1.334	.183	.257	3.884
	Change-orientation	.026	.241	.011	.109	.913	.208	4.797
	Utilising opportunities	.335	.148	.152	2.267	.024	.496	2.017

a. Dependent Variable: Cost Sale Ratio

The R^2 value (Table 5) was 0.26 ($F = 10.02$, $p < 0.001$), which implies that 26% of variation in financial performance of cinnamon crop farms is explained by entrepreneurial behaviour of the farm owners. Though this was a weak influence, there was a statistically significant influence of entrepreneurial behaviour over financial performance of cinnamon crop farms in this study.

However, when beta values of dimensions are considered, only the beta value of 'utilising of opportunity' (0.152) is significant at 0.05 level (Table 6), hence opportunity utilising behaviour significantly influenced to financial performance of the farms. However, the p-values for risk taking and change-orientation were not significant at 0.05 level. Thus, these behaviours were not significant predictors of financial performance of the cinnamon crop farms in this study. The VIF values were less than 5 (Table 6) hence there is no problem of multicollinearity in the model (Dormann et al., 2013).

Nature of skills farmers need to become entrepreneur

Rosairo and Potts (2016), Ridha et al. (2017), Vesala et al. (2007) recommend that the farmers identified themselves as entrepreneurs who have characteristics of risk-taking, growth orientation and innovation. The semi-structured interviews conducted with 20 farm owners focused to explore the skills that require to acquire the characteristics of risk-taking, growth orientation and innovation. According to the interviews, there were 8 farm owners who look for better ways to organize their farms. They try new cultivation method, alternative techniques to increase productivity (use carbonic fertilizers, apply different storing method), open or create new market for their product and expand their cultivated areas. They are passionate about their farm business and are willing to take calculated risks to make their farms profitable and their businesses grow.

As they perceived, competitive situations and disorderly events encouraged the rise of entrepreneurship in cinnamon production. Without these situations and events, entrepreneurial action would not be demonstrated within them. It is clear that to entrepreneurial activity is obsessed by challenging situations or disorderly

events. Apparently, the farm owners can acquire a level of self-perceived control of their life by structuring uncertainty through an entrepreneurial activity with growth potential.

The interviews revealed that these farm owners tend to learn by doing. They have achieved their business growth because traditional system did not provide such knowledge. They inclined to see this learning by doing as critical for their own success.

Together with that, the farm owners exposed to maintain a central decision-making authority. As they trust it is easier to make decisions and implement them without any delay. Though they keep the centralised decision-making power, they are able to maintain trust and teamwork amongst the employees which will finally lead to better work productivity and quality of yields. The findings of interviews also emphasized that the initiator role is the most influencing factor to the success of establishing team work and trust-based relationships. All of these imply that as an initiator the farm owners equip with coordination skills and negotiation skills.

The interview findings also indicated that specific skills in targeting and analyzing market trends seem to place greater emphasis amongst these farm owners. They are in good competent associated to the notification of customers and their need, product variation, as well as time-to-market. Accordingly, retaining adequate skills on marketing permits farms to take advantage of market recognising activity to obtain information of their customers and competitors, as well as skills in evolving pricing strategies and observing the tactics of their rivals in terms of pricing and price changes.

Finally, these farm owners did not hesitate to emphasise the obstacles enrolled with becoming an entrepreneur farmer. As the common factor, all of them stated that social pressure is the main barrier. In that sense, pessimistic responses such as '*you can't do it, what the purpose of doing new things, no one can get it finally, never ask our support for it, don't blame me that I didn't warn you, you don't have experience to do it, look at your elders and learn from them*, became the fiery moments for them. One of the respondents stated that;

'when someone hear these negative mined words, they will definitely demotivate. Because I am determined to do different and try to learn by doing, today I am success. Unfortunately, one of my friends (educated person than me) finally gave

up his idea of practicing new cultivation technique because of his family. His family didn't allow him to carry out that practice. They always blame that he can't do it…. What I am trying to say is that we need to do thing differently and our society needs to be ready to accept it. If they can't accept and act differently, only thing they can do is to cut their negative voices…'

Though our participants' education level ranges from illiterate to well-educated, majority of them were raised the issues with financial illiteracy. Many of them mentioned that they were not keen to keep financial records. The inability to keep financial records had a bearing on controlling the cost of production and identifying the actual profit of the business. The disadvantage of this inability is to not gain the possibility of obtaining financial facilities from formal channels such as commercial banks and micro financial institutions and they are enforced to obtain financial assistance from informal channels such as individual money lenders. This is why it was reported that of the total loan payments between formal and informal sources, informal sector remains relatively high at 34% of total rural sector loans (Central Bank Report, 2018). This will further exacerbate their financial standing because they may fall into financial difficulties due to highest rate of interest. According to the respondents, they did not have appropriate formal training or facilitation in record keeping, budgeting or investment aspects. To address this, the government needs to be working with the commercial and development banks and educational institutions to provide the educational and training programmes on the topics of financial management and investment.

In addition, the interviews also highlight the importance of providing training to the officers of the Agricultural Department as well to equip them with technical knowledge as well as marketing and consultancy skills to ensure an effective delivery of information. This is of the view that the crops are used for food, medical and cosmetic industries, and hence, maintaining or enhancing the quality of crops is critical. As the farm owners mentioned, the main sources of obtaining information regarding price, fertilizers and cultivation practices were media (newspaper, TV), friends, other farmers and some training programmes. The findings then call for the relevant government agencies to initiate public-private partnerships in order to professionalize the sector in terms of accessibility of market intelligence. Availability of market access are required to inspire farmers to adopt entrepreneur behaviour because linking farmers to markets provides new opportunities for them.

The interviews showed differences between strong intention of entrepreneurship and traditional extensive farming. The remaining 12 farm owners much prefer to continue their activities in farms since they do not show a extraordinary ability to adapt. They specifically stated that 'this business cannot make more profit than earlier because there is less demand for cinnamon'. Accordingly, the challenging situation they emphasized involved low-income. They seemed to place greater emphasis on their financial strengths in terms of paying for expenses. It is exciting to note that the farm owners interviewed did not try to maintain the good reputation of their crops and customers, neither did they see the importance of doing so.

For these participants, most of them hinge on this business as it is inheriting them from the district. They have indicated the possibility of disregarding the farming business once they obtain other sources of income. If they happen to disregard the business, this will lead to waste of resources and affect the supply of spices.

Discussion and Implications

Entrepreneur is responsive, continually alert to the opportunities presented by varying resources, seen in terms of human capital and social relationship (Roscoe et al., 2013). Concerning the typical characteristics of entrepreneurship derived from the literature, entrepreneur farmer is an individual whom has change-orientation and value creating entity eager to take risk and embrace innovation, regard on resources, product, process and market, to capitalize opportunities. As shown in Table 3, there was moderate level of entrepreneurial behaviour of the selected farmers in this study. This is further reflected that the farmers have shown their attraction towards risk taking.

Barrett et al. (2012) indicated that relative to the developing nations, acceptance of risk is an important characteristic for farmers in developed nations. From the experiences of many developing nations, Barrett suggested that farmers display risk aversion behaviour that leads to weak entrepreneurial behaviour. The result of this study shed light on the importance of acceptance of risk regarding the entrepreneurship characteristic in developing nations.

However, they are reluctant to practice change-orientation and utilizing opportunities. The interviews conducted with 20 farm owners facilitated to uncover the reasons. It is fascinating to note that the farm owners interviewed

revealed that social pressure is the main barrier to performing change orientation and utilising opportunities. The result is not in line with what is advocated by Ridha et al. (2017) where social pressure from partners, friends, family and consultants can increase the entrepreneurial intention. Thus, it reflects that as the oldest and the most extended form of economic endeavor, human society is still hesitated to view agribusiness as an entrepreneurial sector and in developing countries where agriculture is generally viewed as a non-innovative sector (Adhikari et al., 2017). Moreover, Trettin and Welter (2011) underline that cultural attachment limits opportunities to expand business and to take business-related decisions in situations where a system associates with social obligations dominates. The results imply that entrepreneurial mindset with regard to the agribusiness sector needs to be developed in terms of developing and trying new products, markets or cultivation methods. As Dhaliwal (2006) state, appropriate support policies which consider the varieties in multicultural aspects need to be developed. In this sense, the Divisional Agriculture Officer, who is in direct contact with farm owners, plays a critical role to emphasise on the importance of entrepreneurial orientation.

Independent sample t-test and One-Way ANOVA results were shown in Table 3 further indicated that there were no significance differences in level of entrepreneurial behaviour with respect to gender and education level among farmers selected in this study. This is implying that gender and education levels are not influencing factors when it comes to the risk taking, change-orientation, value creation, innovation and utilizing opportunities of the selected farm owners in this study. The result is not in line with what is advocated by Danes et al. (2007) Inmyxai and Takahashi (2012) and Swinney et al. (2006) that gender can affect with respect to problem solving, seeking business opportunities, processing creative ideas and business leadership. The study shed light on the important role of women, compared with men, in agribusiness regarding entrepreneurial behaviour. Moreover, Rosairo and Potts (2016) emphasised that education background enabled the vegetable farmers to understand the main aspects of entrepreneurship and make decisions based on information they received. However, the present results establish that entrepreneurial behaviour towards risk taking, change oriented and utilising opportunities are not connected with farm owners' educational background. Since most of the farm owners of the present study possessed Ordinary Level (O/L) of education or below (Table 3), education background may not be shown significant influence to the entrepreneurial behaviour of cinnamon crop farm owners in Sri Lanka.

It is further interest to note that all indicators of entrepreneurial behaviour showed differences among cultivation experience. Hence, the finding reinforces the argument that the experience of farm owners may affect their ways of practicing in novel methods of value addition, trying various inputs, and trying unique farming methods.

In order to get more clarification about these differences, the study performed post-hoc test and identified that farmers with less experienced (5 to 10 years) are showing high performance in taking risk and embracing innovation, regard on resources, product, process and market. This finding is in line with what is advocated by Adhikari et al., 2017; Ridha et al., 2017 and Rosairo and Potts (2016). Such cultivation experience ought to reflect the ways of how the farm owners conduct their businesses in this competitive environment through appropriate management of their resources and capabilities. Experience may be of little significance if the farm owners cannot adjust themselves to the current environment. Thus, this result suggests that agriculture entrepreneurial initiatives in developing nations such as Sri Lanka should give more weight to farmers' ability and wiliness to adopt with dynamic agribusiness environment.

Linking entrepreneurial behaviour of farmer to business performance is a very vital aspect of this study (Table 5 and 6). Using cost-price ratio as financial details to determine the agribusiness success, the study identified that 26% of variation in financial performance of cinnamon crop farms can be explained by entrepreneurial behaviour with regards to risk taking, change-orientation and opportunity utilising of the farm owners. Though, the R-square value was low, the study then identified that financial performance of agribusiness farms is a function of entrepreneurial behaviour of farm owners. The significant influences were recorded only to opportunity utilising behaviour. Opportunities define as the stream of endlessly developed ideas, driven and shaped by one's social interface, creative insights, and activity at each stage (Dimov, 2007). Entrepreneurial opportunity provides a financial benefit to the first firm which can discover and utilize them. The scholars in cultural cognitive school argue that opportunity utilization is subjective because it depends on the capability of individuals to advance the mental models needed to interpret and define them as opportunities. Thus, individuals are able enough to make them systematically by deriving and merging cultural schemas and templates to build new meanings and understandings (Shane and Venkataraman, 2000). Having said so, a significant challenge for the agribusiness sector is to enable farmers to enhance their

entrepreneurial opportunity utilisation role, which in turns will enhance the financial performance of farms. Therefore, policy involvements to enhance ability and skills, as well as to overcome the obstacles, of cinnamon crop farm owners may increase their entrepreneurial behaviour to develop their farm business success.

Since learning is critical to the entrepreneur behaviour, the farm owners should provide rooms to apply new ideas on farming activities. It is apparent that training programmes on the topics of risk handling, risk management, network building, financial planning, product and process innovation, team building approaches, coordination skills and negotiation skills and pricing and competitor analysis are required. In line with that, this study suggests selecting the attitudinally entrepreneurial farm owners in first occasion and provide them the training programmes. This enables to identify the pros and cons of the programme and do necessary alterations. Because agricultural training programs alone are not adequate since business environments are changing quite rapidly. Accordingly, the farm owners should see themselves as entrepreneurs and take advantage of training that related to identify customers and logistics, product innovation and process innovation. Overall, what is essential to promote farm entrepreneurship needs to be communicated to the people who engage in the agribusiness.

The increasing demands for agricultural goods across the world need the agriculture sector to be entrepreneurial. For this, the study has systematically constructed a research model relating the entrepreneurial behaviour and financial success, required skills and critical obstacles. Our findings have provided in-depth insights into the concealed factors of the entrepreneurial behaviour of cinnamon crop farmers and have implications for the growing interest in entrepreneurship in agribusiness sector in developing context.

Since the study is set in the context of cinnamon crop, the generalizability of the results to other crops remains restricted. Since our main purpose was to elaborate the entrepreneurial behaviour in developing nation setting, more study is required in order to verify whether the ideas we have identified remain when subjected to quantitative inquiry in large sample, and whether they are generalizable to other settings. Acknowledge with the qualitative research, this study has also suffered from the limitations accompanying with individual interviews namely statistical significance for richness, accurateness and insight into observed processes (Langley, 1999). Thus, future research needs to test empirically each one of the skills and obstacles emphasized in the study, with the

intention to generalise our findings. This study is a cross-sectional in nature, therefore, a longitudinal study on the entrepreneurial behaviour is necessary in order to examine the finer details.

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