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Toward dynamic capability views of entrepreneurial growth intention: perspective of floricultures industry in Sri Lanka

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Abstract

Purpose – It is aware that entrepreneurial growth has gained some attention in the literature, yet the debate in respect of the determinants of entrepreneurial growth intention (EGI) is far from being complete. The purpose of this study is to identify the key dynamic capabilities that foster EGI in floriculture industry in Sri Lanka.

Design/methodology/approach – The study used quantitative approach. The owners of farms who possess commercial experience in floriculture cultivation in Sri Lanka were selected as a target population. A self-administrated structured questionnaire was used to collect data. Valid and reliable indicators were developed to conceptualize five key capabilities and EGI.

Findings – Based on the responses from 206 farm owners, results of the multiple regression analysis indicate that organizational learning, technological and alliance formation capabilities are significantly associated with EGI of floriculture farm owners.

Originality/value – The need for common conceptualization of dynamic capabilities and EGI represents a major gap in the literature. The study expands the current debates on entrepreneurial growth and institutional environment, which allows the mapping out of dynamic capability development.

Keywords Capability approach, Entrepreneurial growth intention, Agribusiness, Floriculture, Quantitative, Sri Lanka

Paper type Research paper

1. Background of the study

It is arguable that the emergence of entrepreneurs is critical in overcoming the poverty issue in developing countries because entrepreneurs focus on productivity and growth (Amin and Islam, 2015). Accordingly, entrepreneurialism has become a critical aspect in the agricultural sector since the society as of today owes much to agriculture. The fascinating truth about growth in agriculture business (agribusiness) is that agricultural firms/farms have been forced to adapt to new challenges such as changes in the market, changes in consumer habits, food safety, sustainability and biotechnology (Lans *et al.*, 2017). Thus it can be noted that entrepreneurship has always been an integral part of the agricultural sector (Yessoufou *et al.*, 2018).

Existing research on entrepreneurship predominantly concerns issues about business start-ups, rather than the growth intention of entrepreneurs (Brown and Mason, 2017). With a lineage from entrepreneurial ecosystem research, attention was mainly paid to establish favorable institutional environment (institutional support namely law systems, formal financial sectors, administrative procedures and organizational structure) for productive entrepreneurship (Brush *et al.*, 2018). In this vein, the theoretical foundation of entrepreneurial growth intention (EGI) is an institutional theory, which highlights the framework

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in identifying the shades of institutional influence on growth intention of entrepreneurs (Wang *et al.*, 2019). In addition, culture, social norms and collectivism practices are also found to be decisive influences on EGI (Autio *et al.*, 2013). Recently, entrepreneurial research has attracted considerable attention to EGI (Wang *et al.*, 2019). However, maintaining long-term entrepreneurial growth is a challenge because it requires the firms to evaluate and modify their business activities whenever there are changes in the economic environment.

It is widely accepted that the application of resources and capacities affect organizational success and growth (Grant, 1991). The main differences between resources and capabilities are that resources are independent, simple and static, whereas capabilities are collective, complex and dynamic. In this context, Makadok (2001) specifically argued that organizations can perform better by selecting suitable resources than their rivals, by integrating them with proper capabilities. This is why Nussbaum (2011) argues that capabilities are normative and should not be considered unchanging or as being closed to revision given greater cultural understanding. Therefore, organizations need to develop the ability to implement new capabilities that need to/would/must react to an environment that is constantly changing. In this sense, growth intention is essential in highly competitive times, whereas new products, new processes, new business forms or business model development is highly treasured. Since entrepreneurial activities take place in a constantly changing environment (Brown and Mason, 2017), a dynamic aspect of capability approach is necessary to explore because dynamic capability believes that competitive advantage can be achieved through the ability to manage resources and organizational process knowledge (Eisenhardt and Martin, 2000).

The few attempts in the area of dynamic capability and entrepreneurship were conceptual (Wilson and Martine, 2015; Yessoufou *et al.*, 2018). Thus, the need for a common conceptualization of dynamic capabilities and EGI represents a major gap in the literature. Considering the state of art of the discussion of EGI and the possibility to draw within the dynamic capability approach, the main purpose of this study is to identify the key dynamic capabilities that foster EGI in the agribusiness sector. For that, we examine a less investigated entrepreneurial case of floriculture industry in Sri Lanka. Floriculture industry is heading into an out-of-the-box thinking and has a supportive environment for innovations in the field of floriculture. The industry has emerged as a high-income creating agribusiness in Sri Lanka, and the country is renowned as one of the world's best floriculture products supplier (Padmini and Kodagoda, 2017). The industry potentially emerged as a means of socioeconomic development in Sri Lanka, especially with the intention of empowerment of women.

The remainder of the article is continued in Section 2 with the review of the literature that supports entrepreneurial growth and dynamic capability and the conceptual model of the study. Section 3 presents the study design, and Section 4 presents the findings of the study. Finally, Section 5 presents the conclusion with research implications.

2. Literature review

2.1 Entrepreneur and entrepreneur farmer

Gray (2002) defines an entrepreneur as an individual who manages a business with the intention of expanding that business and with the leadership and management capabilities for achieving their goals. Unfortunately, this definition was unable to differentiate the entrepreneur from the manager. Fortunato (2014) indicate that entrepreneurship as an activity that involves the discovery, evaluation and exploitation of opportunities to introduce new goods and services, ways of organizing, markets, process and raw materials through organizing efforts that previously had not existed. Having said so, entrepreneurship definitions share common characteristics such as change-oriented, opportunity seeking, innovative, risk-taking and value creating.

Adhikari *et al.* (2017) bring the agricultural perspective into entrepreneurship research debate. Accordingly, the authors propose an entrepreneur as a change-oriented and value creating entity willing to embrace innovation to capitalize on opportunities. In here, the authors argued that attitudes and behavior toward change-orientation, value creation, innovation and utilizing opportunities are critical characteristics of an entrepreneur farmer. Based on that, an entrepreneur farmer can further be defined as an individual employed either on full-time or part-time basis in farm activities (soil cultivation, crop growing and livestock rearing) and nonfarm activities (market seeking and customer handling) undertaken for profitable gains (Naminse and Zhuang, 2018). Considering prior studies, Sachitra (2019) expands the definition of entrepreneur farmer as an individual who has employed either on full-time or part-time basis in farm and nonfarm activities, who as a change-oriented and value creating entity, who are willing to take risk and embrace innovation, regard on resources, product, process and market, to capitalize opportunities.

2.2 Entrepreneurial growth intention

EGI can be defined as preference of the entrepreneurs regarding the willingness to innovate, to revive market offerings, take risks to try out new products and markets and be more proactive than competitors toward risk taking (Edelman *et al.*, 2010). With a lineage from entrepreneurial ecosystem research, attention was mainly paid to establish favorable institutional environment (institutional support namely law systems, formal financial sectors, administrative procedures and organizational structure) for productive entrepreneurship (Brush *et al.*, 2018). In this vein, the theoretical foundation of EGI is institutional theory, which highlights the framework to identify the shades of institutional influence on growth intention of entrepreneurs (Wang *et al.*, 2019). Given the importance of institutional environment, many efforts have been taken and implemented to strengthen entrepreneurship in developing countries (Yessoufou *et al.*, 2018), However, these efforts continuously fail to improve entrepreneurial growth, especially in smallholder entrepreneurs (Karlan and Valdivia, 2011). This seems that institutional environment in developing countries is framed on the basis of so-called developed countries perspective, and these frameworks were not adapted or modified to fit the developing context (Yessoufou *et al.*, 2018). Zahra *et al.* (2014) argued that entrepreneurship seems to be different in each context and that research needs to be taken place within its natural settings. This seems to be required in order to get a deeper view on entrepreneurship origin, functions and growth. As such, the debate on determinants of EGI is still in progress.

In line with that, the present study expands the current debates on EGI and institutional environment toward the capability approach (CA). We take particular interest in CA in entrepreneurial growth in which CA makes a clear interest in the individual's ability to do and be (Nussbaum, 2011) New evidence (Wilson and Martine, 2015) indicates that central premise of CA is that although individuals have the potential or capacity "to do and be", they do not always have the freedom to follow these things through, should they wish to. Undeniably, different possibilities for choosing to do or be are accessible to people living under various nations and cultures. This shows that debate on the capability approach to entrepreneurial growth intention is on.

2.3 Dynamic capability

The term "capability" is defined as a firm's capacity to deploy resources while combining firm's processes (Amit and Schoemaker, 1993); as the ability of a firm to perform its tasks, which are either directly or indirectly related to its input-output process (Grant, 1996); as well as a collection of routines, that together with input inflows, confer upon the management of a firm's decision options for producing significant outputs (Winter, 2000). The CA focuses on the functioning or living conditions of individuals, which are defined as what people can or

cannot do or what they can or cannot be (Sen, 2004). Generally, capabilities are rooted in the resources and processes of firms are difficult to observe and imitate.

Dynamic capability theory arises as the requirement of explaining how organizations react to the environment that is continuously changing (Souza *et al.*, 2017). Grant (1996) defines dynamic capability as the ability of a firm to perform a productive task repeatedly, which relates either directly or indirectly to the capacity of the firm for creating value through effecting the transformation of inputs into outputs. It aims to provide an understanding of unique processes and skills by the individuals who are part of the organization that create differences in organizations (Augier and Teece, 2009). When it comes with the emphasis in entrepreneurship theory, the capability is treated as an internal resource of the individual (Wilson and Martin, 2015). Thus, dynamic capabilities require processes that encourage openness to change in identifying future risks (Ayuso *et al.*, 2006), perceive opportunities and achieve the changes in routines and processes (Teece, 2007).

The literature on dynamic capabilities has suggested a number of conceptualizations of different capabilities. All of the conceptualizations are based on the conceptual framework developed by Grant (1996). Accordingly, the framework consists of four categories of capabilities, namely cross-functional, broad-functional, activity related and specialized. Grande (2011) proposes that the dynamic capabilities of firms include the ability to sense market opportunity, ability to integrate knowledge, ability to build networks and market orientation. Considering the state of the art of CA, the studies (Derissen *et al.*, 2011) are further conceptualized into different pillars of capabilities such as adaptability to organizational learning, communication, sharing and exchanging knowledge and technological capabilities. As Wilson and Martine (2015) stated, the linking of entrepreneurship and CA is not an uncontentious task. Nevertheless, there is still a lack of comprehensive understanding of what essential capabilities are required to possess entrepreneurial growth. Thus, it is high time to employ CA to examine what capabilities require to possess entrepreneurial growth in the agribusiness sector.

This study is the second phase in two stages of the main project. First phase of the study was based on an exploratory approach, adopting a qualitative research design. In-depth interviews were conducted with floriculture farm owners to explore the relevant actions taken as major drivers for entrepreneurship growth in their business. Drawing our attention on the stories of our participants and making the three-phase analysis, we identified 30 key actions denoted by the farm owners. Accordingly, the authors grouped these 30 actions into five categories namely; organizational learning capability, alliance formation capability, technological capability, process management capability and financial know-how capability. The first phase of the work then suggests that the five capabilities might be fruitfully framed around to EGI, whereas empirical investigation is required to generalize it. Accordingly, the present study proposes the five capabilities: organizational learning, alliance formation, technological, process management and financial know-how into quantitative perspective.

Modern-day agriculture urges farmers to capture greater value based on know-how, and this leads to actively search for new information and knowledge. Learning ability is essential for economic survival, and the success of the agricultural sector also depends on learning capacity of farms (Nieuwenhuis, 2002). When it comes to entrepreneurship, Hurley and Hult (1998) conceptualized that knowledge as one of the innovative dimensions, represent organizational cultural characteristics. Organizational learning capability is then characterized by searching new varieties of flowers, follow the given advices and participating to training sessions.

Ngugi *et al.* (2010) found that relational capabilities are especially crucial for small and medium agricultural product suppliers to achieve greater external economies of scale and market strength. Yet we continue to witness a gap of knowledge regarding managerial preferences for alliance formation in entrepreneurial growth. Alliance formation capability largely describes inter-personal trust for transaction-specific investments, and it is

characterized by negotiating with other farmers about the issues in farming and sharing floriculture techniques, planting materials and market opportunity information.

Technology capability includes ability of applying new technology development with regards to product and process, marketing and logistics. Technology capability further relates to the diffusion of technical and market information effectively through relevant functional areas DeSarbo *et al.* (2007). Simply it means the ability to absorb new technologies to the effective management of resources (Morris *et al.*, 2017). Technological capability in here is characterized by high loadings of applying new techniques used in planting and using social media apps for business promotion.

Process management refers to the application of tools and techniques for the monitoring of the manufacturing process, in order to reduce the need for inspection and/or variability, eliminating breakdowns, missing materials or fixtures (Fotopoulos and Psomas, 2010). Capabilities that could change the product, production process or customers are referred to as dynamic capabilities (Winter, 2003). Thus, process management capability largely describes capacity of adapting to variety of planting techniques, control diseases and environmental control techniques in floriculture.

Financial knowledge needs to be separated from the knowledge related to business process because inability of controlling money creates a vicious cycle of financial constraints. Financial constraints have been documented as a major barrier for small-scale businesses (Zaridis and Mousiolis, 2014), specifically, in agribusiness. Financial know-how describes the ability of controlling financial resource in the firm, and it is characterized by keeping records, concerning risk and returns and seeking advices from financial professionals like bank managers.

Wilson and Martine (2015) stated that the linking of entrepreneurship and CA is not an uncontentious task. Nevertheless, there is still a lack of comprehensive understanding of what dynamic capabilities are required to foster EGI. This is becoming an interesting question when more opportunities and resources are perceived in the environment; entrepreneurs are eager to possess the required capabilities to adopt innovative, risk-taking and proactive strategies. Thus, it is high in to employ the dynamic capability approach to examine what dynamic capabilities are required to possess EGI in the agribusiness sector.

3. Methodology

3.1 Scope of the study

The scope of the study includes the entities engage with floriculture industry in Sri Lanka. Sri Lanka's export-oriented floriculture industry was established during 1980/81. Our floriculture industry is renowned to be one of the world's best quality production centers, with floriculture products ranging from tropical to temperate. As such, the industry meets export orders throughout the year, and it is capable of supplying a variety of floriculture products to markets such as the Netherlands, Japan, Germany, Saudi Arabia, the UK, UAE, Kuwait and France (Export Development Board, 2016). The importance of the industry is further reflected in their significant contributions in terms of total agricultural exports (rupees 15.4bn in year 2018 by exporting floriculture products, Central Bank Report, 2018) as well as total to the Sri Lankan economy by showing social identities of women entrepreneurs. Incorporating new thinking and broad thinking are obligatory to sensitive with the trends in the global floriculture business. In this regard, entities which involve with floriculture growing need to think and practice out-of-box and be able to grasp the latest emerging trends in value addition of the product, incensement of vase life of the products, dry flower production, usage of genetic modification and tissue culture methods, identify potential industry, mass propagation housing structure and so on (Beneragama and Peiris, 2016). At present, floriculture covers nine provinces, including 25 districts in Sri Lanka. There is no

reliable national data in Sri Lanka on the total number of stakeholders engaged in the floriculture sector. However, according to Sri Lanka Council for Agricultural Research Policy statistics, there are nearly 10,000 floriculture households (farms) involve with commercial cultivation. For this study, the farms owners involve with commercial floriculture cultivation constitute the units of analysis.

3.2 Study approach

Quantitative approach was used to investigate the dynamic capabilities that are required to possess EGI in the floriculture industry. In doing so, floriculture farm owners in Colombo, Gampaha and Kalutara districts were selected as the target population. These districts were selected due to its highest population and presence of higher number of growers attributed to the availability of exporting and local market facilities. Divisional secretariat office of each selected district maintains the business registration list. Accordingly, floriculture business entities were selected and floriculture farms were sorted out as the target population of the study, therein total 1,453 floricultural farms were selected (Colombo – 497; Gampaha – 488; Kalutara – 468).

The proportionate stratified random sampling technique was used to select 305 entities as the sample (Colombo – 104; Gampaha – 102; Kalutara – 99). A structured questionnaire was constructed using 41 measurement items. These included three categorical items which were used to solicit demographic information from the farm owners such as gender, age and experience in farming. The remaining 39 items (Table 1) represented five dynamic capabilities and EGI. The items were measured on a continuous, itemized rating scale (five-point Likert scale) with end points of strongly disagree and strongly agree. The questionnaire was translated into the Sinhala language in order to avoid any language barrier affecting the responses. The translated questionnaire was retested to ensure no translational errors. With the help of local administrative committees, the authors personally administrated the questionnaire.

3.3 Data analysis

The study followed three primary procedures in quantitative data analysis. First, a descriptive analysis of the sample was performed. Second, to assess the adequacy of the measurement items, exploratory and confirmatory factor analysis, individual item reliability, construct reliability, discriminant validity and multicollinearity were tested. For the third procedure, the multiple regression analysis was performed to identify the capabilities required to possess EGI.

4. Results

4.1 Sample profile

A total of 305 questionnaires were administered among the floriculture farm owners during the period from August 2019 to October 2019, out of which 214 were received (Colombo – 73; Gampaha – 69; Kalutara – 72), representing 70% response rate. Eight questionnaires were not included in the analysis because respondents failed to answer all the questions fully (67% response rate). Out of the total 206 useable questionnaires analyzed, 154 were females (74.8%), with the remaining 52 (25.2%) being males. This indicated the gender-oriented nature of this business. The majority of respondents are more than 40 years old with 10–15 years of floriculture business experience. This enables them to provide adequate and meaningful responses to the study.

4.2 Measurement adequacy

The Kaiser-Meyer-Oklin (KMO) measure of sample adequacy was employed to determine the appropriateness of factor analysis. Generally, a KMO measure of 0.50 or higher indicates the appropriateness of factor analysis (Malhotra and Birks, 2006), and that factor loadings with

Variable	Measurement items
Organizational learning capability (OLC)	Search new varieties of flowers
	Follow advice
	Participate training sessions
	Search floriculture information in foreign countries
	Search flower export details
	Search information about flower export market
	Search export quality standards
	Contacts with floriculture exporters
	Active relationships with farmers' organizations
Alliance formation capability (AFC)	Negotiate with other farmers
	Share floriculture techniques
	Share planting materials
	Exchange the market opportunity information
	Share excess demand
	Offer market opportunities to other farmers
	Connections with flower growers in foreign countries
Technology capability (TC)	Apply new techniques
	Use social media apps
	Use mobile app
	Perform small scale experimentation
Process management capability (PMC)	Control diseases
	Apply environmental control techniques
	Use phycological control techniques
	Use tissue culture growing technique
Financial know-how capability (FKC)	Risk and returns are concerned
	Keep income and expenses records
	Keep customers' records
	Seek business advice from financial professionals
Entrepreneurial growth intention (EGI)	Expand customer base
	Focus to export products
	Cultivate new varieties of flowers
	Deal with risk for growth
	Focus on the further development of the business
	Trust our own judgments when doing this business
	Wise enough to understand the risk in this business
	Believe that to have successful business we must accept the risk
	Enjoy challenge situations in this business
	Not scared to take loans
	Handle uncertainties well

Table 1.
Measurement items

values above 0.70 are acceptable (Barclay *et al.*, 1995). Table 2 shows that the KMO measure of the variables were greater than 0.50 ($p < 0.05$) and that the Bartlett's test of sphericity showed a significant level ($p < 0.001$), indicating the appropriateness of factor analysis. The loadings of the items on their corresponding variables (Refer Annexure) ranged from 0.583 to 0.893 (greater than 0.50). Hence, none of the items were dropped from the analysis. The reliability of each variable was assessed using Fornell and Larcker's (1981) measure of composite reliability (CR) and Cronbach (1951) alpha, as shown in Table 2. The CR and Cronbach's alpha values for each construct were above 0.70, which falls within the acceptable reliability range (Hair *et al.*, 2010). Convergent validity of the constructs was assessed by examining the average variance extracted (AVE). The results presented in Table 2 further shows that AVE values exceed the respective threshold values (above 0.50) ensuring the convergent validity.

The discriminant validity was ensured as the square root values of all AVEs exceed the correlation values of the respective constructs (Fornell and Larcker, 1981) (Table 3). The values

of the square root of the AVE are as given in italic along the diagonals in Table 3. Based on the correlation values, there were statistically significant correlations among entrepreneurial growth and selected capabilities of the study at a 0.01 significance level. Interrelationship between organizational learning and alliance formation capabilities (0.718) was relatively greater than other interrelationships of capabilities. Further, none of the correlation coefficient was above 0.85, indicating the absence of multicollinearity in the variables (Hair *et al.*, 2010).

A look at the mean values in Table 3 indicate that amongst the dynamic capabilities alliance formation capability recorded the highest mean value, followed by organisational learning capability. Process management capability recorded the lowest mean value among all the dynamic capabilities. In terms of EGI, the overall mean value was close to 3.6, which implied moderate level of EGI of the selected farm owners of this study.

Since the study focused on three different districts in order to increase the observed variances and to strengthen the generalisability of the findings, it is imperative to test if there are significant differences in the EGI amongst the three selected districts. To do so, one-way ANOVA was used to test the mean differences. The result of Levene's test of equality of variances was 0.108 ($p > 0.05$), suggesting that the assumption on the homogeneity of variances was not violated (Garson, 2012). The p-value was 0.081, which was greater than 0.05. Hence, there is no significant difference amongst the selected districts' floriculture farms with regards to EGI measurement of this study.

Variable	KMO measure	Bartlett's test of sphericity	AVE	CR	Cronbach's alpha
Organizational learning	0.846	0.000	0.68	0.894	0.868
Alliance formation	0.812	0.000	0.65	0.940	0.814
Technological	0.742	0.000	0.56	0.862	0.772
Process management	0.714	0.000	0.57	0.874	0.800
Financial know-how	0.857	0.000	0.65	0.872	0.784
EGI	0.850	0.000	0.68	0.952	0.793

Table 2.
Assessment of adequacy of measurement

Variable	Mean	Std. deviation	OLC	TC	AFC	FKC	PMC	EGI
OLC	3.3855	0.99626	*0.825*					
TC	3.2182	0.90047	0.530**	*0.748*				
AFC	3.5462	0.88660	0.718**	0.518**	*0.808*			
FKC	3.1945	0.92128	0.614**	0.640**	0.620**	*0.722*		
PMC	3.1188	0.94531	0.590**	0.687**	0.575**	0.649**	*0.756*	
EGI	3.6145	1.02128	0.544**	0.491**	0.801**	0.541**	0.491**	*0.825*

Note(s): **Correlation is significant at the 0.01 level (2-tailed)

Table 3.
Discriminant validity

Model	R	R square	Adjusted R square	Std. Error of the estimate	Durbin–Watson	F	Sig
1	0.883[a]	0.780	0.775	0.46983	2.312	141.923	0.000[b]

Note(s): a. Predictors: (Constant), OLC, TC, AFC, FKC, RRC
b. Dependent variable: EGI

Table 4.
Model summary

Table 5.
Coefficients

Model		Unstandardized coefficients *B*	Unstandardized coefficients Std. Error	Standardized coefficients Beta	*t*	Sig	Collinearity statistics Tolerance	Collinearity statistics VIF
1	(Constant)	0.352	0.145		2.430	0.016		
	OLC	0.160	0.051	0.166	3.121	0.002	0.390	2.561
	TC	0.228	0.067	0.206	3.396	0.001	0.297	3.362
	AFC	0.965	0.058	0.890	16.705	0.000	0.387	2.581
	FKC	0.014	0.053	0.014	0.265	0.791	0.378	2.645
	PMC	−0.040	0.059	−0.039	−0.672	0.502	0.325	3.080

Note(s): Dependent variable: EGI

4.3 Regression analysis

The multiple regression analysis was performed to identify the significant influence of the selected capabilities over EGI of floriculture farmers. The results are as given in Tables 4 and 5.

Table 4 shows that the adjusted R-squared value was 0.775 ($F = 141.923$, $p < 0.001$), which implies that 77% of the variation in entrepreneurial growth intention can be explained by the dynamic capabilities identified in this study. In addition, the Durbin–Watson (DW) statistics was 2.312, which falls within the acceptance range of 1.53–2.50 (Jie *et al.*, 2003) in order to ensure that there is no autocorrelation problem in the data. Table 5 further shows that the variation inflation factor (VIF) values of all the independent variables were above one and below the threshold value of five. In addition, the tolerance values of all the independent variables were higher than 0.20. The results further indicate that there is no multicollinearity issue in the variables.

In residual diagnostics, assumption of the regression analysis is that residuals are independent and identically distributed normally, with a mean of zero and a constant variance (Garson, 2012). In the regression plot of standardized residuals with the standardized predicted value, there was no any pattern of the plots. All the points were at random and falling within ±3. Hence, there is no violation of the assumption of homoscedasticity. Further, in order to test the normality of the residuals, Shapiro–Wilk test of normality was performed. The Shapiro–Wilk test of normality on the residuals records a *p*-value of 0.146, which is more than 0.05. Thus, the assumption of normality of the residual terms is met and hence, the residuals were independent and normally distributed.

Table 5 shows that the *p*-values of organisational learning, technological and alliance formation capabilities were less than 0.05; hence those capabilities are statistically significant predictors of EGI of the selected floriculture farm owners in this study. However, the *p*-values for financial know-how and process management capabilities were greater than 0.05, thus they are not significant predictors of EGI. Among the capabilities, alliance formation recorded the highest beta value (beta = 0.965) and technological capability recorded the second highest value (beta = 0.228).

5. Discussion

Entrepreneurship in the agriculture sector has received much attention in the last decade, in developed and developing economies (Mupfasoni *et al.*, 2018). Although entrepreneurship has been embraced as an economic development strategy, the growth concern of entrepreneurial practices is questionable. Agricultural entrepreneurs initially pursued entrepreneurship with the aim of fulfilling their own self-interest; however, debate in respect of growth intention of them is far from being over.

The study offers insights into the nature of capabilities and entrepreneurial growth intention in floriculture farms. The questions of what factors form the drivers to entrepreneurial growth at farm level and the effect of capabilities on entrepreneurial growth are addressed in

this study. The significant influences of each identified capability over EGI of floriculture farmers were tested. The high *R*-square value indicates a comprehensive coverage of the dynamic capabilities. The findings imply that the key to entrepreneurial growth intention depends on organizational learning, technological and alliance formation capabilities of the farm owners. However, the regression analysis indicates that financial know-how and process management capabilities are not significant predictors of EGI in the selected floriculture farm owners.

Alliance formation capability recorded the highest beta value among five dynamic capabilities (beta = 0.965, Table 5). Cooperation (alliance formation or network building) affects innovation activities, as it allows the complementary exploitation of the resource, especially for small firms (Ciliberti *et al.*, 2016). Ngugi *et al.* (2010) highlighted that relational capabilities are vital to small and medium agricultural product suppliers to achieve greater external economies of scale and market strength. The respondents of our study proved that they seek cooperation specifically with other farmers in order to share information, materials and market opportunities. The responses consisted with high loadings of negotiation with other farmers about the issues in farming and sharing floriculture techniques, planting materials and market opportunity information. In light of these perspectives, this paper provides new insights on alliance formation capability in entrepreneurial growth, emphasizing that, ability to strengthen the relationships encourages the farm owners' EGI.

Followed by alliance capability, technological capability recorded the second highest value (beta = 0.228, Table 5). Technological capability is defined as the ability to absorb new technologies to the effective management of resources (Morris *et al.*, 2017). Thus, it includes ability of applying new technological development with regards to product and process, marketing and logistics. As Kamasak (2015) insisted, technological capability is positively related to innovation performance of the farms. Since innovation directly associates with entrepreneurship, the study results noted that key dimensions in the success of entrepreneurial growth in floriculture farm owners are the ability to apply new techniques in planting as well as in marketing promotion and performing their own experimentations. As the results stress to augment the role of technological capability in the formation of an entrepreneur's growth intention, more targeted measures should be attended to build fair and supportive facilities to obtain advanced knowledge and professional services in technologies related with floriculture cultivation, storing, marketing and distribution.

Modern-day agriculture urges farmers to capture greater value based on know-how, and this leads to actively search for new information and knowledge. Learning ability is essential for economic survival, and the success of the agricultural sector also depends on learning capacity of farms (Nieuwenhuis, 2002). Hurley and Hult (1998) conceptualized that knowledge as one of the innovative dimensions, which represent organizational cultural characteristics. Thus, knowledge is viewed as one of the organizational dimensions that influence the organization's propensity to value creation and contribute to successful innovation (Baker and Sinkula, 2002). Acknowledging that, Perez-Bustamante (1999) opined that entrepreneurship is essentially an outcome of the learning orientation components described as a process of acquisition, processing, storage and recovery of information. New knowledge needs to be developed for the activities of creating, extending and modifying the routines and resources of firms in response to changing market conditions (Amarakoon *et al.*, 2016). Organizational learning capability reflects the ability to develop the knowledge that facilitates changes in the market conditions (Lages *et al.*, 2009). When it comes to entrepreneur's growth intention, the results of the study echo that learning ability is considered as the vital platform for entrepreneurial growth, and farm owners need to be encouraged in continuous learning. Within this capability, searching new varieties of flowers, following the given advices and

participating to training sessions were the three items that loaded highly on the factors with factor loadings. Since modern-day agriculture (floriculture) is characterized by fertilizers plant protection and high-yielding seeds (Ayaz and Hussain, 2011), these challenges demand farm owners to capture greater value based on know-how (Gaytán and Benita, 2014). As argued by Hossein *et al.* (2016), this is especially critical for small scale farms that are working in a competitive environment where organizational learning is required to augment their capabilities.

Process management refers to the application of tools and techniques for the monitoring of the manufacturing process, in order to reduce the need for inspection and/or variability, eliminating breakdowns, missing materials or fixtures (Fotopoulos and Psomas, 2010). Grande *et al.* (2011) highlight that business process management capabilities strongly influence the competition of firms where operational capability can facilitate firms to streamline the flow of processes, reduce the cost of production and improve the quality of products. As such, it is not surprising to identify that process management capability directly and positively relates to all types of innovation (Kim *et al.*, 2012). In the context of this study, farm process management capability reflects the integration of a set of routines performed by a farm to enhance its output through efficient use of its routines in floriculture cultivating techniques and control of diseases. Accordingly, process management capability was characterized by high loadings *n* controlling diseases and environmental control techniques.

However, a contradictory finding on the process management capability and EGI has been recorded in this study. Based on the regression analysis result, process management capability was not a significant predictor of EGI in the selected floriculture farm owners. It can be inferred that the farm owners do not regard processes such as control diseases and environmental control techniques as a dynamic capability in the formation of an entrepreneur's growth intention. Notwithstanding, two possible reasons have been identified; first, the perception that the processes ought to be similar across different farms, and second, the need to focus on the other four capabilities which indirectly lead to the effective deployment of resources to better manage the farm processes.

Financial knowledge needs to be separated from the knowledge related to business process because inability of controlling money creates a vicious cycle of financial constraints. This emphasizes that the ability of managing adequate financial resources is essential to carry out the farm operations and the purchase of appropriate capital equipment (Agada, 2014). The respondents of our study highlighted their financial know-how through record keeping, concerning risk and returns and seeking advices from financial professionals like bank managers. However, the regression analysis indicates that financial know-how capability was not a significant predictor of entrepreneurial growth intention in the selected floriculture farm owners. With the prevailing encouragement of organizational learning capability, it is questionable why financial literacy continues to hinder farm owners' ability to transform financial knowledge into entrepreneurial growth intention. As Zaridis and Mousiolis (2014) pointed out, ability of managing financial asset is a pressing issue encountered by the small-scale farmers. The interviews conducted in the first phase of this study (exploratory approach) identified that some farm owners are reluctant to use bank loans because of their inability to utilize the funds effectively. As they mentioned, some farm owners invest their own money to the business while sacrificing day-to-day requirements because they were scared to take loans from financial institutions. In order to apply for a bank loan, the farms require to maintaining a proper record keeping mechanism of their day-to-day activities as well as their customers. This is of the view that there is a need to professionalize the sector in terms of management of financial resources. This implies that "soft" training programs are to be provided to the farm owners on financial management.

6. Implications and conclusion

Our results have interesting practical implications for the owners/growers and regulatory parties in agribusiness. We point to the importance of development of capabilities with regard to learning, relationship building, adaptability to technological advances, financial control and process management. As the results stress in the role of capabilities in the formation of an entrepreneur's growth intention, more targeted measures should be attended to build fair and supportive facilities to obtain advanced knowledge, professional services specifically in financial literacy, technological support and alliance management. Enhancing these abilities through education, training, experience or peer-to-peer network will stimulate the desire of farm owners/growers to create more time for strategic activities in which they can focus on the exploration of new growth paths.

We counsel the growers to recognize the vital role and importance of alliance formation, taking into account of information sharing. This requires the growers/owners to place emphasis on the development of relationships with stakeholders, where trust, commitment and shared benefits are leading roles. Formal and informal communication, sharing and effort need to be invested to develop such relationships and foster information sharing. Farmers' organizations, government regulators and policies can also act as catalyst.

Focusing on capabilities comes at a price for a farm and the returns derived from them must be in line with the investment required. It is difficult for at farm level to develop all the potential capabilities that might be useful at some point, as they are costly to attain, such as technological and alliance formation capability. According to the CA, the ends of well-being, justice and development should be conceptualized in terms of people's capabilities to function; that is, their effective opportunities to undertake actions and activities that they want to engage in, and be whom they want to be (Robeyns, 2005). Thus, relevant authorities therefore have to be selective in developing suitable strategies that enhance specific types of capabilities which are the key to sustain entrepreneurship.

The key findings reported in this study should be considered in light of certain limitations. First, this study focused on floriculture industry in Sri Lanka and examined a representative sample in Western province. Therefore, caution may be applied when generalizing the results. Applying this framework within other agribusiness settings will be beneficial. The study controlled the farm size variable (income generated per year) because growth intention may change according to the farm size. More explorations with sub-sample divided by farm size are advised to enrich related research. Further, variance analysis of capabilities with respect to farm owner's gender, age, education level and experience is necessary in order to capture the finer details. Our understanding of why some of the capabilities are significantly influenced than others is limited. Further research is required to find the answer for the question; how these capabilities influence entrepreneurial growth? Finally, evidence from comparative research between the regions of the country is necessary to develop since Sri Lanka is a multi-regional country with subtle differences in local institutions.

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Further reading

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Annexure

Variable	Measurement items	Factor loading
Organizational learning capability (OLC)	Search new varieties of flowers	0.842
	Follow advice	0.821
	Participate training sessions	0.814
	Search floriculture information in foreign countries	0.758
	Search flower export details	0.787
	Search information about flower export market	0.696
	Search export quality standards	0.690
	Contacts with floriculture exporters	0.680
	Active relationships with farmers' organizations	0.583
Alliance formation capability (AFC)	Negotiate with other farmers	0.827
	Share floriculture techniques	0.864
	Share planting materials	0.888
	Exchange the market opportunity information	0.736
	Share excess demand	0.808
	Offer market opportunities to other farmers	0.839
	Connections with flower growers in foreign countries	0.647
Technology capability (TC)	Apply new planting techniques	0.736
	Use social media apps	0.519
	Use mobile app	0.617
	Perform small scale experimentation	0.605
Process management capability (PMC)	Control diseases	0.753
	Apply environmental control techniques	0.764
	Use phycological control techniques	0.689
	Use tissue culture growing technique	0.723
Financial know-how capability (FKC)	Risk and returns are concerned	0.660
	Keep income and expenses records	0.889
	Keep customers' records	0.891
	Seek business advice from financial professionals	0.612
Entrepreneurial growth intention (EGI)	Expand customer base	0.613
	Focus to export products	0.691
	Cultivate new varieties of flowers	0.833
	Deal with risk for growth	0.827
	Focus on the further development of the business	0.884
	Trust our own judgments when doing this business	0.893
	Wise enough to understand the risk in this business	0.873
	Believe that to have successful business we must accept the risk	0.857
	Enjoy challenge situations in this business	0.791
	Not scared to take loans	0.783
	Handle uncertainties well	0.743

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