



# Relationships between Institutional Capital, Dynamic Capabilities and Competitive Advantage: Empirical Examination of the Agribusiness Sector

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## ABSTRACT

Resource-based view (RBV) is based on the economic rent concept which explains sources of competitive advantage (CAD) at firm level. The RBV lacks a causality chain between resources and CAD which calls for further examination along with dynamic capabilities possessed by firms. This study aims to determine the relationship between institutional capital (IC), dynamic capabilities and CAD of agribusiness firms, more specifically the minor export crop farms, at the same time contending that the relationship between IC and CAD is mediated by the specific capabilities. The scope of the study comprises entities which have experience in commercial cultivation of minor export crops. 456 farm owners were selected from the highest growing districts of the selected crops (cinnamon, clove and pepper) using proportionate stratified random sampling technique. Self-administrated structured questionnaire was used to collect data. The regression-based path analysis was used to measure the direct and mediation relationship amongst the latent variables. The results of the study suggest that IC has a significant influence on both the quality management capability and marketing capability. This connection contributes valuable insights to the empirical support on the importance of specific capabilities on sustainable CAD. Managerial implications are highlighted along with future research directions.

**Keywords:** Agribusiness Sector, Dynamic Capabilities, Institutional Capital, Mediating Effect, Resource-based View

**JEL Classifications:** M210, Q120

## 1. INTRODUCTION

The concept of competitive advantage (CAD) is widely used in modern economic literature to evaluate the patterns of trade and specialization of firms in commodities which possess CAD (Saboniene, 2009). Although CAD could occur at international, regional, national, industry or even firm level (Sachitra and Chong, 2016a), firm or institutional level CAD has insofar received the greatest attention from researchers and practitioners (Arslan and Tatlidil, 2012; Porter, 1990). Accordingly, CAD at the firm level can be defined as the ability of a firm to offer products and services that meet or exceed customer values currently offered by its rivals, substitutes and possible market entrants (Bhuiyan, 2011; Martinez et al., 2014).

There are two theoretical foundations to explain the sources of CAD at firm level, namely the resource-based view (RBV) and the

relational perspective (Lages et al., 2009). Of the two, the RBV is the leading theory of the sources of CAD (Barney, 1991; Powell, 2001). The RBV is based on the economic rent concept which explains two basic maxims: (1) Resource endowments which are heterogeneously distributed; and (2) capabilities which allow a firm to sustain CAD (Martin-de-Castro et al., 2006). Supporting this view, Bhuiyan (2011) and Martinez et al. (2014) state that the resources and capabilities of a firm need to be scarce to the industry but relevant to the activities of the firm in order to establish CAD. Hence, the RBV suggests that firms should be heterogeneous with regards to their resources and capabilities.

The RBV theory of building CAD is however not sufficient enough because modern firms are more than ever a system of relations (Golonka, 2009). Besides the shortcoming of lacked causality chain between resources and CAD (Hinterhuber, 2013), very little attention has been paid in the literature regarding the

pre-determined functional relationships between resources and capabilities as well as between the capabilities of firms and their associated analysis related to CAd (Wang, 2014).

In order to address this gap, this study intends to develop and test a conceptual model linking resources and dynamic capabilities to CAd, and at the same time investigating the mediating effects of the dynamic capabilities possessed by farms within the context of agribusiness sector.

The term agribusiness encompasses farms operating within the agricultural sector, including bulk commodities and high value fresh products (Ibeh, 2003). The significant contributions made by the agricultural sector in improving the economic well-being of nations are well recognized (Gaytán and Benita, 2014). At the same time, however, the growing demand for agricultural products in the world requires the sector to be competitive in the world market in order to obtain benefits of increased demand (Yercan and Isikli, 2007). This creates an interesting research proposition to explore the competitive position of agribusiness firms.

The current study focuses specifically on the minor export crops sector in Sri Lanka in view of the fact that this sector has since become one of the emerging sectors due to its highest foreign exchange earnings to the country. Minor export crops include cinnamon, cloves, pepper, sesame seed, cocoa, cashew nuts, and cardamom, with contributions to gross domestic product and total export recorded as 9.7% and 5.4%, respectively (Sachitra and Chong, 2015).

Notwithstanding their contributions, the major producers of these crops are increasingly feeling the pressure of growing demand versus limited productivity which is constrained by their family-owned, small-scale farms (Spice Council of Sri Lanka, 2014). In contrast to large-scale agribusiness farms, small scaled farms need to seek resources from institutional environment (Kata and Zajac, 2007). Meeting this condition becomes even more prevalent to emerging countries such as Sri Lanka because market mechanism for resource allocation is characteristically underdeveloped (Apasingha et al., 2014).

Institutional capital (IC) is one of the key resources of small firms derived at from the institutional environment. It plays a significant role in enhancing the competitiveness of small-scale firms (Ismail et al., 2010). Accordingly, adequate government support in terms of production, marketing and infrastructure facilities are able to improve competitiveness of agricultural products (Kumar and Rai, 2007). Hence, this study focuses on government programmes as the key aspect of IC. In addition, due to the relative importance of the spices produced by the minor crops for food and medical supplies, dynamic capabilities such as quality management capability (QMC) and marketing capability (MC) are recognized as important capabilities (Sachitra and Chong, 2016b). The view of Sachitra and Chong (2016b) is also reflected in Simpson et al. (2004) and Talbot (2013) who found that small scale businesses could gain CAd by possessing these capabilities. Premised on these arguments, the present study focuses on two farm specific capabilities, namely QMC and MC.

The rest of this paper is organized as follows. The next section outlines the theoretical view of the main concepts of the study, followed by the development of a conceptual model and hypotheses to be tested. The research design in terms of the methodological approach used is elaborated next. The results are then presented before the paper is concluded with future research directions.

## 2. THEORETICAL REVIEW AND HYPOTHESES

### 2.1. IC

IC is a unique resource that firms acquire from its institutional environment such as from government programmes (Lu et al., 2010). Government support is expected in terms of lower taxes, tax breaks, greater informational and promotional activities as well as more and appropriate training to support agricultural development (Kata and Zajac, 2007). Adequate government support is able to improve competitiveness of minor export crops farms (Kumar and Rai, 2007). Hence, the following hypothesis is proposed:

Hypothesis 1: There is a positive relationship between IC and CAd of minor export crop farms.

### 2.2. QMC

QMC concerns with the ability to design, develop and produce products to fulfill customer requirements (Lages et al., 2009). Due to the relative importance of the spices produced by the minor export crops for food and medical industries, QMC has been recognized as an important capability. In fact, Bhardwaj et al. (2011) highlight that poor product quality management is one of the severe issues that generates low competitiveness in Indian spices. Hence, the following hypothesis ensues:

Hypothesis 2: There is a positive relationship between QMC and CAd of minor export crop farms.

In the context of developing countries, government programmes are imperative to promote farm-specific capabilities in response to the challenge of improving the quality of spices. By engaging in government programmes such as training sessions, workshops, discussion with experts and subsidy enrollment, the minor export crop farmers can develop appropriate competencies to improve the quality of their yields, thus enhancing their QMC. Based on these arguments, the following hypotheses are proposed:

Hypothesis 3: There is a positive relationship between IC and QMC of minor export crop farms.

Hypothesis 4: QMC mediates the relationship between IC and CAd of minor export crop farms.

### 2.3. MC

Marketing capabilities can be defined as a set of complex resources and skills in the marketing field that result in a process of knowledge accumulation and its integration with values and norms developed through organizational processes from all over the firm (Tuominen et al., 1997). Franzak and Pitta (2005) and

Spice Council of Sri Lanka (2014) identified that the ability to market the yields has become the most important factor in spice trading. Forsman (2000) found that MC could enhance the CA of food processing firms. This leads to the following hypothesis:

Hypothesis 5: There is a positive relationship between MC and CA of minor export crop farms.

Adequate government support in terms of marketing facilities will be able to improve competitiveness of minor export crops. This is with the view that government programmes generate opportunities for the farmers to establish links with local customers as well as foreign buyers to collect information regarding customer needs and to learn methods related to pricing strategies, hence enhancing their competitive positions. These lead to the following propositions:

Hypothesis 6: There is a positive relationship between IC and MC of minor export crop farms.

Hypothesis 7: MC mediates the relationship between IC and CA of minor export crop farms.

## 2.4. Conceptual Model

In this study, IC has been identified as a key resource (independent variable) which appears to be critical for the agribusiness firms in general and the minor export crops farms in particular to attain CA (dependent variable). At the same time, the study proposes two dynamic capabilities (QMC and MC) as mediating variables between IC and CA. The hypothesized relationships between the variables are shown in the conceptual model in Figure 1.

## 3. METHODOLOGY

### 3.1. Sample and Data

The scope of this study includes entities with experience in the commercial cultivation of three minor export crops, namely cinnamon, pepper and clove. These three crops have been selected over the other minor crops based on their higher contributions in terms of total agricultural exports as well as total minor agricultural exports to the Sri Lankan economy (Sachitra and Chong, 2015). In addition, this study considers three instead of one crop in order to increase the observed variances as well as to strengthen the generalizability of findings.

About 456 farm owners were selected from the highest growing districts of the selected crops using proportionate stratified random sampling technique. In terms of demographics, the majority of

respondents are more than 50-year-old with 10-20 years of farming experience, hence enabling them to provide adequate and accurate responses to the study. In addition, the majority of them also reported the use of <5 acres of land to cultivate the three crops, signifying the small scale nature of their businesses.

### 3.2. Variables and Measures

A self-administrated, structured questionnaire was developed to collect data from the farm owners. In assessing CA at firm level, Li et al. (2006) and Thatte (2007) developed five dimensions to measure this construct, namely price, quality, delivery dependability, product innovation and time to market. Since product innovation is not applicable to minor export crops, this construct was dropped. However, the dimension of exploiting market opportunities (Newbert, 2008) is incorporated in the construct in order to contextualize the study to the agribusiness sector. About 18 items were included to measure the CA of the minor export crop farms.

Based upon prior studies on IC (Gyau et al., 2014; Lu et al., 2010), the study developed five items to characterize the resources provided by the government. They comprise subsidy for production, workshops to improve quality of products, advice and guidance provided to farmers who encounter issues with production, enabling meetings with officers of the Agricultural Department and support provided in identifying customers.

In measuring QMC, the study used five measurement items of QMC, i.e., the quality goal for yields, compliance with specific cultivating standards imposed by the agricultural department, the practice of environmentally friendly operations to improve product quality, awareness of employees in maintaining product quality and the ability to maintain quality of raw material suppliers. These items were adapted based on the QMC construct proposed by Jie et al. (2013) and Lages et al. (2009).

Similarly, MC was measured using five measurement items, i.e., knowledge of customers, knowledge of competitors, develop pricing programmes, discover strategies and tactics of other farmers, and monitor prices of competitors and price changes. These items were adapted from prior studies on MC (Desarbo et al., 2007; Morgan et al., 2009; Ngo and O'Cass, 2012).

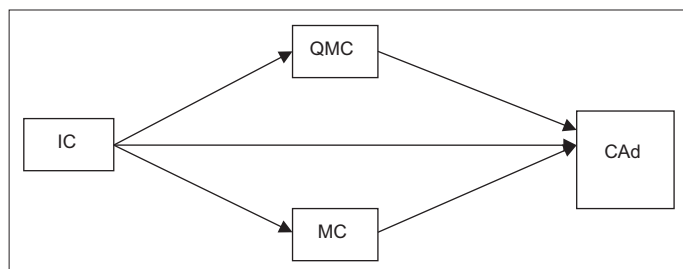
A total of 33 items were featured in the survey questionnaire using a five-point Likert scale ranging from strongly disagree to strongly agree. These are on top of the items used to solicit demographic information from the minor export crop farm owners.

### 3.3. Data Analysis Method

This study follows two procedures: (1) The assessment of adequacy of the measurement items; and (2) the assessment of the hypotheses constructed. In order to assess the adequacy of the measurement items, individual-item reliability, construct reliability, discriminant validity and the issue with multicollinearity were tested.

On the second procedure, regression-based path analysis (Hayes, 2012; 2013) is employed to test the hypotheses constructed. Taking the cue from Baron and Kenny (1986), the regression-based

Figure 1: Conceptual model





path analysis follows four steps in order to assess the mediating effects of variables and their significance. Accordingly, the path coefficient between independent and dependent variables has to be significant. Likewise, the path coefficient between independent and mediating variables as well as between mediating and dependent variables should be significant as well. When the mediating variables are included in the model, the path coefficient between independent and dependent variables should decrease in size and has to be non-significant.

## 4. FINDINGS

### 4.1. Assessment of Adequacy of Measurement

The Kaiser-Meyer-Olkin (KMO) measure of sample adequacy was obtained to determine the appropriateness of factor analysis. According to Malhotra and Birks (2006), a KMO measure which is 0.50 or higher indicates the appropriateness of factor analysis. Generally, factor loadings with values above 0.70 are acceptable (Barclay et al., 1995). The results show that the KMO measure of the constructs were  $>0.50$  ( $p < 0.05$ ), indicating the appropriateness of factor analysis.

The loadings of the items on their corresponding constructs ranged from 0.703 to 0.869 ( $>0.50$ ), hence none of the 33 items were dropped from the analysis. All of the items loaded on their corresponding constructs without any declassification, implying the robustness of the measures of each of the constructs.

In addition, the reliability of individual items was also assessed by examining their internal consistency values through computing the construct reliability ( $<0.90$ ), average variance extracted (AVE) ( $<0.50$ ) and Cronbach's alpha values ( $<0.70$ ), taking the cue from Hair et al. (2010) and Vinayan et al. (2012). The results showed that the construct reliability, AVE and alpha values were above the suggested cut-off values, implying adequate reliability of the items.

The study also considered the computed AVE to test discriminant validity. It is recommended that the AVE should be higher than the corresponding inter-construct squared correlations (Hair et al., 2010). The results supported the discriminant validity of each of the constructs as the AVE values of each of the constructs were far greater than the corresponding inter-construct squared correlations. Additionally, the AVE values were greater than the corresponding correlations between the constructs, indicating that there is no multicollinearity issue in the conceptual model. This permits the regression-based analysis to be conducted.

### 4.2. Assessment of the Hypotheses

From the standpoint of regression analysis, there are four assumptions that need to be fulfilled, such as: (1) All of the variables are measured on a continuous scale; (2) all of the variables follow a normal distribution; (3) relations associated with one observation are not correlated with the relations of any other observation; and (4) relationships amongst variables are assumed to be linear<sup>1</sup>. All the assumptions were adhered to in the study.

<sup>1</sup> Matrix scatter dot diagrams drawn for all variables indicate positive linear relationships amongst the variables.

Table 1 shows the results of the three models which depict the relationships between IC, QMC and CAd. It also shows the mediating effects of QMC on the relationship between IC and CAd. Following the assumptions, first, the path coefficient between the independent (IC) and dependent variable (CAd) has to be significant (Model 3). Second, path coefficient between the independent and mediating variable (QMC) (Model 1) as well as between the mediating and dependent variables (Model 2) should also be significant. Third, when the mediating variables are included in the model, the path coefficient should decrease in size and has to be non-significant (Model 2). Hence, all of the assumptions were fulfilled.

Model 1 predicts QMC using IC, Model 2 predicts CAd using IC and QMC, whilst Model 3 predicts CAd using IC. Based on Table 1, Model 1 and Model 3 show that IC was a significant predictor of both QMC ( $p < 0.05$ ) and CAd ( $p < 0.05$ ), and that Model 2 shows that QMC was a significant predictor of CAd ( $p < 0.05$ ) of the minor export crop farms. Hence, Hypotheses 1, 2 and 3 are accepted.

Based on Model 2, IC was no longer significant in the presence of QMC as a mediator ( $P = 0.106$ ;  $P > 0.05$ ). The measure for the indirect effect of IC on CAd is 0.3037, that is, the indirect effect is significantly  $>0$  at 95% confidence interval. In addition, the  $R^2$  value of Model 2 (0.7605) was greater than Model 3 (0.5171). In short, QMC mediates the relationship between IC and CAd of the minor export crop farms. Hence, Hypothesis 4 is accepted.

Likewise, Table 2 shows the results of the three models which illustrate the relationships between IC, MC and CAd. It also shows the mediating effects of MC on the relationship between IC and CAd. Again, all of the assumptions for regression-based analysis were fulfilled.

In Table 2, Model 1 and Model 3 showed that IC was a significant predictor of both the MC and CAd. Further, MC was found to be a significant predictor of CAd (Model 2). Hence, Hypotheses 5 and 6 are accepted.

IC was no longer significant ( $P = 0.1020$ ;  $P > 0.05$ ) in the presence of MC as a mediator. The measure for the indirect effect of IC on CAd is 0.1768, that is, the indirect effect is significantly  $>0$  at 95% confidence interval. Further, the  $R^2$  value of Model 2 (0.6591) was greater than Model 3 (0.5171). In short, MC mediates the relationship between IC and CAd of the minor export crop farms. Hence, Hypothesis 7 is accepted.

## 5. DISCUSSION

Newbert (2008) insists that a conceptual-level investigation on the underlying characteristics of resources and capabilities is required primarily owing to dearth of studies, particularly one which is especially targeted at the agribusiness sector. On this score, this study fetches important theoretical and practical implications to support Newbert's argument that a firm may have the resources that could generate CAd, but the resources may not be adequate enough to generate a sustainable CAd unless they are supported

**Table 1: Mediating analysis of QMC on IC and CAd**

<b>Outcome: QMC</b>							
<b>Model summary</b>	<b>R</b>	<b>R<sup>2</sup></b>	<b>MSE</b>	<b>F</b>	<b>df 1</b>	<b>df 2</b>	<b>P</b>
	0.6618	0.4381	0.3985	231.9344	1.0000	454.0000	0.0000
<b>Model 1</b>	<b>Coefficient</b>	<b>SE</b>	<b>t</b>	<b>P</b>	<b>LLCI</b>	<b>ULCI</b>	
Constant	1.3890	0.1141	12.1690	0.0000	1.1647	1.6133	
IC	0.5014	0.0329	15.2294	0.0000	0.4367	0.5661	
<b>Outcome: CAD</b>							
<b>Model summary</b>	<b>R</b>	<b>R<sup>2</sup></b>	<b>MSE</b>	<b>F</b>	<b>df 1</b>	<b>df 2</b>	<b>P</b>
	0.8721	0.7605	0.1442	719.2735	2.0000	453.0000	0.0000
<b>Model 2</b>	<b>Coeff</b>	<b>SE</b>	<b>t</b>	<b>P</b>	<b>LLCI</b>	<b>ULCI</b>	
Constant	0.4213	0.0791	5.3294	0.0000	0.2660	0.5767	
QMC	0.6057	0.0282	21.4569	0.0000	0.5502	0.6612	
IC	0.3156	0.0243	1.2967	0.1062	0.2678	0.3635	
Total effect model							
<b>Outcome: CAD</b>							
<b>Model summary</b>	<b>R</b>	<b>R<sup>2</sup></b>	<b>MSE</b>	<b>F</b>	<b>df 1</b>	<b>df 2</b>	<b>P</b>
	0.7191	0.5171	0.2900	486.1850	1.0000	454.0000	0.0000
<b>Model 3</b>	<b>Coefficient</b>	<b>SE</b>	<b>t</b>	<b>P</b>	<b>LLCI</b>	<b>ULCI</b>	
Constant	1.2626	0.0974	12.9664	0.0000	1.0713	1.4540	
IC	0.6193	0.0281	22.0496	0.0000	0.5641	0.6745	
Total, direct, and indirect effects							
<b>Total effect of X on Y:</b>	<b>Effect</b>	<b>SE</b>	<b>t</b>	<b>P</b>	<b>LLCI</b>	<b>ULCI</b>	
	6193	0.0281	22.0496	0.0000	0.5641	0.6745	
<b>Direct effect of X on Y</b>	<b>Effect</b>	<b>SE</b>	<b>t</b>	<b>P</b>	<b>LLCI</b>	<b>ULCI</b>	
	0.3156	0.0243	1.2967	0.1062	0.2678	0.3635	
<b>Indirect effect of X on Y</b>	<b>Effect</b>	<b>Boot SE</b>	<b>Boot LLCI</b>	<b>Boot ULCI</b>			
QMC	0.3037	0.0237	0.2626	0.3565			
<b>Normal theory tests for indirect effect</b>	<b>Effect</b>	<b>SE</b>	<b>Z</b>	<b>P</b>			
	0.3037	0.0245	12.4102	0.0000			

Source: Survey Data (2016). SE: Standard error, MSE: Mean standard error, CAd: Competitive advantage, IC: Institutional capital, QMC: Quality management capability

by specific dynamic capabilities. Accordingly, this research has extended our understanding of the extent of applicability of the RBV and the integration of resources with farm-specific dynamic capabilities to derive at CAd as illustrated in the conceptual model. Supported by a large sample size with the goodness of measures established, this study has made yet another important contribution by addressing the significant lack of published research regarding the source of CAd amongst family-owned businesses (Perez-Cabanero et al., 2012) which characterize the minor export crop farm owners.

The findings of this study are not unexpected since the nature of small scale agribusiness firms demands them to seek resources from the institutional environment (Kata and Zajac, 2007) which includes government programmes (Lu et al., 2010) in order to be more competitive. Hence, this explains the identification of government as one of the key elements in enhancing the competitiveness of small firms (Ismail et al., 2010). This study has also confirmed the literature on the importance of QMC and MC as the more important capabilities in the agribusiness sector to improve the competitiveness of the minor export crop farms as evident from the R<sup>2</sup> values obtained (Benedetto and Song, 2003; Bhardwaj et al., 2011; Forsman, 2000; Simpson et al., 2004). Overall, the findings suggest that the government can support the minor export crop farm owners to gain CAd in terms of price, delivery dependability, exploiting market opportunities and time to market.

The increasing demands for the spices by both the food and medical industries have created an obligation for the farmers to ensure that the crops produced meet certain quality standards along with the pressure to increase production. The findings suggest that by setting a clear quality goal for the yields produced, adopting the cultivation standards imposed by the government, employing environmental-friendly approaches, possessing adequate awareness of product quality amongst employees and having suppliers who supply high quality materials are all important measures for the competitiveness of small scale farms (Franzak and Pitta, 2005; Simpson et al., 2004; Spice Council of Sri Lanka, 2014).

Moreover, the ability to sense market demands contribute to growth (Talbot, 2013), explaining the importance of MC to the competitiveness of the minor export crops sector. Possessing adequate knowledge on marketing allows farm owners to take advantage of market sensing activity to obtain information of their customers and competitors as well as skills in developing pricing strategies and monitoring the tactics of their competitors in terms of pricing and price changes (Benedetto and Song, 2003).

Besides the direct relationships to CAd, it is interesting to note that both the dynamic capabilities have mediating effects as well. This can be seen from the insignificant values of path coefficient between IC and CAd (Baron and Kenny, 1986). Acknowledging the literature on IC, the results demonstrate that government

**Table 2: Mediating analysis of MC on IC and CAD**

<b>Outcome: MC</b>							
<b>Model summary</b>	<b>R</b>	<b>R<sup>2</sup></b>	<b>MSE</b>	<b>F</b>	<b>df 1</b>	<b>df 2</b>	<b>P</b>
	0.6915	0.4783	0.5201	134.6574	1.0000	454.0000	0.0000
<b>Model 1</b>	<b>Coefficient</b>	<b>SE</b>	<b>t</b>	<b>P</b>	<b>LLCI</b>	<b>ULCI</b>	
Constant	1.8487	0.1304	14.1772	0.0000	1.5925	2.1050	
IC	0.4365	0.0376	11.6042	0.0000	0.3625	0.5104	
<b>Outcome: CAD</b>							
<b>Model summary</b>	<b>R</b>	<b>R<sup>2</sup></b>	<b>MSE</b>	<b>F</b>	<b>df 1</b>	<b>df 2</b>	<b>P</b>
	0.8119	0.6591	0.2052	437.9798	2.0000	453.0000	0.0000
<b>Model 2</b>	<b>Coeff</b>	<b>SE</b>	<b>t</b>	<b>P</b>	<b>LLCI</b>	<b>ULCI</b>	
Constant	0.5139	0.0984	5.2243	0.0000	0.3206	0.7073	
MC	0.4050	0.0295	13.7380	0.0000	0.3470	0.4629	
IC	0.4425	0.0269	1.6451	0.1020	0.3897	0.4954	
Total effect model							
<b>Outcome: CAD</b>							
<b>Model summary</b>	<b>R</b>	<b>R<sup>2</sup></b>	<b>MSE</b>	<b>F</b>	<b>df 1</b>	<b>df 2</b>	<b>P</b>
	0.7191	0.5171	0.2900	486.1850	1.0000	454.0000	0.0000
<b>Model 3</b>	<b>Coefficient</b>	<b>SE</b>	<b>t</b>	<b>P</b>	<b>LLCI</b>	<b>ULCI</b>	
Constant	1.2626	0.0974	12.9664	0.0000	1.0713	1.4540	
IC	0.6193	0.0281	22.0496	0.0000	0.5641	0.6745	
Total, direct, and indirect effects							
<b>Total effect of X on Y</b>	<b>Effect</b>	<b>SE</b>	<b>t</b>	<b>P</b>	<b>LLCI</b>	<b>ULCI</b>	
	0.6193	0.0281	22.0496	0.0000	0.5641	0.6745	
<b>Direct effect of X on Y</b>	<b>Effect</b>	<b>SE</b>	<b>t</b>	<b>P</b>	<b>LLCI</b>	<b>ULCI</b>	
	0.4425	0.296	1.6451	0.1020	0.3897	0.4954	
<b>Indirect effect of X on Y</b>	<b>Effect</b>	<b>Boot SE</b>	<b>Boot LLCI</b>	<b>Boot ULCI</b>			
MC	0.1768	0.0198	0.1399	0.2185			
<b>Normal theory tests for indirect effect</b>	<b>Effect</b>	<b>SE</b>	<b>Z</b>	<b>P</b>			
	0.1768	0.0200	8.8513	0.0000			

Source: Survey Data (2016). SE: Standard error, MSE: Mean standard error, CAAd: Competitive advantage, IC: Institutional capital, MC: Marketing capability

programmes can wield significant influence on both the dynamic capabilities and CAD (Ismail et al., 2010; Kumar and Rai, 2007; Lu at al., 2010) of the minor export crop farms. Relative to MC, however, QMC benefits more from government programmes which in turn enhances the CAD of farm owners although both the dynamic capabilities are statistically significant.

From the practical perspective, the findings imply that all of the resources provided by the government such as training and workshops, subsidy, advice and guidance, meeting with officers of the Agricultural Department and support provided in identifying customers are all important means for the minor export crop farm owners to develop their capabilities in order to improve and/or enhance their competitive positions.

At present, the Department of Export Agriculture organizes and conducts training programmes and workshops ranging from nurseries to harvest, marketing and to produce standard certifiable products. As many as two training programmes and three workshops were held this year. However, insofar a low participation rate was recorded and reported. On the other hand, the farm owners who attended the programmes were not satisfied with the contents, whilst those who did not attend blamed it on the late notifications sent to them. This implies the very need to revise the contents of the training programmes and workshops to reflect on currency as well as the various aspects covered in this study. A clear objective must be set before any training programme or workshop is organized. In addition, a more

effective communication channel is required so that the farm owners receive sufficient notice. With these measures in place, it is possible for the department to consider making attendance to the training programmes or workshops compulsory. This can be done by dispatching their officers to the various districts to conduct the training programmes and workshops for both the farm owners and their employees. Such a participation can be tied to the financial allocation provided by government as well as the priority and time allocated to meet with officers of the department for guidance and advice.

Other important institutional support includes financial incentives and non-financial incentives. In the case of financial incentives, at present the government is assisting the farm owners through interest-free or low-interest loans and subsidies. For this purpose, the government had been working with a state-owned and a private bank (the Regional Development Bank and the National Development Bank) to come up with more low-interest loan facilities for small scale farmers (Sachitra and Chong, 2015). There is a need for greater publicity of these incentives in order to reach out to as many farm owners as possible, looking at their population which spread over the country.

In terms of the non-financial incentives, amongst the important ones that could enhance competitiveness of the minor export crop farm owners include consultation, advice and/or guidance on issues relating to production as well as sharing the state-of-the-art equipment to enhance productivity and quality of the yields

produced. The officers could also provide advice on marketing which include identification of customers and logistics, product innovation and time to market. To achieve the desired outcomes, a proper agenda and standard response, including Q and A sheet on areas related to financial incentives, training and development, quality standards, environmental-friendly practices, employee development and management, supplier management, pricing and competitor analysis, identifying market opportunities, to name some, need to be drawn up so as to ease the officers in providing accurate information and advice to the farm owners which sought for them. It is critical that the officers are properly trained in terms of technical knowledge and consultation skills to ensure an effective delivery of information.

On top of the agenda is the importance of creating awareness amongst the farm owners on the importance enhancing their competitive position by developing their QMC and MC through engaging in the various government programmes developed for them (Ismail et al., 2010; Kumar and Rai, 2007). Such a policy intervention ought to be viewed as critical as it could equalize the perceived CAD between new and more established farms (Bhardwaj et al., 2011). Without an active participation, the farm owners will continue with their century-old practices in which any transformation initiative will not bear fruits. A more aggressive and wide-reaching publicity programme is thus warranted.

To broaden the scope of institutional support, it is imperative for relevant government agencies such as the Ministry of Export Crops, Ministry of Industry and Commerce, Export Development Board, Department of Export Agriculture and the Spice Council to collaborate with each other. A close relationship between the farm owners, authorities and private institutions is necessary to ensure proper functioning of the support provided, to the extent that a private-public partnership approach is possible. For the start, there is an ongoing initiative with a private bank to provide financial assistance to the farm owners. Such initiative could be extended to other areas such as by working with large private agribusiness firms to support the small-scale farm owners in terms of hybrid methods of cultivation, scientific post-harvest handling, storage, logistics, quality assurance and market trend analysis, to name a few. Incentives in terms of tax breaks could be given to the large farms for their participation. This approach will not only enhance the competitive position of the agribusiness sector as a whole but will also lead to the nurturing of a more commercially-oriented mindset amongst the small-scale minor export crop farm owners.

## 6. CONCLUSION

The study has contributed to a better understanding of the role of government programmes as the key dimension of IC in the development of CAD and dynamic capabilities at the firm level using the RBV theory as a base. It is an important study since competitiveness of the agribusiness sector, particularly amongst small-scale family owned farms in emerging nations is a significant issue which warrants deserving attention. It is hoped that the recommendations provided useful guide to the government, farm owners and to some extent, the private institutions in enhancing the competitiveness of the minor export crop farm owners. At the

same time, it is also hoped that this research provides the impetus for more studies to be conducted in the future.

Although this study has laid a solid groundwork, there are several limitations which need to be acknowledged for the benefit of future studies. Prior studies on the sources of CAD suggest that capabilities could also be obtained from alliances, reputation and learning (Barney et al., 2001; Grant, 1991; Ismail et al., 2012; Kortelainen and Karkkainen, 2011; Poernomo et al., 2013). Further, human and physical resources cannot be isolated from agribusiness (Tregear and Ness, 2006) due to their strong connection with the sector. The importance of entrepreneurial potential is also increasingly becoming a valuable asset to enhance competitiveness of this sector (Vesala et al., 2007). Hence, it is recommended for future research to extend the current work by examining the differences in the roles and/or impacts of various types of resources (i.e., human assets, network, knowledge, financial assets, physical assets, reputation and entrepreneurial identity) and capabilities (i.e., relationship building, process management and organizational learning) to the competitiveness of the agribusiness sector as a whole.

It is also intriguing if a comparative study amongst small, medium and large farms can be carried out to explore and understand the relationships between the variables in an in-depth manner. Lastly, as the sources of CAD change over time, including the resources and capabilities required, a longitudinal study becomes necessary in order to capture the details.

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