

## Dynamic Capabilities, Organizational Culture and Competitive Advantage : Evidence from Agriculture Cooperatives in China

Qristin Violinda<sup>a\*</sup>  
Sun Jian<sup>b</sup>

<sup>a</sup>Faculty of Economic and Management Wahid Hasyim University, Semarang, Indonesia  
<sup>b</sup>Huazhong Agricultural University, Economic and Management Department, No 1,  
Shizishan Street Hongshan District. Wuhan, Hubei Province, China

### Abstract

This paper aims at exploring the contributions of dynamic capabilities and organizational culture in the competitive advantage of agriculture cooperatives in China. This study has used a structural equation model (PLS-SEM) to explore a theoretical model which links various dynamic capabilities, organizational culture and competitive advantage. Empirical confirmation is given by simple random sampling and collected data from 201 agriculture cooperatives in China. This study finds that both dynamic capabilities and organizational culture of the cooperatives in China contribute significant and positive effect to their competitive advantage as well.

### Keywords

Dynamic capabilities; organizational culture; competitive advantage; agriculture cooperatives.

Received: 21 March 2016; Accepted: 14 April 2016; Published Online: 29 April 2016

DOI: 10.21776/ub.apmba.2016.004.03.4

### Introduction

As long as the socialist era, due to central planning small farms in China were changed into great state or collective farms because the institutional reform in the late 1970s and the market liberalization, China's rural economy changed rapidly. Lin (1992) discloses that almost half of the 42.2 percent increase in total farm outcome in China between 1978-1984 can be narrated by the institutional innovation of decentralization that activated the manage farming system. Personal

resolve-making of family farmers bring down the occurrence of rural poor and the figure fell from 30.7 percent in 1978 to 14.8 percent in 1984 (NSBC, 2007). The consultation resolve-making under the family farming system improved the agricultural market liberalization, and such a market scenario helped to protect upstream farmers from rent revocation from the downstream industries (Huang, et al., 2007). Concluded, the institutional reforms in rural China explain the center of the economic improvement during the

\*Corresponding author Email: [qristinviolinda@gmail.com](mailto:qristinviolinda@gmail.com)

early reform period (Brauw, et al., 2004 and Lin, 1992).

Small farmers, traders, and large-scale commercial enterprises and government agencies all face obstacles, namely in the agro-food system (Hazell, et al., 2006). For small farmers very difficult to obtain precise information and reliable, especially in the use of agricultural technologies. Determining the transaction price is also an issue for farmers and buyers, hence the establishment of agricultural organizations the right choice to facilitate the farmers to provide information relating to the selling price and distribution of their agricultural products (Rottger, 2005). Since the 1980s farm organizations have a new market scenario, new farmer cooperative organizations developed in many provinces of China in the late 1980s, and have been increasing since the late 1990s. The strength of farmer cooperatives enlarged from 100,000 in 2006 to 446,000 in mid-2011 (SAIC 2011).

During 1949-18978 agricultural cooperatives in China can be traced back to the period of the people's communes and collective farms, which was followed by the emergence of farmers specialized associations that finally transformed into local cooperative organizations (1980-2006). Since the adoption of the law on agricultural cooperatives of the People's Republic of China in 2007, the number of registered agricultural cooperatives achieving an increase from about 100,000 in 2008 to 689,000 at the end of 2012; the total capital of registered cooperatives reached US \$175 billion in 2012,5 an increase of 52% from 2011 (State Administration for Industry & Commerce, 2013). The speedy development of agricultural cooperatives in China coincided with serious difficulties in the process of institutional innovation during the last decade. The difficulties included

inconsistent standard governance structure, ineffective operations and credit management, weak member identification with the cooperative, high internal and external transaction costs of cooperatives, and incompetence to compete with other businesses. All these difficulties are usually regarded as barriers to sustainable growth of agriculture cooperatives (Machethe, 1990).

Agriculture cooperatives in China have many problems and currently facing rigorous, for example about complex property rights, vague positioning, cutback functions, feeble links to farmers, and weak performance of the association. The dominance of agriculture has steadily vanished because of the expansion of the country market economy (Xu & Huang, 2007). The main problem of the agriculture cooperatives is the non-existence of the owners, which cause poor governance of agriculture cooperatives and can result in insiders' power over the residual claims. As such, a standard basic of fruitful conversion will be in recognizing the appropriate ultimate owners and in launching a scientific governance and management of agriculture cooperatives. Even after twenty-one years of reformation, agriculture cooperatives in China is still nonetheless to go become "real" farmers cooperatives (Xu & Huang, 2007). A main motive for such sluggish adaptation was in miss-interpreting reform objectives between the long- and short-run. Now transformation and growth of agriculture enterprises have started entered a new period.

Based on China case, the management must be having planning strategic. One of strategic to get a competitive advantage is dynamic capabilities because of this concept as the final basis of competitive advantage (Teece et al., 1997) these concepts to the prior of strategy research.

Though, in a current review of dynamic capabilities by Zahra (2006) conclude that the field is still in its beginning and there are many discrepant in the literature. Resource based theories among them resource-based view of the firm, the dynamic capabilities, competitive advantage and the treat organizational culture as intangible organizational resource from which firms draw its capabilities. Organizations striving for better competitive advantage must nurture and develop culture that supports implementation of market driven strategies capable of delivering superior value to customers. Our study is anchored on the resource advantage theory. The contribution of dynamic capabilities and organizational culture to formulation and the implementation of marketing strategies has attracted considerable research attention for many years. Although various types of resources are necessary for building capabilities, researchers place more emphasis on investigating the influence of dynamic capability and organizational culture on competitive advantage.

As a consequence, intangible resources such as organizational culture have not been adequately researched. While organizational culture is central to marketing management, its impact on marketing has not received satisfactory research attention (Deshpande & Webster, 1989). Treatment of organizational culture in marketing literature has been limited to understanding consumer behavior in the market. In spite of the fact that some empirical studies have investigated the relationship between organizational culture and competitive advantage, inconsistent findings have been reported (Deal & Kennedy, 1982; Peters & Waterman, 1982; Ott, 1989; Denison & Mishra, 1995). Resource-based theories suggest that possession and utilization of distinctive organizational resources lead

to superior performance. Although this may be true, the relationship between dynamic capabilities, organizational culture and competitive advantage in the agricultural cooperatives context has not been adequately investigated. Vorhies and Morgan (2005) in particular focus on capabilities and competitive advantage relationship. Our approach departs from previous studies by examining the influence dynamic capabilities and organizational culture on the competitive advantage. Based on the above background, our study is guided by two research objectives. First, we seek to determine the influence of dynamic capabilities and competitive advantage of agricultural cooperatives in China. Secondly, we aim at establishing the influence of organizational culture on competitive advantage.

## Literature review

### **The Effect of Dynamic Capabilities and Organizational Culture on Competitive Advantage**

Odhiambo et al (2015) explain that support the view that dynamic capabilities and organizational culture give firms competitive advantage and enhance their evolutionary fitness. Furthermore, this relationship is indirect, via the firm's dynamic capabilities and innovation outputs. In other words, a better evolutionary fit comes through sustainable renewal that positively affects the organization's innovative performance, and not because of dynamic capabilities in themselves. This finding also complements the literature on dynamic capabilities, which contains relatively fewer quantitative accounts of their full effect on innovation performance on the one hand, and firm performance or competitive advantage on the other. Another contribution the quantitative level is the use of an objective

dependent variable explicitly to measure evolutionary fitness. Some study finding is that different dynamic capabilities have different effects depending on the competitive environment (Makonnen et al., 2014; Madu, 2011; Odhiambo et al., 2015).

Wang and Ahmed (2007) the reviews of the effects of dynamic capabilities should be achieving sustainable advantage. However, in the ever-changing environment, the ability and preservation of competitive advantage are rather complicated. Therefore, rather than sustainable advantage, some research propose to get a series of short-term advantages (D'Aveni et al., 2010). Based on the literature, this study need to know how is dynamic capabilities and organizational culture can sustain competitive advantage in agriculture cooperatives to continuously provide satisfying products or services for customers better than competitors. Through the strategies management, firms may gain competitive advantage in a certain time. Nevertheless, in an increasingly dynamic capability with quick changing in demand and frequent change in the firm environment, the prior competitive advantage may become traps, which needs strategic sense-making, timely decision-making, and dynamic implementation to reorganize the competitive advantage. A little advantage in sense-making can modify into a strength, strategic advantage of an organization (Haeckel, 1999).

According to by Morgan et.al 2009, competitive advantage outcomes arising from the correlation between dynamic capabilities and organizational culture. Therefore, the correlation between dynamic capabilities and organizational culture has potential for improving reconfiguration and deployment of organizational resources. Reason for expecting such interaction between

dynamic capabilities and organizational culture. The correlation between dynamic capabilities and organizational culture is characterized by property interdependency that makes it difficult for competitor to elaborate. Hence, possession of positive dynamic capabilities and organizational culture is a key source of competitive advantage (Amit & Schoemaker, 1993).

The organizational culture stand out as one of the components that are significant to sustaining competitive advantage for being the best organization. A consistent organizational culture can develop a conducive environment, which in turn can develop a successful organization and critical in developing the confidence and trust of people in the group (Kotler & Keller, 2006). Define of competitive advantage as a company's competencies to make strategic plan that cannot match with competitor. An organizational culture as driver to support and development of people with the precondition ability and competencies needed to get the job done. Venture to encourage competitive advantage is to continuously encourage individuals to improve new advantages successes and failures of an organization depends on the level and purposes of the value created by the organizational culture. If organizational culture in the firm is totally consistent with their system of paying attention to operating efficiency and encouraging subordinates to be creative, the organizations can gain an edge against its competitors (Thompson, 2005). Based on the design of the organizational culture is considered important, value work and change culture stability the interest of all stakeholders mention the role in maintaining an organizational culture that drives learning and competitive advantage.

Resource-based theory suggest better performance to get competitive advantage

outcomes arising from the interaction between dynamic capabilities and organizational culture (Odhiambo, 2015; Makonnen, 2014). Therefore, the interaction between organizational culture and dynamic capabilities has potential for improving reconfiguration and deployment of organizational resources. Reason for expecting such interaction is attributable to the complementary nature of dynamic capabilities and organizational culture. The interaction between organizational culture and dynamic capabilities is characterized by asset interdependency that makes it difficult for competitors to disentangle. Hence, possession of positive dynamic capabilities, organizational culture and presence of supportive organizational processes is a key source of

competitive advantage and performance outcome (Amit & Schoemaker, 1993). For these reasons, we expect:

- H1. Dynamic capabilities have a positive impact on competitive advantage.
- H2. Organizational Culture have a positive impact on competitive advantage

## Methodology

### Sample

The data were collected during December 2014- May 2015. The research sample is collected from five districts (Shandong, Hubei, Henan, Sichuan & Hebei Province) agricultural cooperatives that exist in China, with a total sample of 201 (see table 1).

**Table 1. Respondent Demographics**

Demographics	Sample (N)	Percentage(%)
<b>Gender</b>		
Female	69	34.3
Male	132	65.7
<b>Age</b>		
< 24 years	2	1.0
24-35 years	46	22.9
36-45 years	98	48.8
+46 Years	55	27.4
<b>Education</b>		
Elementary	30	14.9
Junior high school	102	50.7
Senior high school	41	20.4
Diploma	7	3.5
Undergraduate	21	10.4
Master	0	0.0
<b>Tenure</b>		
> 1 year	54	26.9
2 – 4 years	50	24.9
5 – 7 years	66	32.8
>7 years	31	15.4



Based on the table one, the highest gender in China is male (65.7%). For age criteria, the highest in China is 36-45 (48.8%). Highest education in China is junior high school (50.7%) Finally for tenure, the highest in China is more than one year (26.9%). The number of members in the sample cooperatives ranges from 80 to 280; and then the registered capital ranges from 100 thousand Yuan to 150.000 thousand Yuan (about \$20,000-\$50,000); the total farm area in these agriculture cooperatives varies from 100 mu to 300 mu (8-20 hectares); and the types of agriculture cooperatives production is seafood, food packaging, tea, fruit, seeds, pig, chicken and vegetables. This study uses a Likert scale of measurement with 10 points possible answers from strongly disagree to strongly agree. In this research respondent should be low to high (ordinary workers - senior managers). For experience work, we are collecting who have been working the same enterprises in agriculture cooperatives for after one year to ensure a full understanding of the firm in agricultural cooperatives and will enhance data quality.

### Measurement Design

Methodology in this study employs simple random sampling method for data collection. The questionnaire design was developed from a wide review of the literature, which allowed the author to measure the great majority of analyzed variables from valid scales. In order to improve the content validity (Hambrick, 1981), the author developed a pre-test from five different agriculture cooperatives among which any existing agricultural cooperatives in China taken randomly. In this sense, the author sent a lengthy questionnaire, in which the managers could indicate the degree of comprehensibility of the questions, as well as express their opinion whether the

proposed questions were appropriate for the proposals that the author was trying to make. Likewise, the author also developed indepth interview with seven CEO and experts in the design of questionnaires. In these interview, the author went through the questionnaire, so that these experts could establish possible critiques and improvements. After this interview the author made a clearer presentation of some of the items included in the questionnaire. Furthermore, the author controlled the potential common method bias for the use of self-report questionnaires for a single respondent. This step is for examined qualify of measurement items and knowing the measuring instrument is fulfilled or not. Finally, the author sent the questionnaire to conducting a pilot study involving 80 agriculture cooperative in China to determine the efficiency of the questionnaires. After pilot study, the next step is to study checks item-to-total correlation to screen the measurements. Total from 201 respondents for analysis in this study answer all questions in the questionnaire. The next step is final research final number of questionnaire responses that were analyzed in this study was 210 (response rate 100%) from five districts in China.

The first stage of analysis in this study is missing data points, the second step is checking normality and distribution outliers (Kline, 1998). This step use to ensure the data is not missing. Third step is ensuring data robustness, we use the mahalanobis distance to check outliers. The value of Mahalanobis distance is between 0 and 1 for all observations, because the ranges are indicating that the data check the to normality and the data set has no problems with outliers. Fourth step is assessing the validity and reliability of the reflective measures used in this study, we used exploratory factor analysis, which confirmed the unidimensionality

of the constructs (Steenkamp, 1991). And fifth step is to measure convergent validity, we evaluated Cronbach's alpha, analysis variance extracted (AVE), factor loadings, and composite reliability (Fornell&Larcker, 1981). For all constructs, Cronbach's alpha and the factor loadings show values above the required thresholds of more than i.e. 0.5 for exploratory research. We used composite reliability and discriminated validity is above the required threshold of model is more than 0.5, which calls for a construct's analysis variance extract to be larger than the square of its largest correlation with any construct (Hair et al., 2011). All constructs used in this study fulfill this requirement. Overall, the study has used a measurement full model on the second order, and in this study wanted to find out whether the existing theory correspond to reality. This also applies to the measurement developed to empirically assess dynamic capabilities, organizational culture, and competitive advantage.

## **Dependent Variable**

### **Competitive Advantage**

Most researchers used data archives (ROA and questionnaire) to measure competitive advantage, but in order to obtain such data is sometimes very difficult. Firms may also feel unsafe and uncomfortable to provide their financial data. According to this problem, we are measure competitive advantage by subjective data (Spanos&Lioukas, 2001). Competitive edge is able to significantly predict the variance in the performance of the organization (Raduan et al, 2009). It was established that the Resource Based View of the firm's Competitive advantage is one of the keys of strategic management theories related to explaining the organizational consequences. The

advantage of production attributes is main area of competitive advantage, and it is an important capability for a firm to survive and succeed in a competitive market, cope with the market competition (Porter, 1985). Based on theory by Porter (1985) Competitive advantage measures by questions reflected with six financial indicators and non-financial indicators. The indicator is including competency (COM), durability (DUR), profitability (PROF), immitability (IM), transferability (TR) and accountability (ACC).

## **Independent Variable**

### **Dynamic Capabilities and Organizational Culture**

Dynamic capabilities have effect on organization culture, the human aspect has been neglected; some research largely overlooks the role of dynamic capabilities and concerns in organizational life such as relationships, compassion, and virtuous actions (Cameron & Caza, 2002; Spreitzer & Sonenshein, 2003). Based on theory Law et al. (1998), this study uses three dimensions for measure the dynamic capabilities variable. The three dimension of dynamic capabilities are strategic sense-making capacity (SSMC), timely decision-making capacity (TDMC) and change implementation capacity (CIC). For strategic sense-making capacity, this study develops five items in accordance with previous scale (Neil et al., 2007). For timely decision-making capacity, this study expands four items (Shafman& Dean, 1997). For change implementation capacity, this study expands four items on the amendment of current scales (Noble, 1999).

Organizational culture is one factor that is very important for the firm development. It may be mainly important during times of change, merger or acquisition or to

make plans of the business and human resource strategies. Organizational culture is usefully when an organization is expanding and to actively observe the whole culture or allow each new division or geographical area to develop its own culture. We used Denison model to reveal the functional relationships between culture and organizational. The Denison's model grew out of his efforts to develop an integrative theory of organizational culture that (1) explain show culture relates to organizational effectiveness, (2) identifies a broad set of traits and value dimensions enabling a fuller understanding of the culture effectiveness relationship, and (3) provides further insights as to the specific processes by which these traits facilitate or inhibit effectiveness outcomes (e.g., Denison, 1984; Gordon, 1985;). According to Denison (1984) there are four indicators that can describe the organizational culture: involvement, consistency, adaptability and mission. The four things collectively facilitate the ability of the organization for integrating and coordinating internal resources as well as its adaptation the external environment, there by leading to superior organizational performance. Based from theory, organizational culture questionnaire explores the general culture with in an organization across ten dimensions: costumer service (CS), conflict management (CM), professionalism (P), human resource management (HR), individual performance (IP), participation (PC), leadership (L), communication (CM), decision making (DM) and Organizational goal integration (OI).

## **Result**

### **Reliability and validity of the scales**

Validity and reliability measures of this study, we used exploratory factor analysis and confirmed the unidimensionality of the constructs (Steenkamp, 1991). To evaluate convergent validity, we used Cronbach's alpha, analysis variance extracted (AVE), factor loadings, and composite reliability. The result from evaluate convergent validity is Cronbach's  $\alpha$  and the factor loadings show values above the required thresholds of 0.5 and 0.7 for exploratory research, respectively (Fornell & Larcker, 1981). Result for composite reliability is also good with above the required threshold of 0.7 (Hair et al., 2011). According with Fornell and Larcker (1981) to test discriminated validity criterion, we uses analysis variance extract, which calls for a construct's AVE to be larger than the square of its largest correlation with any construct. All constructs used in this study fulfill this requirement. From the analysis, these results lend sufficient confidence that the reflective measurement model fits the data well (see Table 2). For the whole, we consider the measurement properties of the full model on second-order index for this research is acceptable. The study presented in this paper is exploratory applies to the measurement developed to empirically assess dynamic capabilities, organizational culture and competitive advantage.



**Table 2. Reliability Test Results and Variance Extract Full Model Data**

Variabel		Loading	Loading <sup>2</sup>	Error	ej	∑ loading	CR	a	AVE
Dynamic Capabilities	SSMC	0.837	0.700	0.700	0.300	<b>2.210</b>	<b>0.893</b>	<b>0.692</b>	<b>0.737</b>
	TDMC	0.883	0.779	0.779	0.221				
	CIC	0.855	0.731	0.731	0.269				
Organization Culture	CS	0.731	0.534	0.534	0.466	<b>5.728</b>	<b>0.895</b>	<b>0.758</b>	<b>0.571</b>
	CM	0.747	0.558	0.558	0.442				
	P	0.774	0.599	0.599	0.441				
	HR	0.656	0.430	0.430	0.570				
	IP	0.727	0.528	0.528	0.472				
	PC	0.736	0.542	0.542	0.458				
	L	0.727	0.529	0.529	0.471				
	CM	0.833	0.694	0.694	0.306				
	DM	0.821	0.674	0.674	0.326				
	OI	0.800	0.640	0.640	0.360				
	Competitive Advantage	DUR	0.878	0.770	0.770				
TR		0.885	0.783	0.783	0.217				
ACC		0.536	0.590	0.590	0.410				

Annotation : SSMC = Strategic sense-making capacity  
TDMC = Timely decision making capacity  
CIC = Change implementation capacity

CS=Customer service  
CM=Conflict management  
P=Professionalism  
HR= Human Resource  
IP=Individual performance  
PC=Participation  
L=Leadership  
CM=Communication  
DM=Decision making  
OI=organizational goal integration

COM=Competency  
DUR=Durability  
PROF=Profitability  
CS=Customer service  
IM=Immitability  
CM=Conflict management  
TR=Transferability  
ACC=Accountability

The first result of constructs reliability from dynamic capabilities, organizational culture and competitive advantage all meet the relevant reliability criteria as reported in Table 2. Cronbach alpha value from second-order index dynamic capabilities, organizational culture and competitive advantage is  $\geq 0.50$ , the result indicates all dimensions have high reliability. Composite reliability values for each aspect is acceptable ie  $\geq 0.70$ . The results for all factor loadings showed are significant and exceed the required 0.50 level but for one aspect from factor loading are not significant. The factor loading are

not significant is competitive advantage aspect. Factor loading value for competitive advantage is  $\leq 0.50$  (COM, PROF, IM). According by Hair et al (2011), we should will beremoved and deleting the indicator with value  $\leq 0.50$  to get a significant increase in the composite reliability. Finally, when deleting additional items to further increase the analysis variance extract, the model estimations did change significantly. Finally the full model index has discriminant validity, for all convergent validity criterion is met is the analysis variance extract with value  $\geq 0.50$ . Summing up, given the exploratory nature

of our study that aims to develop theory and the acceptable Cronbach's alpha, composite reliability and significant factor loadings, we conclude that the properties of the full model index are acceptable.

This study uses a composite model with second-order index for the full model, the analysis in order to specify the hierarchical latent variable of dynamic capabilities, organizational culture and competitive advantage. Conceptual for this study is hierarchical components model through repeated use of the manifest variables (i.e., indicators) of the underlying first-order reflective constructs (Tenenhaus et al., 2005). Figure one shows a graphical representation of the hierarchical components model. Quality criteria are required to assess the measurement properties of the formative second-order index, as aspects such as internal consistency and convergent

validity is usable to formative constructs (Bollen & Lennox, 1991). Finally, the formative second-order construct for full model has expert validity.

The results of the analysis to the path coefficient showed a good value (see Table 3). We assessed the path coefficients and their significance values to test the derived hypotheses. And then applied the bootstrapping (number of 500 bootstrap samples and 91 bootstrap cases) procedure to evaluate the significance of the path concerning their relevance of investing in dynamic capabilities and when and how they can be influenced with direct effect dynamic on competitive advantage, dynamic capabilities and organizational culture on competitive advantage and then the totally direct effect of dynamic capabilities and organizational culture to competitive advantage.

**Table 3. Path Coefficients Analysis**

Measurement	(China Data)
<i>Main Variables</i>	
<i>Model 1</i>	
Dynamic capabilities → Competitive advantage (direct effect)	0.281***
Dynamic capabilities → $r^2$ → competitive advantage (correlation with OC)	0.105***
Dynamic capabilities → Organizational culture → competitive advantage (total effect)	0.386***
<i>Model 2</i>	
Organizational culture → Competitive advantage (direct effect)	0.198***
Organizational culture → $r^2$ → competitive advantage (correlation with OC)	0.098***
Organizational culture → Dynamic capabilities → competitive advantage (total effect)	0.293***
R <sup>2</sup> (Competitive advantage)	0.553

\*\*\*Significant at 0.01 (2-tailed), \*\*significant at 0.05 (2-tailed), \*significant at 0.1 (2-tailed).

### Hypotheses Testing Result

Consistent with hypotheses 1 and 2, the first correlation between dynamic capabilities and competitive advantage ( $\beta=0.70$ ,  $p<0.01$ ). Considered by themselves, dynamic capabilities have asignificant correlation on competitive advantage and hypotheses 1 for this research are acceptable. Correlation between organizational culture on competitive advantage is ( $\beta=0.49$ ,  $p<0.01$ ), so it can beconcludedthatthe hypotheses 2 is also acceptable (see Table 4). Assessed the path coefficients about direct effect dynamic

capabilities on competitive advantage i.e.( $\beta=0.281$ ,  $p<0.01$ ) and totally direct effect dynamic capabilities on competitive advantage i.e. ( $\beta=0.386$ ,  $p<0.01$ . From this analyses we also can showed the direct effect organizational culture on competitive advantage i.e. ( $\beta=0.198$ ,  $p<0.01$ ). And totally Direct effect from organizational culture to competitive advantage i.e. ( $\beta=0.293$ ,  $p<0.01$ ) (see table 3). Based from this resultit can be concluded that dynamic capabilities and organizational culture has a positive direct effect on competitive advantage.

**Table 4. Descriptive Statistic and Correlation Matrix**

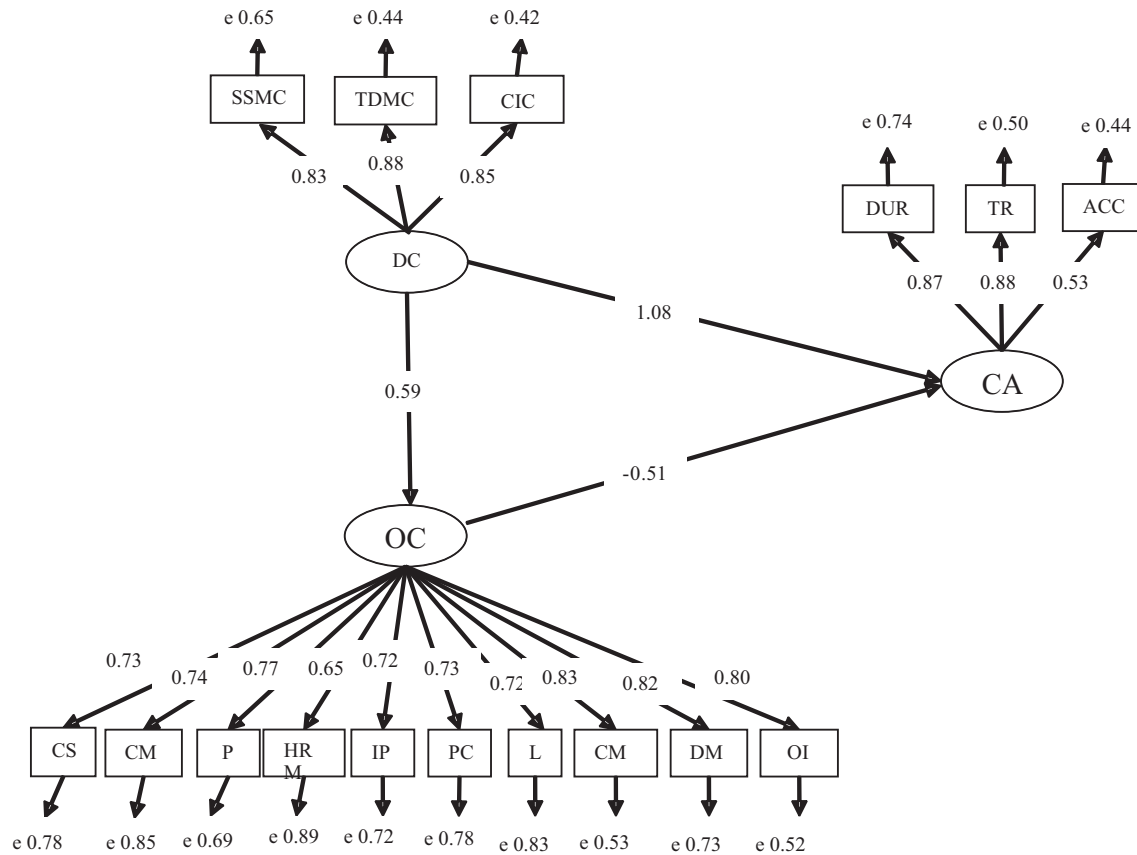
	Mean	SD	Composite reliability	1	2	3	4
1.Dynamic capabilities	6.9	1.23	-	(-)			
2.Organizational culture	7.3	1.05	-	0.79**	(-)		
3.Competitive advantage	6.5	1.25	-	0.70**	0.49**	(-)	

\*\*Significant at 0.01 (2-tailed); \*significant at 0.05 (2-tailed)

### Structural Equation Modeling Analysis

First procedure to evaluate goodness of fit model for individual parameter is determining estimation value. If the model does not fulfill the criteria, AMOS gives recommendation to connect some of indicators in order for the model to fit the data. Measurement for Goodness of Fit-Full Model for this data was tested using the analysis of Structural Equation Model

(SEM). The measurement of Goodness of Fit (GOF) covers variables of dynamic capabilities, organizational culture and competitive advantage. The results of the analysis have met the criteria of Goodness of Fit-Full Model, i.e. value of chi-square= 350.132; probability= 0.00; GFI= 0.86; AGFI= 0.79; TLI= 0,92; CFI= 0.94; CMIN/DF= 2.41; RMSEA = 0.08. Based on the analysis of data, it can be concluded that the model is acceptable (see Figure 1).



**Figure 1. Conceptual Components Model (All loadings and weights are significant at 0.001 (2-tailed))**

**Discussion and Conclusion**

**Conclusion**

Contribution of this study is explaining about theory and practice around resilience thinking in the realm of agricultural cooperatives development in China. Although dynamic capabilities and organizational culture has been a center focus in research on competitive advantage because the question of whether and how dynamic capabilities and organizational culture effect to competitive advantage is have not been studied in the sphere of agriculture cooperatives area (Drnevich & Kriauciunas, 2011). The main role of this study to implications are three sections. The first section is about contribution of dynamic capabilities and organizational culture for use in future research.

Second section is about evidence that the direct effect of dynamic capabilities and organizational culture and about the condition to achieve and enhance competitive advantage. And the third is for policies directed towards the planning and implementation, and finally for managers to give guidance concerning the relevance of investing in dynamic capabilities and organization culture when and how they can be leveraged. The contributions are discussed in detail below.

First, our research makes available vital empirical contribution of the impact from dynamic capabilities and organizational culture. Result from this research explained that dynamic capabilities have a positive impact on competitive advantage of agriculture cooperatives in China. This is consistent with the

theory advanced by (Helfat et al, 2007; Teece et al., 1997). Dynamic capabilities are significantly connected with firm performance in multiple technique; they even the origin base with transforming environments and some scholars believe that dynamic capabilities are the solution to competitive advantage (Ambrosini & Bowman, 2009). Another important contribution of this study is organizational culture also stands out as one of the constituents that are important to sustain competitive advantage. The consistency of organizational culture learning can develop the ethical environment, which in turn can develop people in the organization with the shared belief, faith and group coordination for critical success (Kotler & Keller, 2006). Based on the result analysis, empirical corroboration in China shows that dynamic capabilities and organizational culture have a determinate impact on competitive advantage of agriculture cooperatives in China.

Second contribution from this study is about direct effect of dynamic capabilities and organizational culture and the condition to achieve and enhance competitive advantage. We assessed the path coefficient test and their significance values to test the derived direct effect of dynamic capabilities and organizational culture. The result of path coefficient test in China data from the result of coefficient test shows that dynamic capabilities and organizational culture are significant enough for competitive advantage. It shows that dynamic capabilities directly have played significant role in changing competitive advantage to 28.1% (see Table 3) and organizational cultures have affected competitive advantage to 19.8%. (See table 3). Based on this result, we can conclude that the variable of dynamic capabilities has contributed more than organizational culture towards competitive advantage in China (See Table 3). This

result is consistent with Griffith and Harvey (2001, P.597) they assume that dynamic capabilities are always well and are an origin of competitive advantage.

The entirety of this study, our results suggest that while dynamic capabilities and organizational culture may influence certain types of competitive advantage agriculture cooperatives in China. Based from our results accentuate the importance of ascertaining to pay more attention to the policies directed towards the planning and implementation of good dynamic capabilities and organizational culture, especially to make a plan of strategic policy that will determine the sustainability of competitive advantage in agriculture cooperatives. Theoretical and scientific examination of the theory's applicability and obligatory regulation in China is a meaningful struggle. As an appearing economy, China has many features in general with other arising economies. Accordingly, empirical findings based on the Chinese scene to set provide necessary implications for firms operating in other appearing economies (Zhou & Li, 2010).

For managers, out of a reciprocal perspective, this study serves direction concerning the relationship of investing in dynamic capabilities and organizational culture when and how they can be influenced. First company can manage organizational culture with the fit environment, and that a better fit means better performance. However the continuous process of identifying potential opportunities and threats, and reconfiguring the organizational resource base to exploit the opportunities and avoid the threats, is not an easy option. The company must first overcome the structural inertia that inhibits the process and promotes stability. Therefore, new ways of implementing mechanisms for initiating explorative activities should be



inherent in the organization's management model. Managers need to actively manage their awareness gap between the awareness they need to have and the awareness they exactly have. From a perceptive period of sight the difference between desired and existed dynamic capabilities and organizational culture on competitive advantage. Out of a useful section of view, this difference is beneficial as part of a methodology that guides manager to decide what dynamic capabilities and organizational culture they should have to support their strategies. Second, companies should be active in facilitating change in the resource base to exploit the opportunities and avoid the threats. Of major significance in this activity are the organization's design and communication patterns: top-down and bottom-up information dissemination, the division of labor, and empowerment practices should facilitate the initiation and continuous involvement of the exploratory process. On the level of company practice, at least some individuals in all areas of the organization should, in addition to carrying out their core functions and tasks, dedicate time to questioning current performance and considering how to do things differently.

This study has some limitation. First, this study just explores effects dynamic capabilities and organizational culture on competitive advantage with many other topics is not investigated. For further research strived to be able to develop other aspects of measurement are not included in this study. Second, based on the theoretical assumption, this study has considered an adaptation from some journal articles, but not empirically tested whether this assumption is relevant. This study has bias culture in the questionnaire to representing the measurement of dynamic capabilities, organizational culture and competitive advantage for the next study

can minimize cultural bias by means of this procedure include independent duplication and confirmation by other parties and the requirement for publication in a scientific journal peer review (peer-reviewed). This study used cross sectional data, the application of panel data may be used in the following studies. Finally for the further research, characteristic of the agriculture cooperatives could be developed with other firm on agriculture cooperatives and regions because in this study, the sized firms are relatively small and young in age and then the staff in the firms they don't have high education.

### **Acknowledgement**

The authors are grateful to China Scholarship Council (CSC). The authors are also thankful to National Social Science Fund Project (NSSFP) No.15AZD063, the Fundamental Research Funds for formation mechanism and innovation of the internet plus fresh agricultural product supply chain and Agriculture Cooperatives in China.

### **Notes on Contributors**

**Qristin Violinda** finished her bachelor's and master degrees from Diponegoro University. Before continue her doctoral study, she is a lecturer at Education Faculty of Semarang State University (UNNES). She earned her doctor's degree from Huazhong Agricultural University, Wuhan Hubei China. Now she is lecturer at economic and management faculty of Wahid Hasyim University in Central Java Semarang. In addition she published over 10 papers on domestic and international journals. Her interest research in human resource management, strategic management and marketing. Her conducted a training of trainer (TOT) for Clinical Hypnotherapy. Her is a certified Clinical hypnotherapy by Indonesian

Association of Clinical Hypnotherapist (IACH), and a member of the (IACH).

**Sun Jian** is a professor and PhD supervisor at the college of Economics and Management, Huazhong Agricultural University (HZAU). He earned his Doctor's degree from Huazhong Agricultural University. His interest in Agricultural marketing, logistics, supply chains in agriculture and food, agricultural products circulation and supply chain management, as well as strategy consulting for business companies and government. His researches are respectively funded by the Natural Science Foundation of China, the Social Science Foundation of China (twice), Chinese Ministry of Education, and 15 other research project at the provincial or ministerial level. In addition, he published over 60 papers on domestic and international journals. His main socio-part time includes: Vice President of Hubei Village and Town Construction Association, Deputy Secretary General of Hubei Economic Society, Executive Director of Hubei Soft Science Research Association, Executive Director of Hubei Marketing Society, Deputy Director of Hubei Rural Development Research Center, and Associate Director of HZAU Business Administration Institute.

## References

- Ambrosini, V. and Bowman, C. (2009). What Are Dynamic Capabilities and Are They a Useful Construct in Strategic Management?, *International Journal of Management Reviews*, 11(1), 29-49.
- Amit, R. & Schoemaker, P.J.H. (1993). Strategic assets and organizational rent, *Strategic Management Journal*, 14, 38-46.
- Brauw, A. de, J. Huang, and S. Rozelle. (2004). The sequencing of reform policies in China's agricultural transition. *Economics of Transition* 12(3), 427-465.
- Bollen, K., Lennox, R., (1991). Conventional wisdom on measurement: a structural equation perspective. *Psychological Bulletin* 110, 305-314.
- Cameron, K.S., Caza, A., and Bright, D. (2002). Positive deviance, organizational virtuousness, and performance. Working paper, University of Michigan Business School.
- Denison, D.R. (1984). Bringing corporate culture to the bottom line. *Organizational Dynamic*, 13(2), 4-22.
- Denison, D.R. & Mishra, A.K. (1995). Towards a theory of organizational culture and effectiveness, *Organization Science*, 6, 204-223.
- D'Aveni, R. A., Dagnino, G. B., & Smith, K. G. (2010). The age of temporary advantage. *Strategic Management Journal*, 31(13), 1371-138.
- Drnevich, P.L., Kriauciunas, A.P. (2011). Clarifying the conditions and limits of the of ordinary and dynamic capabilities to relative firm performance. *Strategic Management Journal* ,32, 254-279.
- Deal, T.E. & Kennedy, A.A. (1982). Corporate cultures: Therites and rituals of corporatelife, reading, Massachusetts: Addison-Wesley. butions of ordinary and dynamic capabilities to relative firm performance. *Strategic Management Journal* ,32, 254-279.

- Deshpande, R. & Webster, E.F. (1989). Organizational culture and marketing: Defining the research agenda, *Journal of Marketing*, 53, 3-15.
- Fornell, C., Larcker, D.F., (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research* 18, 39-50.
- Gordon, G. (2001). The relationship of corporate culture to industry sector and corporate performance. In R. H. Kilman, M. J. Saxton, & R. Serpa (Eds.), *Gaining control of the corporate culture*.
- Griffith, D. A. and Harvey, M. G. (2001). A resource perspective of global dynamic capabilities, *Journal of International Business Studies*, 32(3), 597-606.
- Hambrick DC. (1981). Environment, strategy and power within top management teams. *Adm Sci Q*, 341-59.
- Hazell, P., C. Poulton, S. Wiggins, and A. Dorward,. (2006). The future of small farms: Synthesis paper. Background paper for WDR. RIMISP.
- Hair, J.F., Ringle, C.M., Sarstedt, M., (2011). PLS-SEM: indeed a silver bullet. *Journal of Marketing Theory and Practice* 19, 139-151.
- Haeckel, S. H. (1999). *Adaptive enterprise: Creating and leading sense-and-respond organisations*. Boston: Harvard Business School Press.
- Huang, J., S. Rozelle, X. Dong, Y. Wu, H. Zhi, X. Niu, & Z. Huang,. (1992). *Agrifood Sector Studies China: Restructuring agrifood markets in China - The horticulture sector Part A - meso-level study*. London, Regoverning Market Program, IIED.
- Helfat CE, Peteraf MA. (2003). Understanding dynamic capabilities: progress along a developmental path. *Strategic Organization* 7(1), 91-10.
- Helfat, C., Finkelstein, S., Mitchell, W., Peteraf, M., Singh, H., Teece, D., Winter, S., (2007). *Dynamic Capabilities: Understanding Strategic Change in Organizations*. Blackwell Publishing, Malden.
- Kotler, P and Keller, K. L.,. (2006). *Marketing management*. (12th ed.), Prentice-Hall.
- Kline, R.B. (1998). *Principles and practices of structural equation modeling*, New York, N.Y.: The Guildford Press
- Lin, J.Y. (1992). Rural reforms and agricultural growth in China. *American Economic Review* 82(1), 34-52.
- Law, M., Stewart, D., Pollock, N., Letts, L., Bosch, J., and Westmorland, M.,. (1998). Guidelines for critical review form-Quantitative studies. 284, 357-362.
- Machethe, C. L. (1990). Factors contributing to poor performance of agricultural co-operatives in less developed areas. *Agrecon: Agricultural Economics Research, Policy and Practice in Southern Africa* 29: 305-309.
- Madu C Boniface. (2011). Organization culture as driver of competitive advantage. *Journal of academic and business ethics*. 5, 1.

- Makkonen, Pohjola, Olkkonen & Aki Koponen. (2014). Dynamic capabilities and firm performance in a financial crisis. *Journal of business research*. 67, 2707-2719.
- Morgan, A.N., Slotegraaf, J.R. & Vorhies, W.D. (2009). Linking marketing capabilities with profit growth, *International Journal of Research in Marketing*, 26, 284-293.
- NSBC. (2007). *Poverty monitoring report*. Beijing. China Statistical Press, National Statistical Bureau of China.
- Noble.,C.H. (1999). The Eclectic Roots of Strategy Implementation Research. *Journal of Business Research*, 45, 119-134.
- Neil, S., MC Kee, D., and Rose, G.M.,. (2007). Developing the organization's sense-making capability: Precursor to an adaptive strategic marketing response. *Industrial Marketing Management*, 36(6): 731-744.
- Ott, J.S. (1989). *The organizational culture perspective*, Pacific Grove, Calif: Brooks/Cole.
- Odhiambo J, Kibera Franeis & Musyoka.,. (2015). The influence of organizational culture and marketing capabilities on performance of micro finance institution in kenya. *Journal of marketing management*. 3, 91-99.
- Peters, T.J. & Waterman, H.R. (1982). *In Search of Excellence, Lessons from America's Best-run Companies*, NewYork: Harper and Row.
- Raduan, C.R, U, J, A, H & I, A.I., (2009). A Conceptual Framework of the Relationship between Organizational Resources, Capabilities, Systems, Competitive Advantage and Performance, *Research Journal of International Studies*, 12.
- Rottger, A. (2005). Strengthening farm-agribusiness linkages in Africa; proceedings of an expertconsultation. AGSF Working Document. Agricultural Support Systems Division, FAO.
- SAIC. (2011). State Administration for Industry & Commerce of the People's Republic of China. <http://www.saic.gov.cn>.
- Steenkamp, J.-B. (1991). The use of LISREL in validating marketing constructs. *International Journal of Research in Marketing* 8, 283-299
- Spanos, Y. E.,& Lioukas., (2001). An examination into the causal logic of rent generation: contrasting the resource-based perspective. *Strategic Management Journal*, 22(10), 907-934.
- Shafman, M. P., & Dean, J. W. (1997). Flexibility in strategic decision making: Informational and ideological perspectives. *Journal of Management Studies*, 34(2), 191–217.
- State Administration for Industry & Commerce (2013). *The Development of Main Market Entities in China 2012*.
- Spreitzer, G. M., & Sonenshein, S. (2003). Positive deviance and extraordinary organizing. In K.Cameron, J. Dutton, & R. Quinn (Eds.), *Positive organizational scholarship*, 207-224.
- Teece, D., Pisano, G.,& Shuen, A., (1997). Dynamic capabilities and

- strategic management. *Strategic Management Journal* 18, 509-533.
- Thompson, A. A. , Strickland, A. J., & Gamble, J. E. (2005). *Crafting and executing strategy: The quest for competitive advantage: Concepts and cases* (4th ed.). Mc.Graw-Hill, Irwin.
- Tenenhaus, M., Vinzi, V.E., Chatelin, Y.-M., & Lauro, C., (2005). PLS path modeling. *Computational Statistics & Data Analysis* 48, 159-205.
- Vorhies, D.W. & Morgan, N.A. (2005). Benchmarking marketing capabilities for sustained competitive advantage, *Journal of Marketing*, 69(1), 80-94.
- Winter, S.G. (2003). Understanding dynamic capabilities. *Strategic Management Journal*, 24, 991-995.
- Wang, C. L., & Ahmed, P. K., (2007). Dynamic capabilities: A review and research agenda. *International Journal of Management Reviews*, 9(1), 31-51.
- Xu, X & Huang, (2007). Organization and strategy of farmer specialized cooperatives in China, ed. G. Cliquet, G. Hendrikse, M. Tuunanen, and J. Windsperger, *Economics and Management of Networks: Franchising, Alliances, Joint Ventures and Cooperatives*. Physica Verlag: 434-460
- Zahra, S. A., (2006). Sapienza, H. J. and Davidsson, P. Entrepreneurship and dynamic capabilities: A review, model and research agenda, *Journal of Management Studies*, 43(4), 917-955.
- Zhao, Y., Li, Y., Lee, S. H., & Chen, L. (2010). Entrepreneurial orientation, organizational learning, and performance: evidence from china. *Entrepreneurship: Theory and Practice*, 35(2), 293-317.
- Zollo, M., & Winter, S. G. (2002). Deliberate learning and the evolution of dynamic capabilities. *Organization Science*, 13(3): 339-358.