

# The Dynamic Capabilities and Organisational Culture in Competitive Advantage and Performance of Agricultural Cooperatives in Indonesia and China

**Qristin Violinda<sup>a\*</sup>, Sun Jian<sup>b</sup>,** <sup>a</sup>Universitas PGRI Semarang, Economic and Business Faculty, Jl.SidodadiTimur No 24 Semarang, Indonesia 50125, <sup>b</sup>Huazhong Agricultural University, Economic and Management Faculty, No 1, Shizishan Street Hongshan District. Wuhan, Hubei Province. PR China 430070,Email: <sup>a\*</sup>[qristinviolinda@ymail.com](mailto:qristinviolinda@ymail.com)

This paper aims to explore the contributions of dynamic capabilities and organisational culture in competitive advantage and performance of agriculture cooperatives in Indonesia and China. This study used a structural equation model (PLS-SEM) and SPSS to explore a theoretical model which links dynamic capabilities, organisational culture and competitive advantage and performance. Empirical evidence is provided via simple random sampling of 201 agricultural cooperatives in China and 241 in Indonesia. This study found that the Chinese cooperatives contribute a significant and positive effect to their competitive advantage and performance. On the other hand, Indonesian dynamic capabilities and organisational culture provided positive effects solely on competitive advantage. There is not positive impact on performance.

**Key words:** *Dynamic capabilities; organisational culture; competitive advantage; performance; agriculture, cooperatives.*



## Introduction

Dynamic capabilities and organisational culture have a vital role in business operation and financial and non-financial aspects such as decision making. Some scholars believe that dynamic capabilities are fundamental to competitive advantage and firm performance (Teece et al, 1997). Researchers claim that dynamic capabilities and organisational culture plays an important role between competitive advantage and performance (Deal & Kenedy, 1982; Kotler& Keller, 2006; Wang & Ahmed, 2007). According to select theories, agricultural cooperatives should have good, dynamic capabilities and organisational cultures. This is because of their role in sustaining their business. In doing this, they can successfully compete with other entrepreneurs. Agricultural cooperatives, as a centre of rural economies, do not see themselves as formidable business entities able to empower the economy to which they contribute.

In 2013, it was reported that the number of Indonesian cooperatives had increased from 170.411 units in 2009 to 200.808 units in little under six years. From this data, active cooperatives in 2013 stands at 142.387 units while non-active at 58.421 units. It is obvious that almost 50% of Indonesian cooperatives are non-active. This non-activity seriously affects government incentive programs and causes distortion in cooperative growth. It is the similar condition with Growth of Business Value (GBV) of agriculture cooperatives which in 2011-2012 decreased to 23.74 % and increased 23.25% in 2012 yet with significant progress. This growth is not equivalent to the total Indonesian population. This is also the case for agricultural cooperatives with shrinking growth. Growth stood at 6.03% in 2012 and decreased to 3.25% in 2013 (Data source Indonesia Ministry of Cooperatives and SMEs, 2013). This shows that the general development of Growth of Business Value and cooperatives' growth is not reliable or sustainable. In light of this problem, agricultural cooperatives should maintain strategic initiatives to restore their critical importance of economic growth and prosperity.

According to Xu and Huang (2007), agricultural cooperatives in China face complex problems such as those related to ownership rights, unclear positions, diminished property functions, poor relations with farmers and weak organisational performance. This problem has dramatically impacted the Chinese agricultural sector in achieving competitive advantage. The main problem faced by agricultural cooperatives is the absence of the 'real' owner. This absence affects the governance of agricultural cooperatives; it is less effective and leads to insider domination of residual claims. Xu and Huang (2007) reveal that after twenty-one years of reforms, agriculture still confronted a real problem; namely how to become a "real" farming cooperative acceptable to the community.

Based on background research, this study aims to explore the definitions and effects of dynamic capabilities and organisational culture as they relate to agricultural cooperatives in China and

Indonesia. This research offers a new research approach by clarifying Chinese and Indonesian debates about the influence of dynamic capabilities, organisational culture on competitive advantage and performance on agricultural cooperatives.

This paper is organised as follows: Section 2 presents constructs of interest and the relationship among them and develops related hypotheses. Section 3 outlines the study methodology and Section 4 presents the empirical results. Finally, the paper will provide a discussion and conclusion.

## **Literature Review and Research Hypotheses**

Dynamic capabilities are a collection of routines that enable organisations to respond to changing environments using value-creating strategies (Eisenhardt & Martin, 2000; Winter, 2002). Although such capabilities are clearly desirable, they are imperfectly understood; they are assumed to arise from human capital resources in causally ambiguous and socially complex ways (Boxall, 1998; Boxall & Steeneveld, 1999). In response to this combination of competitive importance and causal obscurity, the field of strategic management has engaged in a quest to understand how internal processes translate into dynamic capabilities. Earlier studies show how dynamic capabilities influence performance indirectly (Cepeda & Vera, 2007; Danneels, 2002; Helfat et al., 2007; Protogerou et al., 2011; Winter, 2003; Zahra et al., 2006).

### ***The effect of dynamic capabilities and organisational culture on competitive advantage***

Wang and Ahmed (2007) propose that the examination of dynamic capabilities and their effects must be a continuous advantage. However, in a changing environment, the acquirement and maintenance of competitive advantage is quite difficult. Rather than sustainable advantage, some scholars propose a series of short-term advantages (D'Aveni et al., 2010). According to the literature, this study holds that competitive advantage is a state in which organisations cope with environmental dynamism and, as such, continuously provide satisfying products or services for customers.

Organisational culture stands out as one important component to sustain performance, competitive advantage, and the prominence of the organisation. An effective organisation culture develops an ethical environment. An organisational culture drives and supports the development of knowledgeable and competitive people to get the job done. To achieve and inspire competitive advantage is to continuously encourage individuals to innovate. An organisational culture model values strong work ethics and shifts culture towards competitive advantage.

In line with the above, the following hypotheses are proposed:

**H1a.** That dynamic capabilities have a positive impact on competitive advantage and;

**H1b.** That organisational culture has a positive impact on competitive advantage

### ***The effect of dynamic capabilities and organisational culture on performance***

Dynamic capabilities are organisational and strategic routines whereby managers change their resources to generate strategies that value-add to the entity (Eisenhardt and Martin, 2000). By promoting new strategic paths, dynamic capabilities contribute overall to a firm's performance (Teece et al., 1997; Wu, 2007; Zollo and Winter, 2002; Zott, 2003). The dynamic view of capabilities is particularly important in international markets (e.g., Griffith and Harvey, 2001; Prange and Verdier, 2011; Teece, 2007), where firms are completely exposed to opportunities and threats associated with rapid changes in customers, technology and competitors (Teece, 2007). In these contexts, success depends on the organisation's ability to constantly renew and reconfigure its resources and adjust them to international constraints (Li, 1995). Critically, organisational culture shapes behaviour and performance of organisational members. According to Deal and Kenedy (1982) performance improvement is linked to deliberate efforts by management towards developing organisational culture. By comparison, Bennett, Fadil and Greenwood (1994) argue that organisational success depends on achieving a good fit between strategy, structure and culture.

Based on the above, it is proposed:

**H2a:** That dynamic capabilities have positive impact on performance and;

**H2b:** That organisation culture has a positive impact on performance.

### ***The influence of competitive advantage on performance***

Competitive edge is able to significantly predict the variance in the performance of the organisation (Raduan et al, 2009). From a resource point of view, competitive advantage is one key strategic management theory that explains organisational consequences. Competitive advantage can be viewed from various perspectives, particularly from the industrial and resource-based view (RBV). The production attributes is an important capability as it allows a firm to survive, succeed and cope in a competitive market (Porter, 1985) as well as to enhance performance (Day & Wensley, 1988; Porter, 2001; Hawawini, et al., 2003; Kim, et al, 2008).

In light of the above, the following hypothesis is proposed:

**H3:** That competitive advantage has positive impact on performance

### ***The role of dynamic capabilities and organisational culture***

Dynamic capabilities have great effect on an organisation's culture. A body of research has overlooked and neglected to consider human aspects such as relationships, compassion, and virtuous actions (Cameron & Caza, 2002; Spreitzer & Sonenshein, 2003). This research project explores how the humanistic behaviour, resulting from an extraordinary work ideology, creates dynamic capabilities. Specifically, the study examines how a work ideology of social relationships and humanistic interactions translates into human-resource management practices. These dynamic capabilities are essential in organisations where meeting the needs of agricultural cooperatives and their competitive success can only be achieved through human capital (Harber, Ashkanasy, & Callan, 1997).

Subsequently, the following hypothesis is proposed:

**H4:** That dynamic capabilities have a positive impact on organisational culture

### **Research design**

#### ***Samples***

With regard to the Chinese and Indonesian contexts, this study employed a simple random sampling method for data collection. An extensive literature review provided the basis for developing an initial list of items to measure. Then, in order to revise the measurement items, interviews with five CEOs (policy makers and competitors) from five different agricultural cooperatives were carried out. In terms of a pre-test, ten agricultural cooperatives in Indonesia and six agricultural cooperatives in China, both with expertise in strategic management, were identified. The pre-test sought to examine whether these revised measurement items were compulsory and sufficient. The next step was conducting a pilot study involving 80 agricultural cooperatives in China and 100 agricultural cooperatives in Indonesia. The purpose was to determine the efficiency of the questionnaires. Lastly, this study examined item-to-total correlation so as to refine measurements.

Design measurements with a ten-point Likert scale ranging from “strongly disagree” to “strongly agree” were chosen. Given the research need, respondents would be low to high or senior managers who have worked in the same agricultural cooperatives for over a year. This would ensure a full understanding of the firm and enhance data quality. In this study the respondents are workers of agricultural cooperative firms from low held positions (employee) to high positions (senior manager or director). Table 1 below illustrates respondent demographics:

**Table 1:** Respondent demographics

<b>Demographics</b>	<b>(N) China</b>	<b>(%) China</b>	<b>(N) Indonesia</b>	<b>(%) Indonesia</b>
<b>Gender</b>				
Female	69	34.3	76	31.5
Male	132	65.7	165	68.5
<b>Age</b>				
< 24 years	2	1.0	0	0.0
24-35 years	46	22.9	60	24.9
36-45 years	98	48.8	97	40.2
+46 Years	55	27.4	84	34.0
<b>Education</b>				
Elementary	30	14.9	9	3.7
Junior high school	102	50.7	58	24.1
Senior high school	41	20.4	128	53.1
Diploma	7	3.5	22	9.1
Undergraduate	21	10.4	23	9.5
Master	0	0.0	1	0.4
<b>Tenure</b>				
> 1 year	54	26.9	21	8.7
2 – 4 years	50	24.9	50	20.7
5 – 7 years	66	32.8	92	38.2
>7 years	31	15.4	78	32.4

Based on Table 1 above, the highest gender in China and Indonesia is male: 65.7% and 68.5% respectively. With regards to age criteria, the highest in China and Indonesia was 36-45 years: 48.8% 40.2% respectively. The highest education obtained in China is junior high school at 50.7% and 53.1% for Indonesia. Finally, in terms of tenure, the highest in China exceeds one year at 26.9% and 5-7 years, 38.2%, for Indonesia

**Measure**

**Result**

**Reliability and validity of the scales**

Results establish sufficient confidence in that the reflective measurement model suits the data (see Table 2 and 3). Overall, the measurement properties of the full model on the second-order index is acceptable. Firstly, the four first-order constructs from dynamic capabilities, organisational culture, competitive advantage and performance all meet the relevant reliability criteria as reported in Table 2 & 3.

**Table 2:** Reliability Test Results and Variance ExtractFull Model Data in Indonesia

Variabel		Loading	Loading <sup>2</sup>	Error	Ej	∑ loading	CR	a	AVE
Dynamic Capabilities	SSMC	0.892	0.795	0.795	0.205	<b>2.392</b>	<b>0.921</b>	<b>0.853</b>	<b>0.797</b>
	TDMC	0.941	0.885	0.885	0.115				
	CIC	0.844	0.712	0.712	0.288				
Organisational Culture	CS	0,718	0.515	0.515	0.485	<b>5.561</b>	<b>0.927</b>	<b>0.858</b>	<b>0.556</b>
	CM	0.826	0.682	0.682	0.318				
	P	0.812	0.659	0.659	0.341				
	HR	0.519	0.514	0.514	0.486				
	IP	0.794	0.630	0.630	0.370				
	PC	0.799	0.638	0.638	0.362				
	L	0.763	0.582	0.582	0.418				
	CM	0.834	0.695	0.695	0.305				
	DM	0.745	0.555	0.555	0.445				
	OI	0.769	0.591	0.591	0.409				
Competitive Advantage	COM	0.862	0.743	0.743	0.257	<b>4.341</b>	<b>0.939</b>	<b>0.871</b>	<b>0.723</b>
	DUR	0.928	0.861	0.861	0.139				
	PROF	0.820	0.672	0.672	0.328				
	IM	0.868	0.753	0.753	0.247				
	TR	0.800	0.640	0.640	0.360				
	ACC	0.820	0.672	0.672	0.328				
Performance Management	FIN	0.979	0.958	0.958	0.042	<b>2.224</b>	<b>0.827</b>	<b>0.891</b>	<b>0.556</b>
	PA	0.661	0.437	0.437	0.563				
	PS	0.715	0.511	0.511	0.489				
	CS	0.564	0.318	0.318	0.682				

Source: primary Indonesia data proceed, 2015

**Table 3:** Reliability Test Results and *Variance Extract* Full Model Data in China

Variabel		Loading	Loading <sup>2</sup>	Error	ej	$\Sigma$ 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								
Organisation	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>				
Culture	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								
Competitive Advantage	OI	0.800	0.640	0.640	0.360								
	DUR	0.878	0.770	0.770	0.230					<b>1.743</b>	<b>0.793</b>	<b>0.795</b>	<b>0.581</b>
	TR	0.885	0.783	0.783	0.217								
ACC	0.536	0.590	0.590	0.410									
Performance Management						<b>2.848</b>	<b>0.907</b>	<b>0.853</b>	<b>0.712</b>				
	FIN	0.888	0.789	0.789	0.211								
	PA	0.890	0.792	0.792	0.208								
	PS	0.859	0.738	0.738	0.262								
	CS	0.727	0.529	0.529	0.471								

Source: primary China data proceed, 2015

Secondly, the dynamic capabilities, organisation culture, competitive advantage and performance second-order index displays a Cronbach's  $\alpha > 0.70$  and indicates high reliability. Thirdly, the composite reliability is  $>0.70$  and, thus, above the acceptable threshold. Fourth, all factor loadings are significant and exceed the required 0.50 level, indicating competitive advantage only for China. Data with loading value  $<0.50$  (COM, PROF, IM) should be removed and will lead to a significant increase in composite reliability. When deleting additional items to further increase the AVE, the model estimations do change significantly.

Finally, the full model index has a discriminant validity, as all convergent validity criteria is met with an AVE value  $> 0.70$ . Given the study's aims to develop theory, an acceptable Cronbach's alpha, composite reliability and significant factor loadings, we conclude that the properties of the full model index are acceptable.

The researchers used a composite model, second-order index, for a full model analysis. In order to specify hierarchical latent variables of dynamic capabilities, organisational culture, competitive advantage and performance in PLS-SEM, a graded component model was constructed through repeated usage of manifest variables, i.e. indicators (Tenenhaus et al., 2005; Wold, 1985). Figure 2 and 3 above show a graphical representation of the hierarchical components model. Finally, the formative second-order construct for a full model was validated through discussion at pretesting stage.

With regards to Tables 4 and 5 below, the correlations between constructs are sufficiently high for Indonesian and Chinese data sets. It is the case that for Indonesia, only dynamic capabilities to performance is not significant. Table 6 below summarises the results of the PLS-SEM analysis and is discussed in the following section. The researchers assessed path coefficients and their significance values to test the hypotheses. To do so, the bootstrapping procedure (with a number of 500 bootstrap samples and 91 bootstrap cases, using individual sign changes) was applied. This was done to evaluate the significance of relevant paths of investing in dynamic capabilities. The evaluation additionally identified when and how paths can be leveraged. To this end, a comparative analysis of competitive advantage and performance of agricultural cooperatives between China and Indonesia (Table 7) was carried out. These contributions are discussed in detail below.

**Table 4:** Descriptive statistic and correlation matrix (China data)

	Mean	SD	Composite reliability	1	2	3	4
1.Dynamic capabilities	6.9	1.23	-	(-)			
2.Organisational culture	7.3	1.05	-	0.79**	(-)		
3.Competitive advantage	6.5	1.25	-	0.70**	0.49**	(-)	
4. Performance	6.2	0.75	0.97	0.43**	0.47**	0.39**	(0.97)

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

**Table 5:** Descriptive statistic and correlation matrix (Indonesia data)

	Mean	SD	Composite reliability	1	2	3	4
1.Dynamic capabilities	6.95	1.19	-	(-)			
2.Organisational culture	7.18	1.04	-	0.80*	(-)		
3.Competitive advantage	6.60	1.20	-	0.72*	0.67**	(-)	
4. Performance	6.42	0.94	0.82	0.62	0.65**	0.67**	(0.82)

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

### *Hypothesis testing*

Consistent with hypothesis 1(a) and (b), the first correlation is between dynamic capabilities and competitive advantage  $\beta=0.70$ ,  $p<0.01$ (Chinese data) and  $\beta=0.72$ ,  $p<0.01$  (Indonesian data). By themselves, dynamic capabilities have a significant correlation on competitive advantage and hypothesis 1(a) for this research is acceptable. Correlation between organisational culture on competitive advantage  $\beta=0.49$ ,  $p<0.01$ (Chinese data) and  $\beta=0.67$ ,  $p<0.01$ (Indonesian data). Given this, it can be concluded that hypothesis 1(b) is also acceptable. An assessment of path coefficients of direct dynamic capabilities on competitive advantage is  $\beta=0.281$ ,  $p<0.01$ (Chinese data) and  $\beta=0.729$ ,  $p<0.05$  (Indonesian data) and; the effect of dynamic capabilities on performance  $\beta=0.105$ ,  $p<0.05$ (Chinese data) and  $\beta=-0.124$ ,  $p<0.1$  (Indonesian data). Subsequently, it can be concluded that Dynamic capabilities and organisational culture has a positive, direct effect on competitive advantage (Model 1&2).

Secondly and with regards to Hypothesis 2(a) and (b), the correlation between dynamic capabilities and performance is  $\beta=0.43$ ,  $p<0.01$ (Chinese data) and  $\beta=0.62$ ,  $p>0.01$  (Indonesian data). So, Hypothesis 2(a) of this study is suitable for the Chinese data, whereas data for Indonesia is unacceptable. Correlation between organisational culture on performance is  $\beta=0.47$ ,  $p<0.01$ (Chinese data) and  $\beta=$ ,  $p<0.01$ (Indonesian data). In light of this analysis, the study is acceptable for Hypothesis 2(b). Measured by themselves, organisational culture in China and Indonesia has a significant correlation on performance. Direct effect dynamic capabilities on performance is  $\beta=0.06$ ,  $p<0.05$ (Chinese data) and ( $\beta=0.02$ ,  $p>0.05$  (Indonesian data). In terms of this analysis, dynamic capabilities have a direct effect on performance (Chinese data), whereas for Indonesia, no direct effect on performance is evident. The direct effect of organisational culture on performance is  $\beta=0.19$ ,  $p<0.01$ (Chinese data) and  $\beta=0.11$ ,  $p>0.01$ (Indonesian data). Organisational culture, it is concluded, has a significant direct effect on performance (Model 3&4).

Hypothesis 3's correlation between competitive advantage and performance is  $\beta=0.39$ ,  $p<0.01$ (Chinese data) and  $\beta=0.67$ ,  $p<0.01$  (Indonesian data). In this respect, competitive advantage has a significant correlation on performance and verifies that Chinese data for Hypothesis 3 is acceptable. An analysis of path coefficients about direct effect competitive advantage on performance stands at  $\beta=0.15$ ,  $p<0.01$ (Chinese data) and  $\beta=0.45$ ,  $p<0.01$  (Indonesian data), showing that dynamic capabilities on competitive advantage have a significant, targeted effect on performance (Model 5).

A correlative analysis of Hypothesis 4 presents dynamic capabilities and organisation culture at  $\beta=0.79$ ,  $p<0.01$ (Chinese data) and  $\beta=0.80$ ,  $p<0.01$  (Indonesian data). Seen by themselves, dynamic capabilities have a significant correlation on organisational culture and Hypothesis 4 is proven to be acceptable. An assessment of path coefficients on the direct effect dynamic capabilities on organisational culture is  $\beta=0.624$ ,  $p<0.01$ (Chinese data) and  $\beta=0.64$ ,  $p<0.01$  (Indonesian data). It can be verified that dynamic capabilities have a significant, targeted effect on organisational culture (Model 5).

**Table 6:** Path Coefficients analysis

	(China Data)	(Indonesia Data)
<i>Control Variables</i>		
Firm size → Competitive advantage → Firm performance	-0.078	-0.251***
Firm age → Competitive advantage → Firm performance	0.256***	0.053
<i>Main Variables</i>		
<b>Model 1</b>		
Dynamic capabilities → Competitive advantage (direct effect)	0.281***	0.729***
Dynamic capabilities → $r^1r^2$ → Competitive advantage (corelation with OC)	0.105***	-0.124***
Dynamic capabilities → Organisational culture → competitive advantage (total effect)	0.386***	0.605***
<b>Model 2</b>		
Organisational culture → Competitive advantage (direct effect)	0.060**	0.034*
Organisational culture $r^1r^2$ → Competitive advantage (corelation with OC)	0.105**	-0.124*
Organisational culture → Dynamic capabilities → competitive advantage (total effect)	0.165**	-0.09*
<b>Model 3</b>		
Dynamic capabilities → Firm performance (direct effect)	0.069**	0.026
Dynamic capabilities $r^1r^2$ → Firm performance (corelation with OC)	0.094**	0.044
Dynamic capabilities → Organisational culture → Firm performance (total effect)	0.166**	0.070
<b>Model 4</b>		
Organisational culture → Firm performance (direct effect)	0.198***	0.119***
Organisational culture $r^1r^2$ → Firm performance (corelation with OC)	0.098***	0.144***
Organisational culture → Dynamic capabilities → Firm performance (total effect)	0.293***	0.163***

<b>Model 5</b>		
Competitive advantage → Firm performance	0.153***	0.450***
Dynamic capabilities → Organisational culture	0.624***	0.649***
R <sup>2</sup> (Competitive advantage)	0.553	0.514
R <sup>2</sup> (Performance)	0.459	0.224

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

**Table 7:** Comparative analysis

Variable	Sig		Mean		SD	
	China	Indo	China	Indo	China	Indo
Competitive advantage	0.534		-	-	-	-
Performance	0.060		-	-	-	-
Firm age	0.008	0.000	7.74	6.81	0.44	1.34
Firm Size	0.649	0.000	6.63	7.12	0.97	1.27

Significant level is 0.05

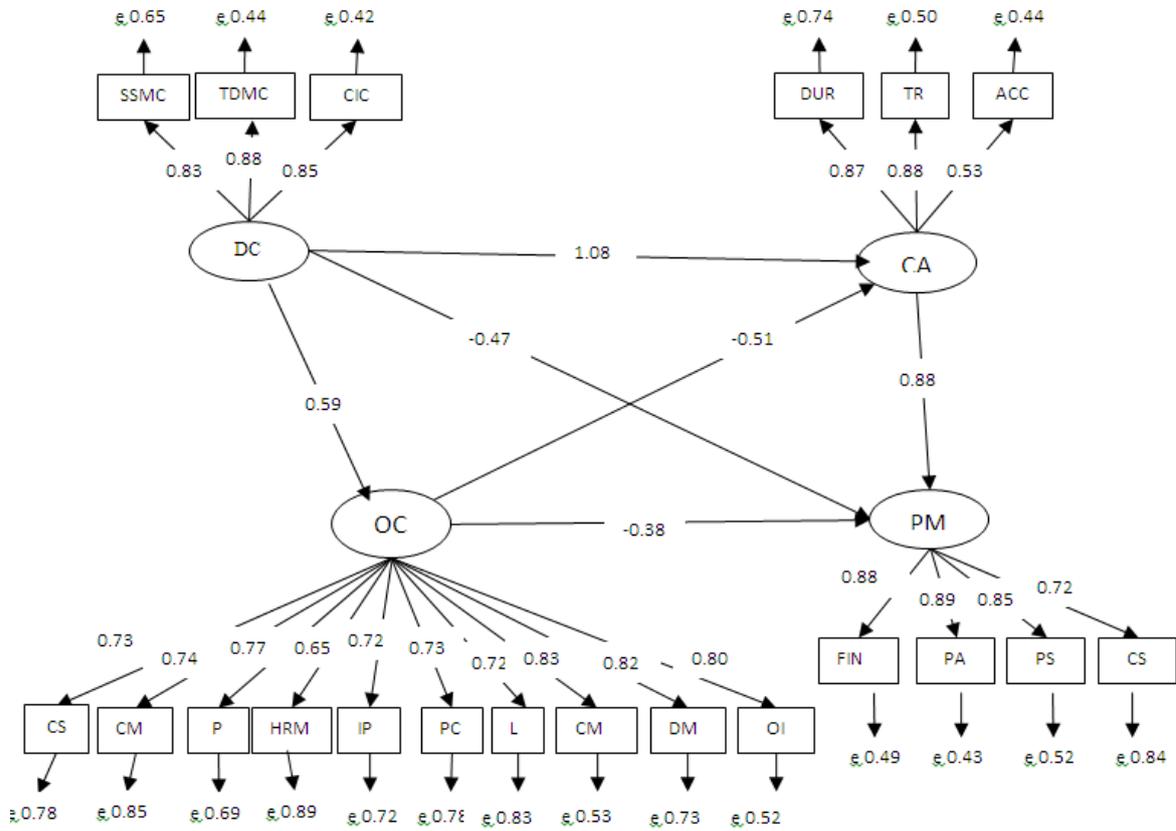
### ***Structural Equation Modelling Analysis***

The first procedure is to evaluate the appropriateness and fitness of the model to determine the estimation value of individual parameters. If the model does not fulfil the criteria, AMOS recommends connecting some indicators in order for the model to suit the data.

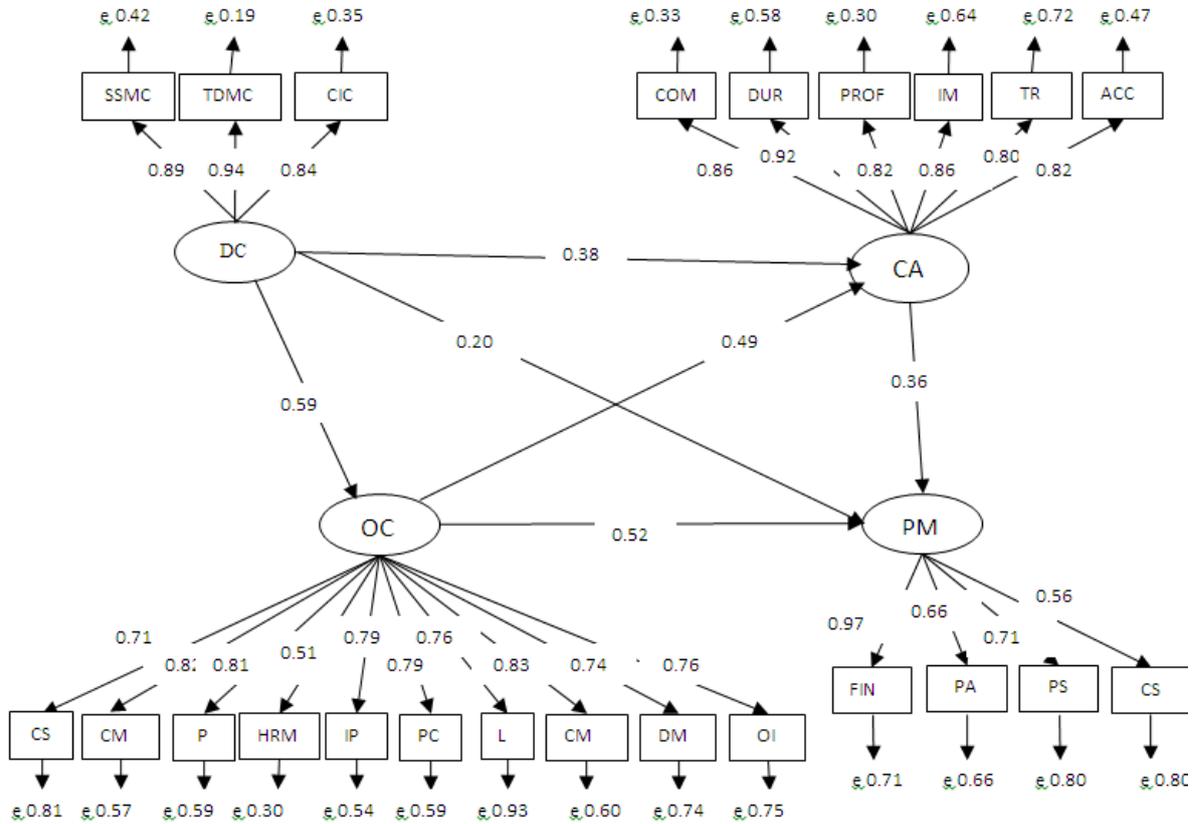
With regards to Figure 2 below, measurement of individual Chinese parameters covers the variables of dynamic capabilities, organisational culture, competitive advantage and performance. The results of the analysis satisfy the suitability and fitness of the Model: i.e. the value of chi-square=350.132; probability= 0.00; GFI=0.86; AGFI=0.79; TLI=0,92; CFI=0.94; CMIN/DF=2.41; RMSEA=0.08. Based on an analysis of data, it can be concluded that the model is acceptable.

Regarding Figure 3 below, measurement of individual Indonesia parameters was tested using the Structural Equation Model (SEM). The measurement of GOF covers variables of dynamic capabilities, organisational culture, competitive advantage and performance variables. The results of the analysis satisfy the suitability and fitness criteria: i.e. the value of chi-square is =576.468; probability=0,00.; GFI=0.83; AGFI=0.76; TLI=0,90; CFI=0.92; CMIN/DF=2.85; RMSEA=0.08. Based on data analysis, it can be concluded that the model is adequate.

**Figure 2.** Conceptual representation of Hierarchical Components Model for Chinese data. All loadings and weights are significant at 0.001 (2-tailed).



**Figure 3.** Conceptual representation of Hierarchical Components Model for Indonesian data. All loadings and weights are significant at 0.001 (2-tailed)



## Discussions and conclusions

The main contributions of this work to the theory are three-fold. Firstly, the research provides empirical evidence on the impact dynamic capabilities and organisational culture have in on improving competitive advantage and performance of agricultural cooperatives in China. This is consistent with previous theories established by Helfat et al, 2007; Teece et al., 1997. Dynamic capabilities positively influence firm performance in multiple ways; they match the resource base with changing environments. The results show that in China dynamic capabilities and organisational culture have a positive impact on competitive advantage and performance of agricultural cooperatives.

Secondly data analysis of agricultural cooperatives in Indonesia demonstrate that dynamic capabilities and organisational culture contribute to competitive advantage. This theory is consistent with those of Teece and Pisano (1994); i.e. competitive advantage of a firm comes from daily dynamic capabilities inherent in the company. In light of this, Indonesian agricultural cooperatives, especially in relation to dynamic capabilities, do not have a positive impact on performance. The existing dynamic capabilities in these agricultural cooperatives

has no significant, aimed effect on performance. Additionally, it is caused by a mismatch of accepted dynamism. This is because dynamic ability will happen if there is conformity to expected dynamism and actual dynamics (Ambrosini & Bowman, 2009).

Thirdly, an assessment of coefficient paths and significance values tested the direct effect of dynamic capabilities and organisational culture. The result of path coefficient tests for Indonesia shows that dynamic capabilities play a significant role in competitive advantage, i.e. 72.9%. Organisational culture also plays a similar role for competitive advantage of agricultural cooperatives in Indonesia, i.e. 3.4%. However, the number is not as high as dynamic capabilities have not accomplished what they need to do. An analysis of Chinese data shows that dynamic capabilities and organisational culture are significant enough for competitive advantage. Dynamic capabilities play a significant role in changing competitive advantage by 28.1%; while organisational cultures affect competitive advantage by 6 %. In terms of competitive advantage in China and Indonesia, dynamic capabilities variables have contributed more than organisational culture (Refer Table 6).

Comparative analysis results to do with competitive advantage and performance, both in China and Indonesia, is not significant (Refer Table 7). Indonesia and China have the same conditions in competitive advantage and performance. Variable control for firm age and size between China and Indonesia shows that both have significant differences (Refer Table 7). From this result, it can be concluded that there are dissimilar effects of firm competitive advantage and firm performance. This research found that firms which operate more than 10 years have a better competitive advantage compared to firms which have operated for less than 10 years (Refer Table 7). For China, firm size is not significant in terms of competitive advantage and performance but, for Indonesia, firm size presents significant differences. A firm size ranging from 1 to 150 in Indonesia has better competitive advantage and performance compared to the firms with has less or more than the specified range.

In summary, results suggest that dynamic capabilities may influence certain types of competitive advantage and performance of agricultural cooperatives in Indonesia and China. Results also emphasise the importance of close scrutiny of policies directed at planning and implementing effective dynamic capabilities and organisational culture. This is especially the case when constructing a strategic policy that determines sustainability of competitive advantage in agricultural cooperatives. In other words, to improve performance, a firm must first achieve the competitive advantages that stem from its dynamic capabilities and organisational culture. As emerging economies, China and Indonesia have many features in common. The empirical findings presented in this study showcase important implications for firms operating in other emerging economies and not just China and Indonesia (Zhou & Li, 2010).



From a research perspective, this paper illustrates the efficacy of applying PLS-SEM to empirically unpack competitive advantage and performance differentials. As such, they are examined in the context of dynamic capabilities and organisational culture. The key illustrations of PLS-SEM include the use of both formative and reflective measurement models (e.g., Coltman et al., 2008); and a second-order measurement model with a demonstration of a Type II multidimensional second-order index (reflective-formative type) for the dynamic capabilities construct (Diamantopoulos and Winklhofer, 2001; Jarvis et al., 2003; Ringle et al., 2012). Furthermore, this study demonstrates the worth of applying PLS-SEM with small samples sizes (which are common when conducting research involving from level employee to senior manager).

For managers, this paper provides guidance concerning the significance of investing in and leveraging off dynamic capabilities and organisational culture. Firstly, senior managers operating in highly competitive environments are guided by the findings and recommended to invest in establishing dynamic capabilities and organisational culture. In environments where firms face little or no significant competition, investment in dynamic capabilities may be considered a lower priority, thus freeing up resources for other purposes. Similarly, when dynamic capabilities and organisational culture are present, management are encouraged to establish conducive dynamic capabilities and organisational culture in order to better capitalise on competitive advantages to increase performance.

This research includes limitations. This study only explores the effects, comparison and relationship of dynamic capabilities, organisational culture, competitive advantage and performance. Given this, many other topics left unexplored. Further research should explore more broadly and more deeply other aspects related to the field.



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