Business Research Review
Volume 2, Issue 1, June 2016
ISSN 2518-6698

How Does Strategic Orientation Influence Intellectual Capital through Value-Creating Activities?

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Abstract

This study develops and empirically tests a model that links alternative strategic orientations with intellectual capital (IC) by mediating the effects of value-creating activities. Field visits and interview-based questionnaires are used to collect data. A structural equation model is used to examine Taiwanese small- and medium-sized enterprises (SMEs) in China. Empirical results show that a resource-oriented strategy indirectly affects innovation capital by capitalizing on the manufacturing process and development of local innovation centers. Finally, innovation capital contributes to customer capital. Furthermore, a cause–effect relationship exists among market-orientation strategies, value-creation activities, and IC. Market-orientation strategies affect the cultivation of human resource, development of communication channels to customers, and establishment of localized social networks. The development of communication channels to customers and the establishment of localized social networks affect human capital, which in turn influences customer capital.

Key Words: Strategic Orientation, Value-creating Activities, Intellectual Capital

1. Introduction

Enterprises are facing a highly competitive business environment because of the rapid development of technology, reduction of product life cycles, and increased internationalization of production and sales.

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To counteract such intense competition, enterprises acquire and use tangible and intangible assets from a resource-based view (RBV) to continuously enhance performance (Wernerfelt, 1984; Beldona *et al.*, 1997). The RBV suggests that enterprises may develop their competitive advantage with rare and unique resources and skills. This approach enables small- and medium-sized enterprises (SMEs) to overcome their weaknesses because of their scale. For this competitive advantage to have a recognizable strategic value, SMEs should focus on intangible assets or intellectual capital (IC), such as human resource management practices, innovation, and technology (Cohen and Kaimenakis, 2007).

China is the world's second largest economy (Breslin, 2005; Aamir *et al*., 2011). The transition of the Chinese economy from a planned economy into a market economy has changed the investment behavior of enterprises from being production-oriented to being market-oriented (Sin and Tse, 2003; Liu and Daly, 2011). A production-oriented firm inwardly focuses on exploiting existing assets as sources of value creation, whereas a market-oriented firm, which typically has strong outward focus, is intent on looking outside the firm for new ways to engage in value creation. Kianto *et al*. (2010) demonstrated that service-oriented companies are more focused on activities that create IC compared with product-oriented enterprises. IC is not only a critical indicator of organizational performance but also a source of value-creation methods for enterprises to achieve sustainable and competitive advantages (Marr *et al.*, 2003; Mavridis, 2005; Shih *et al*., 2010). Taiwanese SMEs have more than 30 years of accumulated investment experiences in the Chinese market.

Taiwanese SMEs in China have adopted resource- and market-oriented strategies, and many of these enterprises have successfully developed methods of value creation. The strategic role of IC is widely accepted; however, recent studies have focused on identifying the components of IC (Bontis, 1998; Tseng and Goo, 2005; Cabrita and Bontis, 2008; Khodavandkar and Khodavandkar, 2009), and only few studies have focused on providing a comprehensive structure for exploring the relationship among the types of strategies, value-creating activities, and IC. Peppard and Rylander (2001) proposed the input–process–output diagram to help enterprises visualize value-creating activities and accelerate IC growth. St-Pierre and Audet (2011) indicated that SMEs arrange IC by adopting different strategies. Molodchik *et al.* (2012) used the value-based view to propose the IC-transformation evaluating model to explore the IC accumulation that enterprises obtain from value-creating processes. Therefore, this study aims to integrate the cross-knowledge fields of strategic orientation, value-creating activities, and IC and substantially contribute to the existing body of knowledge on these topics. This research uses value-creating activities as the mediator to further explore the relationships among the strategic orientation, value-creating activities, and IC of Taiwanese SMEs in China.

The results of this study may serve as a reference for SMEs that seek to maintain a competitive advantage. Moreover, these results can be used as references for investors and governments in making related investments and policy decisions.

In the succeeding sections of this paper, we review the literature. Section 3 propose the conceptual framework, and develop the hypotheses. Section 4 explains the sample selections and research design. Section 5 presents the empirical results. Finally, we conclude the paper and draw the implications.

2. **Literature review**

Strategic orientation

Strategic orientations are culture-based, organization-specific, and complex capabilities that can lead to superior competitive advantages (Zhou *et al.*, 2005). Orientations differ in the manner of theorizing how companies achieve sustained and competitive advantages and match resources in a business environment. Orientations enable managers to make strategic decisions on resource allocation, product development, and market expansion. Tan and Tan (2005) indicated that enterprises should identify different strategic orientations and activities to adapt to various changes in business. Enterprises have used different strategies to create value for customers and achieve competitive advantage over competitors. Enterprises have different strategic orientations that significantly vary depending on internal and external conditions. The following dominant strategic orientations are currently used by firms: resource, market, entrepreneurial, and learning orientations (Grinstein, 2008; Hakala, 2011). In recent years, Taiwanese SMEs no longer invest merely to obtain cheap factors of production but to secure their grasp on the future potential of the Chinese market. Therefore, we divide the strategic types of Taiwanese SMEs in China into two perspectives, namely, the resource-oriented strategy and market-oriented strategy.

Value-creation activities

Strategic researchers have attempted to identify the value drivers and critical successful factors (CSFs) of corporate success; they recognized that different types or combinations of value drivers can aid enterprises to achieve their desired vision (Tan and Tan, 2005; Liu and Roos, 2006). Green (2007a, 2007b) proposed the balanced scorecard perspective and business value-chain model to develop the framework of intangible valuation areas (FIVA). FIVA can assist enterprises in identifying the objectives of their knowledge management and enable them to extract core value drivers.

On the basis of the concept of FIVA, Andreou *et al*. (2007) propose a list of operational knowledge assets (LOKA) to identify value-creating activities and the CSFs from each activity. The developed LOKA consists of 31 CSFs, which were grouped into 7 value-creation activities, namely, competitive intelligence, enterprise intelligence, social intelligence, leveraging competencies, leveraging technology, capitalizing on processes, and customer intimacy. Enterprises can create core competencies and competitive advantage by integrating unique resources and by adopting correct value-creation activities (Cater and Cater, 2009; Choudhury and Orissa, 2010; Zubac *et al*., 2010; Liu and Daly, 2011). An effective combination of internal resource and value-creation activities enables enterprises to resist a dynamic environment and improve their performance (Hernandez and Noruzi, 2010; Othman and Sheehan, 2011).

On the basis of LOKA, we identify the five major value-creation activities that are being adopted by Taiwanese SMEs in China. These activities include manufacturing processes, development of local innovation centers, cultivation of human resources, development of communication channels to customers, and establishment of localized social networks (Liang *et al*., 2013).

IC

Financial statements face an unprecedented challenge in explaining company market value. Furthermore, financial statements are limited in explaining company market value because the source of economic value is IC (Edvinsson and Sullivan, 1996; Bontis, 2001). An IC perspective emphasizes the resources used in action, creation, and control. IC is the most valuable asset of enterprises (Marr *et al*., 2003) and represents the collective knowledge embedded within the human resources, organizational resources, customer foundations, and network relationships of enterprises (Andreou and Bontis, 2007). Researchers have suggested that ICs outside financial statements are the value drivers (Edvinsson and Malone, 1997). IC can be classified in many ways; however, we follow the most commonly used classification and divide IC into human, innovation, and customer capital (Tseng and Goo, 2005, Cheng *et al*., 2010).

3. Conceptual framework and research hypotheses

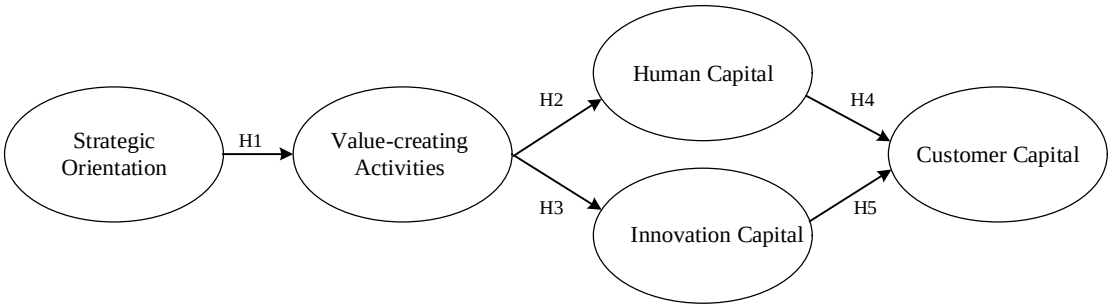

Figure 1: Concept framework

The conceptual framework of the research model is shown in Figure 1. The differences in the strategic orientations of an organization lead to different value-creation activities. A resource orientation describes the degree in which a firm practices RBV and is used to assess the extent in which a firm is oriented toward the development of valuables and unique resource bundles (Paladino, 2006). Resource orientation is primarily internally oriented because it focuses on the development and deployment of unique company resources and uses this resource to exploit opportunities or neutralize threats in business (Paladino, 2007). A resource-orientated strategy indicates that enterprises that consider China as the global factory focus on reducing operating costs and on positioning themselves as key links in supply clusters to establish a standard operating procedure and achieve economic development (Shane and Ulrich, 2004). The resource orientation strategy implies that enterprises have competitive advantage when they implement value-creating activities that are not simultaneously implemented by competitors.

Market orientation is defined as “the organization culture that most effectively and efficiently creates the necessary characteristics for the creation of superior value for buyers and the achievement of continuous superior performance for the business” (Narver and Slater, 1990, p. 21). A market-oriented strategy indicates that enterprises that consider China as the global market focus on markets with large potentials. The improving cross-strait economic relationship and increasing demand of the Chinese market have both caused Taiwanese SMEs to be dependent on the Chinese market, which has gradually transformed from a resource-oriented economy to a sophisticated market-oriented economy. If China is considered a global market, enterprises should allocate additional resources on developing value-creating activities to construct a mutually beneficial model that can be adopted to approach the domestic market.

A recent study of Paladino (2007) suggests that, although both resource and market orientations require different organizational capabilities and resources, they both have different effects on organizational performance. In resource- and market-oriented approaches, previous studies state that flexible production methods, infrastructure R&D, human resource development, customer access activities, and local relationships with government and strategic partners are critical value-creation activities that can be used in the Chinese market (Chen and Ku, 2002; Sin and Tse, 2003; Luo and Park, 2004; Li, 2005; Wu *et al*., 2006; Huang *et al*., 2010; Wilson and Brennan, 2010). Chung and Ng (2011) indicated that Taiwanese enterprises should apply more value-creating activities to transform their enterprises from being resource-oriented to being market-oriented to increase future streams of firm value. Researchers have further analyzed the relationships of different types of strategy and value-creating activities on the basis of previous literature. Thus, the current study proposes H1 under the assumption that different types of strategies have significant effects on value-creating activities in Taiwanese SMEs:

H1. Strategic orientation has a significant effect on value-creating activities.

The concept of IC management is similar to the concept of knowledge management; therefore, enterprises should efficiently use their resources, knowledge, and value-creating activities to accumulate IC (Kianto, 2007; Kianto *et al*., 2010). Academic researchers have extensively investigated the relationships between different value-creating activities and IC (Andreou *et al*., 2007; Enright, 2009). However, SMEs differ from large enterprises because IC components interact in value-creation activities (Cohen and Kaimenakis, 2007).

Customer capital is the resource and knowledge embedded in customer relationships. It also represents brand image, customer satisfaction, and customer loyalty (Bontis, 1998; Bontis *et al*., 2000; Kianto, 2007; Cheng *et al*., 2010). To achieve good relationships with customers in the current customer-oriented environment, companies generally maximize customer benefits by improving equality and reliability through production and process innovation. Among the components of IC, human capital and innovation capital are the two fundamental. Innovation capital is the ability of a firm to create advanced innovation and new products that can meet customer needs (Johnson, 1999; Cheng *et al*., 2010). The improvement in innovative products and services positively influences customer capital (Tseng and Goo, 2005). Meanwhile, human capital is inherently developed and cannot be physically owned by an organization. It represents the competence, innovative capacity, prior work experience, and know-how of employees (Bontis, 2001; Bontis *et al*., 2002; Martinez-Torres, 2006).

Previous empirical studies revealed that human capital indirectly influences performance via customer capital (Bontis, 1998; Bontis *et al*., 2000; Wang and Chang, 2005). Many manufacturing organizations also found that enhanced employee capability increases customer satisfaction (Bernhardt *et al*., 2000; Goldstein, 2003). On the basis of previous literature, this study combines value-creating activities with IC to explore the relationship and effects of value-creating activities on IC components and test whether the relationships among the three IC subdomains (i.e., human capital, innovation capital, and customer capital) reported in previous empirical surveys also exist in Taiwanese SMEs. Therefore, this study formulates the following hypotheses:

H2. Value-creating activities have a significant effect on human capital.
H3. Value-creating activities have a significant effect on innovation capital.
H4. Human capital has a significant effect on customer capital.
H5. Innovation capital has a significant effect on customer capital.

4. Methodology

Data collection

Previous empirical studies conducted in China indicated that questionnaire survey is the most wildly used method but is disadvantaged by its low response rates (Quer *et al*., 2007). Wilson and Brennan (2010) have suggested that by using the researchers' interpersonal relationship, China can allow smoother access to find the appropriate interviewees and make the research process more efficiently. Therefore, we employed field visit and interview-based questionnaire as means to collect data. To capture the representative samples from Taiwanese SMEs in China, 436 firms was provided by the Taiwan Businessman Association in 2009. However, only 228 firms replied with their willingness to participate in the survey, accounting for a 52% participation rate. Out of the 228, 74 firms cannot fully answer the questionnaire and were thus excluded from the analysis, yielding a total of 154 usable questionnaires (a net response rate of 68%).

Questionnaire

Questionnaire items relevant to this study are described in the Appendix. Basing on previous studies, we developed six items to measure strategic orientation (Dunning, 2000; Sin and Tse, 2003; Bathgate and Omar, 2006) and 17 items to measure value-creation activity (Green 2007a, 2007b; Andreou *et al*., 2007; Cheng *et al*., 2010; Huang *et al*., 2010; Zubac *et al*.. 2010; Yang and Wang, 2011).

Twelve items were adapted from Edvinsson and Malone (1997), Brooking (1996), Bontis *et al*. (2000), Tseng and Goo (2005), Cabrita and Bontis (2008), and Khodavandkar and Khodavandkar (2009) to assess IC. For each question, respondents were asked to indicate the extent of their agreement through a nine-point Likert scale (1=strongly disagree through 9=strongly agree).

5. Analysis and results

Reliability and validity

The reliability and validity of the model are shown in Table I. Table I shows the factor loading, Cronbach's alpha, and average variances extracted (AVE). All values of Cronbach's alpha exceeded the suggested value of 0.70. Therefore, a high internal consistency is suggested among the items and their related constructs (Nunnally, 1994). Convergent validity is supported as a result of item loadings exceeding the suggested 0.7 level to test the validity of the construct (Hatcher, 1994; Segars, 1997). All AVE exceeded the suggested value of 0.5, thus indicating that each construct has a certain convergent validity (Fornell and Larcker, 1981).

Table I: Reliability and validity

Constructs	Standardized Factor Loadings	AVE	Cronbach's Alpha
Resource-orientation strategy (ROS)		0.97	0.99
ROS1	0.99		
ROS2	0.99		
ROS3	0.99		
Market-orientation strategy (MOS)		0.97	0.99
MOS1	0.98		
MOS2	0.99		
MOS3	0.99		
Cultivation of human resource (CHR)		0.80	0.91
CHR 1	0.90		
CHR 2	0.92		
CHR 3	0.90		
CHR 4	0.85		
Development of communication channel to customers (CCC)		0.91	0.95

CCC 1	0.95		
CCC 2	0.96		
CCC 3	0.95		
Capitalization on Manufacturing process (CMP)		0.80	0.91
CMP 1	0.90		
CMP 2	0.91		
CMP 3	0.86		
CMP 4	0.91		
Development of local innovation center (LIC)		0.66	0.83
LIC 1	0.83		
LIC 2	0.81		
LIC 3	0.80		
LIC 4	0.81		
Establishment of localized social network (LSN)		0.85	0.81
LSN1	0.92		
LSN2	0.92		
Human capital (HC)		0.78	0.95
HC1	0.88		
HC2	0.89		
HC3	0.86		
HC4	0.90		
Innovation capital (IC)		0.92	0.97
IC1	0.96		
IC2	0.95		
IC3	0.96		
IC4	0.96		
Customer capital (CC)		0.77	0.95
CC1	0.74		
CC2	0.70		
CC3	0.93		
CC4	0.95		

Preliminary analysis

This study conducts confirmatory factor analysis (CFA) and analyzes the causal relationships among financial, customer, internal processes, and learning and growth perspectives by using the structural equation model with AMOS (Arbuckle 2009).

CFAs are used to evaluate the adequacy of the measurement model. The fit statistics corresponds reasonably well with those found in literature. These results show that the data have reasonable model fit and enables the evaluation of the structural model (Bagozzi and Yi, 1988; Hair *et al.*, 1998; Hu and Bentler, 1999) (Table II).

Table II: Goodness of fit statistics

Measurement model	χ^2	χ^2/ **df**	**GFI**	**AGFI**	**RMSEA**	**CFI**	**NFI**
Resource-orientation model	106.2	1.45	0.92	0.86	0.06	0.98	0.95
Market-orientation model	128.3	1.36	0.91	0.86	0.05	0.99	0.96

Notes: Previous literatures suggested that a model is regarded as acceptable if normed fit index (NFI) exceeds .90 (Byrne 1994); goodness of fit index (GFI) exceeds .90 (Byrne 1994); comparative fit index (CFI) exceeds 0.93 (Byrne 1994); root mean square error of approximation (RMSEA) is less than 0.08 (Hu and Bentler 1998) ; and the relative chi-square should be less than 2 or 3 (Kline 1998).

Structural model and hypotheses testing

The results of the proposed model are presented in Table III. For our conceptual model, the significant paths and their corresponding standardized path coefficients are illustrated in Figures 2 and 3. The hypotheses are generally supported, and some interesting differences are revealed. In our empirical results, strategic orientation has a consistent positive influence on value-creation activity, which affects innovation and human capital and influences customer capital (support for the hypotheses of the resource-oriented model: 1, 3, 5; market-oriented model: 1, 2, 4).

Table III: Results of structural model

			Resource-orientation model		Market-oriented model	
Path Description			**Estimated Coefficient**	**t-value**	**Estimated Coefficient**	**t-value**
ROS	→	CHR	0.10	0.64		
ROS	→	CCC	0.31	0.24		
ROS	→	CMP	0.50***	4.51		
ROS	→	LIC	0.81***	11.12		
ROS	→	LSN	0.13	0.86		
MOS	→	CHR			0.87***	18.22
MOS	→	CCC			0.89***	18.07
MOS	→	CMP			0.20	0.54
MOS	→	LIC			-0.25	-0.67
MOS	→	LSN			0.46***	5.33
CHR	→	HC	-1.16	0.43	0.76***	4.18
CHR	→	IC	0.21	1.74	0.01	0.01
CCC	→	HC	0.45	0.91	0.05	0.29
CCC	→	IC	0.08	1.00	-0.35	-0.03
CMP	→	HC	0.20	1.35	0.95	0.76
CMP	→	IC	-0.75**	-2.58	0.15	0.91
LIC	→	HC	0.91	0.64	0.08	0.76
LIC	→	IC	1.50***	5.59	0.43***	3.27
LSN	→	HC	0.15	0.08	0.18***	3.53
LSN	→	IC	0.07	0.90	-0.05	0.02
HC	→	CC	1.07	.07	1.07***	8.11
IC	→	CC	0.56***	4.34	-2.47	-0.73

Notes: Significant at: *P<0.1, ** P<0.05, *** P<0.01.

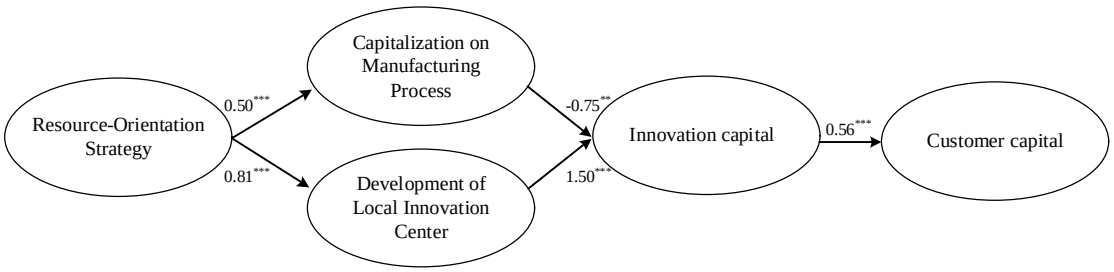

Figure 2: Empirical results for resource-orientation model

According to Figure 2, a resource-oriented strategy directly influences the capitalization of manufacturing processes and the development of local innovation centers. Moreover, value-creation activity directly influences innovation capital, thereby affecting customer capital. All paths are statistically significant in testing the effect of value-creation activity on innovation capital. Therefore, SMEs that focus on a resource-oriented strategy may continue to improve their activities and collaborate with local and known universities and research institutions to enhance their innovation capitals by developing collaborative innovations, building local center innovations, and participating in the industrial innovation networks of China. However, the results reveal the significant and negative association of capitalization on manufacturing processes with innovation capital. Finally, innovation capital has a significant effect on customer capital. Hence, companies should focus on a resource-orientated strategy and improve their innovation capability by developing local innovation centers to serve customer needs.

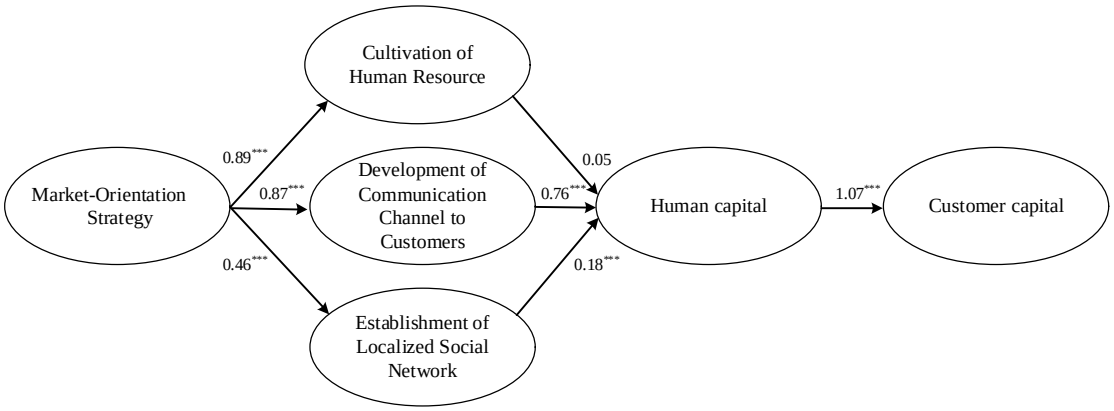

Figure 3: Empirical results for market-orientation model

According to Figure 3, a market-orientated strategy directly influences the cultivation of human resources, development of communication channels to customers, and establishment of localized social networks. In testing the effect of value-creation activity on IC, the development of communication channels to customers and the establishment of localized social networks are statistically significant. However, this cultivation of human resources is insignificantly associated with human capital. Therefore, SMEs that focus on market-orientated strategy may allocate additional resources for the maintenance of good communication channels with customers and local strategic partners to facilitate the accumulation of human capital. With regard to the relationship between human capital and customer capital, the former has both positive and significant effects on the latter.

6. Conclusion

This study investigates the different in the strategic orientations of SMEs in China and develops a model that associates strategic orientations and value-creation activities to IC. This research provides valuable insights for practitioners on implementing value-creation strategies in dynamic competitive environments. The empirical result of this study proves that enterprises that have adopted a resource-orientated strategy have achieved the capitalization of processes and co-innovations with local strategic partners in China and have successfully improved innovation capitals. Enterprises that adopted a market-orientated strategy are likely to allocate their resources on developing human resources, customer access activities, and local network relationships to capture the high potential market.

However, our result indicates that only the development of customer access activities and local network relationships have positive effects on human capital. Finally, with regard to IC, empirical results show that the effects of innovation and human capital on customer capital are not only positive but also significant. This study implies that SMEs that consider China as a global factory should capitalize on processes and maximize local innovations and technologies to accumulate innovation capital. Increased innovation capital results in improved customer capital. By contrast, SMEs that consider China as a global market should focus on improving their customer access activities and connections with the local government officials and strategic partners. These mechanisms may lead to enhanced customer capital.

Finally, the model is empirically tested in Taiwanese manufacturing SMEs. Future studies can be conducted in other countries and industries and can be compared with this study. Other organizational features, such as culture and study design, may influence value-creation activity. Therefore, a follow-up research can be conducted on other organizational features that may influence the research framework.

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Appendix: Questionnaire items

Construct	Measurable Items
Strategic orientation	Resource-orientation Strategy 1. To pursue low cost of labor, land and electricity and water (ROS1) 2. To reduce operating cost (ROS2) 3. To reach larger economies of production scale (ROS3) Market-orientation Strategy 1. To serve customers' future need for pursuing high domestic market growth (MOS1) 2. To expand beyond existing domestic buyer-supplier relationships for future market share expansion (MOS2) 3. Top-management emphasis on market-orientation management process (MOS3)
Value-creating activities	Cultivation of human resource 1. To establish customized on-the job training and practice-related courses (CHR 1) 2. To develop skilled-type talent (CHR 2) 3. To hire local managers (CHR 3) 4. To establish a plan of talent cultivation (CHR 4) Development of communication channel to customers 1. To set up representative offices to conduct market survey and research (CCC 1) 2. To establish marketing channels (CCC 2) 3. To develop an advertising-based marketing plan for building brand image (CCC 3) Capitalization on manufacturing Process 1. To expand the production scale(CMP 1) 2. To conduct action of process improvement (CMP 2) 3. To build a standard operating procedure and training manuals (CMP 3) 4. To increase local procurement (CMP 4) Development of local innovation center 1. To adopt a market-driven product development strategy (LIC 1) 2. To work with prominent universities and research institutes on technology and product innovation (LIC 2) 3. To build a center of innovation (LIC 3) 4. To take part in the industrial network of innovation (LIC 4) Establishment of localized social network 1. To seek connections and cultivate guanxi with influential local governmental officials (LSN1) 2. To integrate supply chain partners and local strategic partners in order to build a satellite factory and industrial cluster (LSN2)

Construct	**Measurable Items**
Intellectual capital	Human capital 1. Come up with new ideas (HC1) 2. Get the most out of employees(HC2) 3. Employees perform their best (HC3) 4. Employees are feeling bright (HC4) Innovation capital 1. Develop most ideas within Industry (IC1) 2. Support development of new ideas (IC2) 3. Implement new ideas to meet local needs (IC3) 4. Procedure supports innovations (IC4) Customer capital 1. Customers' increasing preferences on us (CC1) 2. Customer is satisfied all the time (CC2) 3. Customer are loyal (CC3) 4. Confident to maintain a good relationship with customer (CC4)