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Value creation for the growth of contract manufacturers by technological competence leveraging

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Applying existing competence to different end products is an easy and low risk way, vis-à-vis building new competence, for a contract manufacturer (CM) to pursue growth. As such, a CM in effect adopts competence-related diversification. However, there is a strong concentration on value of competence building and neglecting that value is also created by competence leveraging for CMs' growth. Two case studies compared and contrasted two CMs in the composite material and IT industry in Taiwan. A survey of existing literature provided the relevant constructs and concepts for developing a conceptual framework of technological competence leveraging (TCL) functions for CMs' growth. Subsequently, indepth interviews and secondary data from many sources were compared and analyzed. The results showed five functions of TCL that influence CMs strategic growth and they are: leveraging existing competence into new market; 1) having low risk; 2) utilizing slack resource; 3) displaying the value of competence to buyers; 4) building new competence for future growth; and 5) creating opportunities to build own-brand with low conflicts.

Key words: Contract manufacturer, competence leveraging, function, growth.

INTRODUCTION

OEM/ODM businesses rely heavily on operational excellence for management efficiency, cost reductions, and quick responses demand fluctuation to maintain sufficient margins. In fact, upon engaging in OEM/ODM businesses, contract manufacturers (CMs) can also expand the scope of their technological manufacturing competence to encompass product design and development by learning from their existing customers or researching on their own (Hobday, 1995; Lee and Chen, 2000). CMs that develop their own competence pertaining to product design or key techniques of product development and who enter new product markets with existing competence-based opportunities can expand their business scope efficiently and reduce the uncertainty and risk associated with limited sources of orders.

Mahoney and Pandian (1992) stated that a diversification strategy is a good way for firms to adapt to the pursuit of growth. Rather than adopt the traditional

definition that uses standard industry classification codes (Ansoff, 1957; Bettis, 1981), we adopt the concept of competence similar to what is used to define and classify related or unrelated diversification. When a firm builds new competence rather than using existing competence to diversify into new product markets, this is regarded as an unrelated diversification strategy (Markides and Williamson, 1994). Hence, related diversification refers to the situation where a firm extends its product market based on existing competence. Because related diversification is generally believed to be an easy way to achieve growth, many CMs adopt this approach in various product markets through the utilization of their existing competences.

Even when it makes perfect sense to do so, some CMs still do not understand the value when they attempt a related diversification with existing competence. This brings us to the question: what kinds of value creation of technology competence leveraging (TCL) exist for CMs' growth? This is a major and interesting issue for CMs' growth. Therefore, determining the value that a firm may create as part of the diversification process of technological competence leveraging is crucial. The motivation

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for this study is that the topic of TCL for CM growth has attracted very little attention from business scholars (Chen, 2005). While some studies discuss the value of competence building, the value of competence leveraging is largely unexplored (Liu and Liu, 2011). In other words, the purpose of this research was to use case study conceptualizing value creation of TCL for CMs' growth.

In this study, we approach these issues from the CM's perspective. A key feature of CMs engaging in original equipment manufacturing/original design manufacturing (OEM/ODM) business is the utilization of their core technological competence in manufacturing or design, to make products for global companies with well-known brands. The two case studies compared and contrasted two CMs in the composite material and IT industry in Taiwan. Data from in-depth interviews and secondary data from many sources were compared and analyzed.

Literature review

There are at least two general models of firm growth: opportunity-based and competence-based growth (Lee and Chen, 2000). Many firms, especially small- and medium-sized enterprises, use an opportunity-based growth strategy. These companies can perceive external opportunities and take advantage of them; however, when those opportunities disappear, so do the companies. Thus, their competitive advantage may be achieved by chance along. Since opportunities for growth are usually random, they cannot be located at any given time. Although an opportunity-based growth strategy usually has a rapid impact on growth rate and direction, relying on such a strategy is highly risky if opportunities dry up.

Contrary to opportunity-based growth strategies, competence-based growth strategies suggest that managing a synergistic relationship between both competence building and competence leveraging will result in growth value for a firm (Christensen and Foss, 1997). In brief, competence leveraging refers to the exploitation of an existing stock of competence, while competence building refers to the exploration of new assets or capabilities for a company (Christensen and Foss, 1997). In contrast to competence building, competence leveraging is reactive, implying lower research and development (R & D) costs and greater certainty, because the search for new markets takes place in well-known areas. Prahalad and Bettis (1986) suggested that entering new product markets by utilizing existing competence can be regarded as simply managing strategically similar businesses and firms that do so stand to gain a competitive edge faster and more economically than competing firms that lack such competence and flexibility. Additionally, competence leveraging preserves the value of current resources or competence by transferring that competence to different product lines (Mahoney and Panadian, 1992; Bettis, 1981). In other words, applying existing competence to

different end products seems to be an easy and less risky way, vis-à-vis building new competence, for a CM to pursue growth (Prahalad and Bettis, 1986; Mahoney and Panadian, 1992; Markides and Williamson, 1994).

Nevertheless, growth by new market entry offers an important context for exploring capability development (Helfat and Lieberman, 2002). According to Sanchez et al. (1996), the definition of competence leveraging is applying a firm's existing competence to current or new market opportunities in ways that do not require qualitative changes. It is true that competence leveraging requires no qualitative changes in existing competence. However, it is also true that new products based on the same technological competence can span over various industries that require different specifications (Liu and Liu, 2011). Each product market has its own unique resource endowments and specific knowledge. Such specific knowledge can motivate a CM to explore these advantages and enlarge its competitiveness in both its original and new markets. Bingham and Eisenhardt (2008) also stated that leveraging core resources into a new market or adding core resources to an existing market may also require leveraging existing complementary resources or building new complementary ones.

METHODOLOGY

Basically, there are two kinds of research methods; qualitative research and quantitative research. A case study research consists of a detailed investigation that attempts to describe an analysis of the context and processes involved in the phenomenon under study. Case studies can involve either single or multiple cases, and numerous levels of analysis. Dyer and Wilkins (1991) argue that the most critical trade-off faced by researchers between single case study and multiple cases is the deep understanding of a particular social setting and the benefits of comparative insights. Eisenhardt (1989) shared that evidence obtained from a multiple case study is usually more reliable and persuasive, as using multiple cases is similar to conducting multiple experiments to understand a phenomenon. Yin (1994) also suggested using multiple sources of evidence as the way to ensure construct validity. Therefore, the multiple case study approach was used in the present study to obtain a detailed picture of how two Taiwanese CMs have worked through TCL.

Case selection

In this paper, we selected two CMs, each of which is famous and a leading CM of its industry in Taiwan that has leveraged its TCL into new product markets. There are two reasons for choosing these two CMs to support our findings. The first is that all cases selected are CMs that engage in OEM/ODM business. These leading CMs have a long history of collaborating with international companies who are either leading, or very large companies and have had a demand for outsourced manufacturing activities since early times. Secondly, we selected composite material and IT (information technology) CM as the objects of present research in order to limit variation (Eisenhardt, 1989). The two case companies are technology-based firm.

Subsequently, the OEM business of the CMs can be classified into many types in light of different criteria. Due to the potential for competition between buyers and suppliers, for example, the

Table 1. Case company profile.

	Company name (disguised name)	'A' company	'B' company
CM's profile	Year of establishment	1980	1997
	Original product	Racket	PDA (Personal digital assist)
	Source of competence	Composite material	WinCE technology (Windows system)
	Brand-building date	NA	2006
TCL strategy	First time TCL	1992	2002
	First new product market	Bicycle	Intelligent mobile phone (Smartphone)
	Product structure (2010)	Racket, Bicycle, Aviation, Medical equipment, helmet	PDA, Intelligent mobile phone (Smartphone)

customer may tend to be cautious and decide to end its collaboration with the CM engaged in building its own-brand. However, many international companies still choose to retain their collaborations with some CMs that have established their own-brands. This brings us to the question: what specific strategies do these CMs have in place to maintain such competitive collaborations? Therefore, these two cases which we selected have a little different consideration with TCL. One case that we have selected suggests that some CMs prefer to use TCL for future growth, while another case further indicates that TCL strategy is what sustains the buyer-supplier relationship when CMs establish their own brands.

Data collection

Gillham (2000) stated that case study is a main method for qualitative research. Within it, different sub-methods are used: interviews, observations, document and record analysis, work samples, and so on. The main sources for this study includes industry research reports and statistical data of domestic or overseas research institutes, researchers' studies and literatures, company's prospectus, investment banks' analysis, and reports of commercial media. Because 'A' company is not a publicly-listed company, some financial data were not readily available. Most of our information was collected primarily by means of in-depth interviews. The use of primary data obtained from in-depth interviews of individual case companies provides a better understanding of the relationship between the background, the history, and the actors (Yin, 1994).

The data collection of 'B' company was obtained mainly from secondary sources (for example, news, stocks and bonds business investigation reports, the company's prospectus). The lack of interviews might be seen as an indication that the researchers had incomplete knowledge to make an accurate and detailed analysis. There was a risk that the researcher might misinterpret the influence of certain decisions on own-brand building. However, 'B' company is a well-known own-brand company in Taiwan, and the commercial media and researchers have published many interviews with key persons in the company. These extensive secondary sources of data, which were collected at different times and from different places, detail the incidents in question and provide the relevant information needed to unveil 'B' company's strategy of TCL.

For the most part, our analysis of the data and our exploration of

the literature were carried out concurrently. Our data analysis may point to relevant concepts in the literature, while at the same time, the literature may aid us in the interpretation of the data. Based on our data, we have identified a list of key issues, as shown in Table 1. We analyze the case evidence with respect to each construct derived from literature, and compare the case findings with previous theoretical arguments. Among these two cases, 'B' company (disguised name) built own-brand, while 'A' company (disguised name) did not.

CASE FINDINGS

Low risk

Applying existing competence to different end products is what we refer to as a related diversification, which seems to be an easy and less risky way, vis-à-vis building new competence, for a firm to pursue growth. By leveraging existing competence into new markets, a firm preserves the value of its current resources and competence accumulated through its original business operations by extending that value to other markets that are less similar to their home market (Mahoney and Panadian, 1992). A company's competence has long been in the chairman's mind. He recalled:

"I sought a new opportunity in the direction of my profession, which is carbon fiber, because I understood carbon fiber mostly through tennis rackets, and I believed everything in the world involved carbon fiber..."

Competence leveraging is a behavior where a firm escalates its commitment in existing competence to develop new products. Microsoft dominated the PC operating system market and therefore could help users transfer from PCs to handheld products. Given the technology's future potential and the interconnection between PCs and handheld devices, 'B' company passed

over the popular Palm OS and instead, chose Microsoft's WinCE as its major technology for handheld devices (PDA). After 'B' company decided to adopt WinCE and put all its focus on developing this technology, it gradually used this competence into Smartphone market and gained the leading position in the global market. As such, a CM in effect adopts a competence-related diversification. Because CMs exploit opportunities for expansion by leveraging their accumulated resources and competence as a stepping stone to new product markets (Wernerfelt, 1984), TCL is a lower risk way for CM growth.

Slack resource utilizing

Slack is a potentially utilizable resources that can be diverted or redeployed for the achievement of organizational goals. These resources underpin foundational competence for a firm's products. George (2005) stated that successful firms with larger slack resource endowments are more likely to have freedom in their response to competitor strategies. Markides (1998) noted that successful firms believe that the way they play the game is the right way. Because a prior successful experience decreases their perceived risk and sense of uncertainty associated with future attempts, it encourages them to undertake more of the same activities. As a manager of 'A' company recalled:

"After having success in racket market, there were many young, highly-educated employees who had the desire and the capacity to engage in the development of new products."

That is, when slack exists, the organization can literally afford to experiment with new strategies by, for example, introducing new product, entering new markets, and so on (Hambrick and Snow, 1977). Slack gives a firm leeway in managing responses to competitive pressures and may be deployed wherever needed and permits the firm to experiment with strategic innovation (Cyert and March, 1963). CMs can exploit opportunities for expansion by leveraging their slack but accumulated resources into new product markets. TCL provides more opportunities to exploit distinct resources that are underutilized in organization.

New relationships building

Morgan and Hunt (1994) stated that if firms deliver superior benefits that are highly valued, partners will commit themselves to establishing, developing, and maintaining relationships. Gullen et al. (1995) also argued that the partners' commitment will develop if the partners perceive value in the collaborative benefits

derived from their collaboration. Successful TCL provides the opportunity for diversified CMs to prove the value of their competence. Additionally, CMs could demonstrate their competence and technological potential to their customers through TCL (Golfetto and Gibbert, 2006; Zerbini et al., 2007). As 'A' company's chairman recalled:

"The excellence of epoxy in composites has been perceived by our customers since 1993."

If a CM demonstrates its competence, ability, and potential to its customers, the customers will have a better understanding of their CM partner's resources and abilities, which in turn builds new competence and maintains strong perceptions in the minds of existing customers, even potential customers. When such strong perceptions of CM competence are perceived by customers to be of high value and potential in new markets, customers are likely to render suggestions or opportunities to enhance or reexamine the collaborative relationship (Ebers and Grandori, 1997). The relationship between CMs and their customers will change from unilateral to bilateral (Kang et al., 2009). Referrals and/or recommendations from current customers support a supplier to enter new markets and to establish commercial relationships (Boles et al., 1997). 'A' company entered the helmet market in 1993 after a customer, the chairman of a helmet company in Italy, had visited its plant. The customer thought 'A' company could apply its process for rackets (that is, piece-by-piece adhesion of prepeg) to the production of helmets. When 'B' company entered the PDA phone market in 2002, 'B' company was invited to cooperate for the first time with global telecommunications operators. In the second guarter of 2002, telecommunications operator O2 launched a PDA phone designed by 'B' company, which represented a milestone for 'B' company in the wireless handheld device field. Therefore, CMs should realize that their development and exploitation of core competence is an important step, but that their communication and demonstration of that competence to existing or potential customers could be even more important for future growth (Ritter, 2006).

New competence building

In fact, it is considered here that TCL seems to provide a chance for a diversified firm to evaluate the need for competence renewal as well as the acquisition of complementary competence. After choosing a target market, a firm must acquire new, complementary competence to respond to the attributes and demands of the new market (Danneels, 2002, 2007). In the end of 2001, 'B' company entered the wireless handheld device domain and afterwards introduced the first PDA phone. In order to get into the wireless communication field, Microsoft introduced

two French cell phone firms, Mitsubishi telecommunication and Sagem to adopt WinCE platform and to work with 'B' company. In Europe, both Mitsubishi telecommunication and Sagem possess the ability to design and manufacture cell phones.

Leveraging its competence into the aviation industry enabled 'A' company to define and clarify the boundaries and attributes of its competence in a competitive market. This experience revealed that 'A' company's competence is its knowledge of epoxy resin composite rather than resins in general. The competence of 'A' company started to be defined and measured as its ability to use epoxy resin to manufacture high-quality composite products with tangible and intangible resources, such as machines and formula cards. Subsequently, 'A' company adopted its existing competence with epoxy resin composite and acquired new techniques such as foaming to produce helmets and later, ramps and a magnetic resonance imaging hospital bed.

In other words, competence renewal means the intensification of current competence that responds to environmental change. Also, when applying its current competence to other products, a company must acquire the complementary competences normally demanded by that new product. Building new complementary skills will help a CM expand its competence and provide it with new product opportunities. As a CM understands and keeps learning about which complementary skills are needed for producing future products, the technological competence gap will be significantly reduced.

Own-brand building

In the past, CMs specialized in low-cost strategies based on their manufacturing competence (Heide and John, 1990; Quinn and Hilmer, 1994). As CMs have continuously learned from the lessons from their prior experiences and the best practices of both themselves and their customers (Collis, 1996; Zollo and Winter, 2002; Hobday, 1995), the scope of their competence has evolved from manufacturing to product design and development. The expansion in the scope of their competence has helped CMs create more value by dedicating resources to the creation of own-design and own-brand products. As CMs focus on, and enhance their product design and development, there is no doubt that this form of TCL will provide them with the capability and opportunity to manufacture their own-brand products.

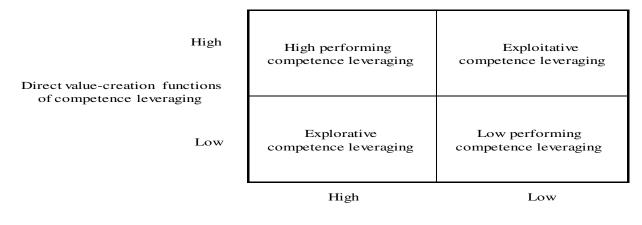
If CMs decide to develop own-brand products that are similar to previous low-end OEM products in the same product line, they naturally threaten and go against the interests of their customers so that their customers may no longer continue to cooperate with them (Lin, 2004; Arruñada and Vázquez, 2006). That is, the CMs may lose the orders of their customers. Hence, the approach whereby CMs that build their own brands for the first time

in markets that do not overlap with those of their customers is deemed to be less risky. Launching new products with the utilization of existing competence will not only be seen as the strategy of minimizing conflict with the original customers, but it will also help them to gain new resources or competence such as marketing knowledge in other product markets and geographic markets. A good example of this is 'B' company that built its own brand of smart phone rather than that for the original PDA market. In doing so, 'B' company has been able to leverage its competence in relation to PDA techniques to the area of Smartphone development, while also minimizing the risk of brand customers recalling orders in the PDA market, while 'B' company has its own-brand in the Smartphone market. Similarly, ASUS's ability to leverage its competence was based on its main product, the motherboard (Prahalad and Hamel, 1990), that developed a creditable brand impression, and it entered the notebook computer industry with its own brand in 1997. Nevertheless, CMs who build own-brand also need to develop their brand marketing competence as opposed to manufacturing and design competence, what we define as technological competence in this paper. For example, 'B' company acquired an Asian Smartphone brand in 2006. By acquiring with this brand, 'B' company gained marketing knowledge through this brand's existing overseas subsidiaries, including those in mainland China, Hong Kong, Singapore, and other Asian-Pacific countries

DISCUSSION

This paper explored TCL value from the CMs' perspective, and offered a conceptual model of TCL value. The functions of TCL are explored from the CMs' perspective, providing an alternative viewpoint of CMs' growth. In Figure 1, we used the two dimensions direct value-creating functions and indirect value-creating functions to develop a 2 \times 2 matrix for categorizing value creation through TCL.

direct functions of TCL include competence of CM that may create value to the CMs' growth without being dependent upon other (connected) new resource or competence. Indirect functions of TCL capture connected effects on new resources or competence for future growth. Connected means the critical mission for some CMs who leverage competence as a "stepping stone" into new product markets is to search for new competence, new relationship or build new competence. CMs can gain product ideas, technologies, and/or market access from new product markets. TCL becomes a key source of competitive advantage building. That is, TCL may positively improve new competence building. TCL will not hinder innovation as generally thought previously. In other words, the two important functions of TCL that CMs should consider to provide growth value



Indirect value-creation functions of competence leveraging

Figure 1. Classifying value creation through competence leveraging.

are: 1) direct functions including low risk of growth and slack resource utilization into new market entry; and 2) indirect functions including the building of new relationships, competence, and own brands.

Exploitative competence leveraging

Despite their fungibility, technologies are often not fully leveraged, that is, they are used only in limited ways. This lack of value extraction means missed profits for the firm while for societal welfare at large, it means that many benefits of technological progress are foregone. Gambardella and Torrisi (1998) showed the limited scope to which firms applied their fungible electronics technologies in various product markets, while Patel and Pavitt (1997) found that large firms had a broader range of technologies than products.

The cost advantages offered by a CM in outsourcing become more important. This is the reason that most CMs need to surpass a certain capacity-utilization threshold in order to achieve economies of scale (Walter et al., 2001). It could be expected that CMs make concessions in prices to handle customers that purchase comparatively larger portions of the manufactured products. It may seem that CMs are controlled by their orders. However, from another point of view, CMs will save considerable capital from a stable flow of orders, and capital is an indispensable and often neglected element of competitive strength.

The customers who outsource large orders to CMs are always the leading companies with strong brands and large market shares, such as Motorola in the mobile phone market and Dell in the computer market. These big business customers will pressure for discounts, and their margins will usually benefit at the expense of the supplier. If a CM depends on a few large customers due to its

initial OEM strategy, its bargaining power is significantly diminished. Investing in fewer markets provides a CM with an opportunity to learn and transfer product knowledge efficiently, but ultimately limits the number of orders. In a depressed marketplace, CMs could face unfulfilled selling agreements.

TCL into new alternative market increases the speed with which existing capabilities are improved. In fact, OEM/ODM suppliers have the capacity to capture complex requirements from multiple customers and transform that data into a format that is usable by their generic processes. As a company multiplies the number of application arenas for its core products, it can consistently reduce the cost, time, and risk, in new product development. In short, well- targeted TCL can lead to economy of scale (Prahalad and Hamel, 1990). Suppliers are able to achieve relatively stable demand profiles, high-capacity utilization rates, and low costs by pooling demand from a large number of customers. The CMs could start to offer a broader range of services, and attract enough business for economy of scale by leveraging their existing competence such as manufacturing into new product markets. In other words, TCL could help a CM reduce uncertainties and increase the variety of its orders, which in turn would enhance its cost positioning in different product markets.

Explorative competence leveraging

CMs are continually searching for new sources of long-term growth (Bhardwaj et al., 2006). The CMs will only succeed in the marketplace once they offer more value to their customers compared to their competitors. However, their competence in terms of low-cost manufacturing is rarely significantly different from that of their competitors (Wenerfelt, 1984; Mahoney and Pandian, 1992). In order

to gain success in today's competitive environment, a CM needs to pursue a coherent technology strategy to design its plans to develop, acquire, and deploy technological resources to achieve superior financial performance (Zahra, 1996). After choosing new product lines by leveraging competence, the CMs could acquire the complementary competencies normally demanded by that new product when applying its existing competence to produce new products.

In current practice, due to the lack of available market information, CMs' searching for new opportunities or new markets is at a disadvantage compared with their customers who are typically the leading companies with the specific brands and market information. By TCL into new product markets, CMs can gain new opportunities to enhance their competence, such as marketing competence which has traditionally been a major weakness. In other words, CMs could acquire marketing competence in a diversified business (Penrose, 1959). They will pay more attention to gaining "user experience" from new product markets.

For example, they will learn why a particular product design will be popular with consumers, or why this particular product's function is necessary for consumers. By doing so, CMs create opportunities to know the kinds of products needed by the consumer to offset the lack of specific market information. That is to say, CMs can learn how to design new products from market-driven, rather than production-driven points of view. Consequently, the critical mission for CMs who leverage competence into new markets is to search for attractive market opportunities and explore those new opportunities. The development of new capabilities associated with this TCL can target new markets as well as new technological opportunities.

Low performing competence leveraging

It is common for a firm not to know exactly what competence it has even when it wants to engage in TCL. In particular, the transfer of knowledge of product design and techniques of product development drives from the international buyers and represents the main learning source for CMs who normally focus just on manufacturing activities. In such instances, an identifying-by-doing process might be needed to prevent the corporate leaders or senior managers from misidentifying their firm's existing competence. Even if the corporate leaders or senior managers know exactly what competence they have, they might still fall into a competence trap if they do not account for rapid changes in the competitive and technological environments (Leonard-Barton, 1992). In fact. TCL can provide opportunities for a CM to define and clarify the boundaries and attributes of its competence in the competitive marketplace by diversification.

High performing competence leveraging

The continuous activities in TCL lead to a deepening of the knowledge base, but over time, this may create competence rigidities (Leonard-Barton, 1992). Hence, in the short run, competence leveraging involves more certainty in maintaining the foundation for survival, but over time, the continued deepening of the competence base may have detrimental effects and lead to an erosion of the foundation for survival. By building new competence from new product markets, cross-functional integration between marketing, R and D, and manufacturing would have impacts on new product development (Gupta et al., 1986; Song and Dyer, 1995). Furthermore, if the potential alternative application of existing competence (either manufacturing or R and D competence) is highly valued by customers, customers might commit themselves to establishing, developing and rendering new opportunities for the CMs (Gulati, 1999). CMs with high levels of motivation and the capacity to learn should be more open to gaining experience from different situations; this makes them more likely to do business abroad than more defensive CMs using a static TCL strategy. When exploring commitment, coupled with superior capabilities exploitation, CMs will have a high probability of succeeding in related diversification. Success goes to those CMs that constantly commit to both exploiting and exploring capabilities in response to various and competitive markets and strategic intentions. The greatest limitation is that our construct and related concepts were drawn from the literature and case study, and have not been validated empirically. However, the goal of this paper was to present a conceptual framework to stimulate research interest surrounding value creation of TCL for CMs' growth.

In future research, the factors that influence the level of value creation should be explained. For example, the characteristics of new markets such as the levels of potential growth or competition in markets where CMs leverage competence might influence the levels of new competence building and exploration. Furthermore, are there any insignificant outcomes that result from competence leveraging? For example, TCL might also bring the complexity of product design and manufacturing when CMs start to offer a broader range of services. The negative aspects of competence leveraging could also be considered in future research. Future studies could subsequently attempt to explore those factors that are the most vital for a CM's diversification strategy with time series analysis.

Conclusion

Growth, as conceptualized here, is guided by the idea that a firm's market entry is directed by its existing capability development trajectories (Mahoney and Pandian, 1992). Ansoff (1957) defined growth strategies as those

resource allocation strategies that a firm uses to persist and grow. Prahalad and Hamel (1990) also stated that patterns of diversification and market entry may not just be guided by markets' attractiveness, but may be guided by competence. Managerially, this research afforded a useful foundation for CM's growth decisions in diversification, such as reducing conflicts with existing customers in own-brand building. Often, the choice of diversification entails a comparison of competence building, versus competence leveraging while entering new product market. Our research provided a framework in which to examine the benefits and value from the CM's perspective, taking into consideration the CM's motivation for competence related diversification.

We have attempted to conceptualize functions of TCL for CMs' growth and in doing so, we have made two unique contributions. First, we drew conclusions about the theories' effectiveness in conceptualizing TCL value for CMs' growth. Second, by recognizing the CMs' perspective in the TCL with case study, we used the two dimensions direct value-creating functions and indirect value-creating functions to develop a 2 \times 2 matrix, useful for categorizing value creation through TCL.

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REFERENCES

- Ansoff HI (1957). Strategies for diversification. Harv. Bus. Rev., 35(5):113-124.
- Arruñada B, Vázquez XH (2006). When your contract manufacturer becomes your competitor. Harv. Bus. Rev., 84(9):135-159.
- Bettis R (1981). Performance differences in related and unrelated diversified firms. Strateg. Manage. J., 2(4): 379-383.
- Bhardwaj G, Camillus JC, Hounshell DA (2006). Continual corporate entrepreneurial search for long-term growth. Manage. Sci., 52(2):248-262
- Bingham CB, Eisenhardt KM (2008). Position, leverage and opportunity: a typology of strategic logics linking resources with competitive
- advantage. Manage. Decis. Econ., 29: 243-245.
 Boles JS, Barksdale HC Jr., Johnson JT (1997). Business relationships:
 An examination of the effects of buyer-salesperson relationship on customer retention and willingness to refer and recommend. J. Bus. Ind. Mark., 12:248–258.
- Chen SF (2005). Extending internalization theory: A new perspective on international technology transfer and its generalization. J. Int. Bus. Stud., 36(2): 231-245.
- Christensen JF, Foss NJ (1997). Competence-based Strategic Management. New York: John Wiley & Sons Publications.
- Collis DJ (1996). Organizational capability as a source of profit. In Moingeon B, Edmondson A (Eds), Organizational Learning and Competitive Advantage. London: Sage Publications, pp.139-163.
- Cyert RM, March JG (1963). A behavioural theory of the firm. Prentice—Hall: Englewood Cliffs Publications.
- Danneels E (2002). The dynamics of product innovation and firm competences. Strateg. Manage. J., 23(9): 1095-1121.
- Danneels E (2007). The process of technological competence leveraging. Strateg. Manage J. 28(5): 511-533.
- Dyer W G, Wilkins AL (1991). Better stories, not better constructs, to generate better theory: A rejoinder to Eisenhardt. Acad. Manage.

- Rev., 16(3): 613-619.
- Ebers M, Grandori A (1997). The Forms, Costs, and Development Dynamics of Inter-Organizational Networks. Oxford :Oxford University Press.
- Eisenhardt KM (1989). Building theories from case study research. Acad. Manage. Rev., 14(4): 532-550
- Gambardella Å, Torrisi S (1998). Does technological convergence imply convergence in markets? Evidence from the electronics industry. Res. Pol., 27(5): 445-463.
- Gillham B (2000). Case Study Research Methods. New York.: Continuum.
- George G (2005). Slack resource and the performance of privately held firms. Acad. Manage. J., 48(4): 661-676
- Golfetto F, Gobbert M (2006). Marketing competencies and the sources of customer value in business markets. Ind. Mark. Manage., 35(8): 904-912.
- Gulati R (1999). Network location and learning: The influence of network resource and firm capabilities on alliance formation. Strateg. Manage. J., 20(5):397-420.
- Gullen JB, Johnson JL, Sakano T (1995). Japanese and local partner commitment to IJVs: psychological consequences of outcomes and investments in the IJV relationship. J. Int. Bus. Stud., 26(1): 91-116.
- Gupta AK, Raj SP, Wilemon D (1986). A model for studying R&D—Marketing interface in the product innovation process. J. Mark., 50(2): 7-17.
- Hambrick DC, Snow CC (1977). A contextual model of strategic decision making in organizations. In Taylor RL O'Connell JJ Zawacki RA, Warrick DD (Eds.), Acad. Manage. Proc., pp. 109-112.
- Heide JB, John G (1990). Alliances in industrial purchasing: The determinants of joint action in buyer-supplier relationships. J Mark. Res., 27(1): 24-36.
- Helfat C, Lieberman M (2002). The birth of capabilities: market entry and the importance of pre-history. Ind. Corp. Change, 11(4): 725-760.
- Hobday M (1995). Innovation in East Asia: The Challenge to Japan. VT: Brookfield Publications.
- Kang MP, Mahoney JT, Tan D (2009). Why firms make unilateral investments specific to other firms: the case of OEM suppliers. Strateg. Manage. J., 30(2): 117-135.
- Lee JR, Chen JS (2000). Dynamic synergy creation with multiple business activities: Toward a competence-based growth model for contract manufacturers, In Sanchez R, Heene A (Eds), Research in Competence-based Management. London: Elsevier. pp. 209-228.
- Leonard-Barton D (1992). Core capabilities and core rigidities: A paradox in new product development. Strateg. Manage. J., 13: 111-125
- Lin BW (2004). Original equipment manufacturers (OEM) manufacturing strategy for network innovation agility: the case of Taiwanese manufacturing networks. Int. J. Prod. Res., 42(5): 943-957
- Liu HY, Liu FH (2011). The process of competence leveraging in related diversification: A case of technology management at a composite-material company. Technol. Anal. Strateg., 23(2): 209-227.
- Mahoney JT, Pandian JR (1992). The resource-based view within the conversation of strategic management. Strateg. Manage. J., 13(5): 363-380.
- Markides C (1998). Strategic innovation in established companies. Sloan Manage. Rev., 39(4): 31-42.
- Markides CC, Williamson PJ (1994). Related diversification, core competences and corporate performance. Strateg. Manage. J., 15: 149-165.
- Morgan RM, Hunt SD (1994). The commitment-trust theory of relationship marketing. J Mark., 58(3): 20-38.
- Patel P, Pavitt K (1997). The technological competencies of the world's largest firms: complex and path dependent, but not much variety. Res. Pol., 26(2):141-156.
- Penrose ET (1959). The Theory of the Growth of the Firm. New York: John Wiley and Sons Publications.
- Prahalad CK, Bettis RA (1986). The dominant logic: a new linkage between diversity and performance. Strat. Manage. J. 7(6):485-501.
- Prahalad CK, Hamel G (1990). The core competence of corporation. Harv. Bus. Rev., 68(3): 79-93.
- Quinn JB, Hilmer FG (1994). Strategic outsourcing. Sloan Manage. Rev., 35:43-55.

- Ritter T (2006). Communicating firm competencies: Marketing as different levels of translation. Ind. Mark. Manage., 35(8): 1032-1036.
- Sanchez R, Heene A, Thomas H (1996). The Dynamics of Competence-Based Competition: Theory and Practice In The New Strategic Management. New York: Pergamon Publication.
- Song XM, Dyer B (1995). Innovation strategy and the R and D—Marketing interface in Japanese firms: A contingency perspective. IEEE T Eng. Manage., 42(4): 360-371.
- Walter A, Ritter T, Gemünden HG (2001). Value creation in buyer-seller relationships: theoretical considerations and empirical results from a supplier's perspective. Ind. Mark. Manage., 30(4):365-377.
- Wernerfelt B (1984). A resource-based view of the firm; summary. Strat. Manage. J., 5(2): 171-180.

- Yin RK (1994). Case study research Design and methods. London: Sage Publications.
- Zahra SA (1996). Technology strategy and performance: a study of corporate-sponsored and independent biotechnology ventures. J. Bus. Vent., 11(4): 289-321.
- Zerbini F, Golfetto F, Gibbert M (2007). Marketing of competence: Exploring the resource-based content of value-for-customers through a case study analysis. Ind. Mark. Manage., 36(6): 784-798.
- Zollo M, Winter S (2002). Deliberate learning and the evolution of dynamic capabilities. Organ. Sci., 13(3): 339-351.