FROM EXPLOITATION TO EXPLORATION: THE EVOLUTION OF STRATEGY AND ORGANIZATIONAL LEARNING IN A CHINESE-JAPANESE JOINT VENTURE

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Abstract This paper looks at the strategy evolution and learning orientations of international joint ventures through an in-depth study of a Chinese-Japanese joint venture. We examine the joint venture's strategy evolution, culture embedment and technology evolution and link these with its learning orientations. We highlight the tension between exploratory learning and exploitative learning in the joint venture during the strategy and technology evolution process and conclude that given the increasingly dynamic environment and market competition, joint ventures in China should engage more in exploratory learning in order to build their innovative capability for sustainable growth.

Key words: strategy evolution; organizational learning; exploration; exploitation; joint venture

1. Introduction

Over the past two decades, international joint ventures have become a vital strategy for many firms to sustain and enhance their competitive advantage by gaining market access and capability building through collaboration. An important part of capability building in joint ventures can be achieved by access to and acquiring partner's knowledge (Hamel, 1991). Learning processes are central to the evolution of a joint venture because it can be seen as a collaborative process of learning transfer (Hamel, 1991; Doz, 1996). However this is only true of joint ventures formed between developed countries which are of comparable strengths and compatible goals. Learning in joint ventures between West and transition economies like central east Europe and China is more likely to be viewed as a one-way process. The view that the western partner is superior in both technology and management has created dependency in local partners on their western counterparts. Such dependency has resulted in local partners engaging extensively in exploitation of foreign partners' knowledge. On the other hand, because the western partners naturally adopt the role of a teacher, they fail to explore with their local partner knowledge appropriate for the joint venture context (Liu and Vince, 1999; Liu, 2006).

In an effort to speed up economic development, the Chinese government implemented an 'Open Door Policy' to introduce advanced technology and management systems from abroad. Joint venture with Western countries is seen as one of the important avenues of achieving this. Over the last twenty years or so, international joint ventures has become one of the most popular entry modes for foreign investors to enter the Chinese market.

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These joint ventures have played a key role in transforming Chinese companies and together with many domestic Chinese companies laid the foundations of industrial infrastructure of “Made in China”. Beijing Matsushita Color CRT Co. Ltd. (BMCC) is one of these joint ventures that have been successfully operating in China for 20 years. In this study, we look at the evolution of strategy and learning in BMCC. We specifically examine the impact of the asymmetrical relationship on exploitative and explorative learning behaviors in the local partner. We highlight the tension between exploratory learning and exploitatative learning in BMCC's strategy and technology evolution process.

2. Theoretical Background

2.1 The Dynamics of Inter-Partner Learning

A large proportion of research into learning within joint ventures is focused on strategic issues of competition or/and collaboration. Joint venture is an important means of supplementing strengths and covering weaknesses. Firms enter cooperative relationships with each other in order to sustain and enhance their competitiveness, which can be achieved by access to and acquiring partner’s knowledge (Hamel, Doz and Prahalad, 1989; Hamel, 1991). Two types of learning in the process of joint venture evolution have been identified: (1) learning about the joint venture partner and (2) learning from the joint venture partner (Inkpen and Curral, 2004). Joint ventures begin to evolve when partners engage in a mutual learning process and learn about each other. Such learning enhance their mutual understanding of each other’s complimentary contributions, competitive positions, strengths and weaknesses, culture, and strategic objectives (Inkpen and Curral, 2004).

However, symmetrical learning is seldom seen in international joint ventures, in particular in joint ventures in emerging economies. Learning in joint ventures in emerging economies are characterized by asymmetrical power relations. In such ventures learning is more important for the less powerful partners in order to obtain partner’s technical and managerial knowledge. In contrast, Western partners see themselves as purveyors of business and managerial expertise, and feel that there is little they can learn from their local partners (Liu and Vince, 1999; Liu, 2006). Very often, the Western partners would insist that knowledge transfer in a predetermined standardized form without any appropriate adaptation to the local context. Although research demonstrate that knowledge contribution of Western partners enhances joint venture performance (Lyles and Salk, 1996), lack of consideration for the social, economic, and cultural context of host country has given rise to a lot of conflict in partner relationships in joint ventures in emerging economies such as east European countries and China (Child, 1994; Child and Markozy, 1995; Cyr and Schneider, 1996). It is argued that extensive knowledge transfer combined with the inherent potential for conflict between joint venture partners can cause joint venture instability and failure (Senthil and White, 2005; Steensma and Lyles, 2000; Steensma et al. 2008).

2.2 Exploitative and Exploratory Learning

Since the publication of March's (1991) seminal work, the terms 'exploration' and 'exploitation' have increasingly come to dominate organizational analyses of technological innovation, organizational design, organizational adaptation, organizational learning, competitive advantage and organizational survival (March, 1991; Levinthal & March, 1993; Crossan et al., 1999; McGrath, 2001; Benner & Tushman, 2003; He & Wong 2004; Sidhu et al., 2004; Gupta et al., 2006; Lavie & Rosenkopf, 2006; Siggelkow & Rivkin 2006; Jansen et al., 2005; 2006). These studies address the following central questions. What do exploration and exploitation really mean? Are exploration and exploitation two ends of a continuum, or two different and orthogonal aspects of organizational behavior? What is the appropriate way of achieving the balance between exploration and exploitation? Is it possible, under certain conditions, to dedicate an organization or system solely to exploration or solely to exploitation? (Gupta et al., 2006).

March (1991) identified two types of organizational learning: exploration and exploitation. Exploratory learning often involves experimentation with new alternatives and acquiring new knowledge and capabilities. Exploitative learning, on the other hand, involves the extension or improvement of existing capabilities. March argued that both exploration and exploitation are critical for organizational survival and prosperity. In the face of increasingly stiff competition and rapid change, firms need to renew themselves by exploiting existing competencies and exploring new ones (Floyd and Lane, 2000). The degree of exploration is a critical organizational contingency (McGrath, 2001). Levinthal and March (1993) observed that in mature organizations exploitation tends to drive out exploration, making renewal based on exploration very difficult. The key problem is that the development of core capabilities tend to be path-dependent (Cohen and Levinthal, 1990). Organizations tend to build on its previous success, refine its organization routines and procedures and integrate these into the organizational knowledge base for future exploitation. Such learning can be self-limiting as it cannot help an organization to cope with changes in the market (Levinthal and March, 1993). It is possible, however, for exploration based renewal to take place even in firms dominated by exploitation orientation (McNamara and Baden-Fuller, 1999).

Joint ventures in emerging economies are perceived as learning laboratories and it is suggested that whilst much of the learning occurs through cooperative processes with both partners, each also engages in experiential learning (Hitt et al, 2005). Local partners can gain a strategic advantage over their competitors if they learn and leverage the knowledge acquired from foreign partners. For foreign partners on the other hand, they can acquire knowledge of culture, institutional norms, and important social relationships (Steensma and Lyles, 2000; Tsang, 2002). Four learning approaches are identified. Cooperative-exploratory learning involves creating new knowledge for the specific joint venture context in collaborative effort. Cooperative-exploitative learning involves addition to a firm's existing knowledge stock through transfer of partner knowledge so that a firm can exploit its current knowledge. Experiential-exploratory learning is more radical and adds new knowledge to a firm's knowledge base through experiencing new context. Experiential-exploitative learning is more incremental and helps the firm exploit its existing knowledge base (Hitt et al, 2005).

Local partners can engage in both exploratory and exploitative learning. Empirical studies demonstrate that Chinese technology firms acquire and develop marketing and technological capabilities through strategic alliances with foreign partners (Lu, 2000; Li and Atuahene-Gima, 2002). The value created through such learning depends on the absorptive capacity of local partners (Cohen and Levinthal, 1990) as well as on the quality of their relationship with the foreign partners. Exploitative learning in strategic alliances involves the internalization and routinization of experiences generated from strategic alliances (Holmqvist, 2004). This type of learning takes place when joint venture partners have effectively adapted to each other and have established common routines and application of capabilities. Foreign partners on the other hand, also sought to learn from local partners about local markets and institutional relationships when they first entered the market. But this will require a student attitude and certain degree of humility on the part of foreign partners, as Hamel has put it, "learning is most likely to occur in the middle ground, between abundance and arrogance on one side, and deprivation and resignation on the other" (1991: 97).

3. The Case of BMCC

This case study illustrates the strategy evolution and organizational learning in a Chinese-Japanese joint venture — Beijing Matsushita Color CRT Co., Ltd. (BMCC) — over a period of 20 years growth and development. Data gathering took place in July 2007 as part of an ongoing research study into evolution of joint ventures in China. It involved unstructured and semi-structured interviews with key BMCC managers. The case presented here is largely based on the story told from the perspective of Wenqiang Fan, the Chairman of BMCC, who has experienced the ups and downs of the joint venture since its establishment. His story was supplemented by accounts from other managers who were also long time workers of the joint venture. Additional sources were gathered in the form of company archives, published sources and videos.

3.1 Overview of BMCC

Beijing Matsushita Color CRT Co., Ltd. (BMCC) is among the earliest international joint ventures in China. The company was established in 1987 and formerly entered production in April 1989. It is a Sino-Japanese equity joint venture with each partner taking 50% of the stake. The Chinese partner is a consortium of three Chinese companies of which Beijing Orient Electronics (Group) Co., Ltd. is the biggest shareholder. BMCC Currently employs 5,000 workers, its core product is CRT, 'the heart' of television, which determines the picture quality, durability and size of a television. As Matsushita's first joint venture in China, BMCC was regarded as strongly "experimental" and "risky" from a strategic point of view.

According to Mr. Matsushita's plan, BMCC was designed to be built as Matsushita's global 'model factory' and to transfer advanced product technology and management expertise. Matsushita has been invested generously in every stage of the development and

major breakthroughs in BMCC. The joint venture has attracted wide attention from Japan and has become the venue for many Japanese high ranking officials to visit, exchange ideas with and learn from the staff of BMCC. For example, The Matsushita Institute of Government and Management, an institution dedicated to develop political elites in Japan, will send each intake of its participants to BMCC for three weeks' internship. The purpose of the trip is for the future Japanese leaders to gain a deeper understanding of the value, thinking and feeling of ordinary Chinese.

BMCC is one of the leading players in the CRT market. Thanks to the channel of its parent company as well as channels built by the joint venture, the company's overseas sales revenue has already accounted for 30% of the total sales revenue at the time of this study. The top management has attributed the achievement to the core competitiveness of BMCC, namely its strategy and corporate culture. The company has built 8 production lines since the beginning of its operation (of which the lighting business has been separated), with the capability of manufacturing a wide range of CRT, unraveled by any other companies in the industry. The products are sold to over 70 customers in more than 30 countries worldwide.

The joint venture provides extensive training for the technical staff through the technical assistance of experts from Matsushita and internship in Japanese companies for Chinese staff. Through the process of learning and exploration, BMCC has acquired mature CRT technology, with a relatively independent research and development team, namely, the Product Business Promotion Department. By continuous learning and applying what they have learned in their everyday work practices, the performance of both the management and employees on the Chinese side has been recognized by the board. Currently, except the finance department, the positions of director of the other 7 departments are held by Chinese.

3.2 Evolution of the Joint Venture: Adaptability and Choices

3.2.1 Strategic evolution

Strategy plays a key role in every stage of an organization's development. It is widely recognized that strategy is dynamic, incremental and adaptable. The strategy of an international joint venture will be invariably subject to the global strategy of the MNC and the host country government. In addition, it is also affected by the vision and insights of the top management of the joint venture.

The chairman of BMCC, Wenqiang Fan, is an executive director, whilst his two predecessors are both non-executive. Mr Fan has a very strong government background, reflecting Beijing Municipal Government's commitment to make the joint venture a success. Joined BMCC in 1987, and different from his predecessors, Mr Fan knows the company and the market well. He has been to Japan many times to learn about the strategy and management principles of Japanese enterprises.

In the early years of the joint venture, all the department directors were expatriates sent by Matsushita. Now only the position of Finance Director is still taken by the Japanese. This indicates that the joint venture has changed fundamentally, it has transformed from a

wholesale adoption of Japanese management to 'localization'. This is consistent with "Think globally, act locally".

The first stage: wholesale introduce and replicate the Japanese management practices and build the 'model factory' in China.

BMCC was set up at a time when there were very few joint ventures in China. With the strong backing of the Chinese government and low competition in the market, competitive capability was not much of an issue. BMCC almost adopted every aspects of the strategy and culture of the Japanese parent company. This is demonstrated in the following aspects.

Clear strategy. The strategic positioning of technology-led, differentiated, and complete product range placed the technology and the profit above everything else. As Mr Matsushita has it, "Since social resources have been used, it is criminal not to make a profit."

Detailed business plan. Every year from October through to December, the company will make annual plan for the next year. To ensure the feasibility of the plan, the work would begin from the operational level of work groups and sections all the way up to the departmental level, and formulated an action plan. The plan would be refined according to the intentions of the top management. Such process would repeat many times before the action plan was finalized. The action plan was by no means a form of management control but guidelines for next year's work. It was contractual and had to be abode by every member in the organization.

Rigid seniority. The joint venture adopted a very rigid seniority system. Pay and benefits were not linked to performance, therefore employees were generally short of competitive awareness.

The second stage: active adaptation to the changes in the market and participation in market competition.

As the CRT market developed, more and more homogenous firms emerged. For example, big names such as Samsung also entered China and joined the competition. The stiff competition forced many companies out of the CRT market. The number of CRT manufacturers reduced from 68 to only 27 worldwide. To make things even worse, many Chinese companies had grabbed a large portion of the market with cutting throat price. It became impossible for BMCC to make any profits if products were sold at the market price. However, the top management still strongly upheld the principle of Matsushita, that profit should always come first, and refused to sell at a lower price.

By the year of 2001, the company was faced with increasing inventory costs because of the extremely high level of stock. The production line had to cease operation and this had led to a vicious cycle. Mr Fan, who was then in charge of the sales department, realized that competition has come and it was time to change. He persuaded the Chairman to

delegate to him the authority to deal with the stock at any price. Unexpectedly, Mr Fan was faced with a more serious problem in his negotiation with Mr Ni Runfeng, then the CEO of Changhong. Because of the poor market condition and seasonal low sales, Changhong had ceased production, which meant Mr Ni had no intention of buying any CRTs regardless of the low price. After tough negotiations, Mr Ni agreed to buy but on condition that he had the CRTs first to resume production and settled the payment based on the market price at the end of the year. BMCC found itself in a cross-road, but it had no way but to take the risk and grab the opportunity. After thorough consultation and coordination, BMCC accepted Changhong's condition. On 30 April 2001, a contract without price terms came to being, which was unprecedented in Matsushita. When the first patch of CRTs was delivered, the inventory pressure was alleviated and the production lines also resumed production. Mr Fan emphasized that BMCC was the only manufacturer at the time to work in full capacity. As other CRT manufacturers either suspended production or produced at very low volume, there was an over supply of raw materials. BMCC unexpectedly obtained low raw materials. By July, when the hot season for television came, the market rebound and the price of raw materials also hiked up. Having sufficient low price raw material, BMCC was able to produce at a low cost. Meanwhile the price of CRT went up as the volume of television sold also increased. Towards the settlement time at the end of the year, the market price of CRT was much higher than previously expected. That year, 90% of CRT manufacturers were losing money whilst BMCC achieved a profit of 100 million RMB yuan. This was the most glorious victory in the market crisis of 2001.

This risky action and proactive attitude towards competition had profound impact in BMCC. The top management became aware of the criticality of competition. Quotes from Matsushita such as "No profit, no production" were giving way to a proactive market strategy. As Mr Fan noted, "If a firm and its employees do not have competitive awareness, they are unlikely to adapt to the complexity of the market and enhance customer satisfaction.

Since then, BMCC began to develop market awareness and competitive awareness. For example, the company actively participated in market competition instead of following Matsushita's quotes rigidly. It also replaced the pay system based on seniority with MBO and performance management. It might appear easy for average companies, but for a company with strong Japanese management practices, this is a transformation and innovation process.

The third stage: improve the integrative capabilities of the company and put the theory of "Flood versus Mountain" into practice.

At BMCC, market change is compared to flood. The flood can be unpredictable and it is beyond a firm's ability to control its timing, scale and likely damage. Nevertheless the degree of damage done will depend on a firm's competitiveness. Those with strong competitive position are high on the mountain and will always be the last to be drowned but first to be relieved when floods subside, and therefore have the greatest opportunity to survive. Adaptability, therefore, is the key to a firm's survival.

Then how to adapt to change? The answer lies in the following three aspects: achieving the best results for the existing market; actively expanding new businesses and new markets; and developing the firm's integrative capability. For BMCC, single capability is like a piece of construction material. You need to integrate different materials together to construct a building that is strong enough against possible hazards. A firm's capability comes from the integration of technology, people, market, culture and system. Based on many years of the joint venture experience BMCC has develop a profound understanding that a joint not only serves the strategic need of the MNCs, but also need to be firmly grounded in the local market and develop its own core competence. This will provide a basis from which it can compete globally.

3.2.2 Culture embedment

In a sense, strategy is one of the important components of an organization's culture. It is necessary to look at how the culture of BMCC has evolved in addition to the evolution of its strategy. Anyone who does business with the Japanese may share the feeling that it is not simply a matter of striking a deal, you will also be affected by an invisible atmosphere. You will find that the Japanese people focus more on rules and order of business, a phenomenon closely related to corporate culture.

In building its corporate culture, BMCC has been following three principles, namely consciousness-led, well-designed procedures and behavior norms. Its culture mirrors the characteristics of Japanese enterprises, in particular the focus on group consciousness and collective action. To be more specific, these include team consciousness, collaboration consciousness, problem consciousness, site consciousness, prevention consciousness, business leader consciousness and the consciousness of being customer's first choice.

In team conscious, the focus is on team management and communication through lunch time team saloon. In collaboration consciousness, it would be unacceptable to say "I don't know about this".

In problem identification and problem solving, the company emphasizes that no mistakes should happen again. If an employee makes a mistake, he should not worry too much for being disciplined or even getting sacked. Instead, he should reflect on the problem and find effective solutions to resolve the problem so that no similar mistakes would happen again. To achieve this, the company develops a "preventative reporting mechanism", to identify the root cause of the problem and to document the process of problem identification and solution. In this way, the chance of recurring has been dramatically reduced, and tasks are also standardized. For example, a forklift truck operator damaged a piece of CRT during transformation. A conventional way of dealing with this would be that the operator admitted the problem was caused by speed driving and promised that he would not exceed the 5 km/hour speed limit next time. Doing so however would not prevent similar problems from occurring again. In preventative report, the person concerned had to identify the root cause of the problem, which had to do with the

accelerator. So a bolt was fixed to the accelerator, the speed of the truck was controlled within 5km/hour and the problem was eradicated.

Business leader consciousness and the consciousness of being customers' first choice reflected the determination of BMCC in pursuing excellence and become the leader of the industry. The company guaranteed that every piece of product will be of the highest quality. These two types of consciousness resonate with the BMCC's business concept of 'mountain and flood' discussed earlier in this case.

In addition, most employees at BMCC are contractual workers. Although they save labor cost but they are also likely to be poor in skills and competence. To address this issue, the HR department developed a detailed three-tier education and training system. These are orientation training focusing on safety training, employment and company rules; shop floor training focusing on skills learning; and a training program with BMCC characteristics, that is, reemployment skills training. In the process of shop floor training, employees will have the opportunity to participate in technical competition so that they can exchange with and learn from each other for continuous improvement. In reemployment training, the company offers a variety of skills training for those contractual workers for their future employment once their contracts with BMCC terminates. This has not only enhanced the workers' competence and improve their employability but also demonstrate BMCC's social responsibility.

During SARS outbreak in 2003, BMCC was isolated because a number of suspected and diagnosed SARS cases had been identified. Thanks to the joint effort of the management and the employees they have finally overcome the crisis with no death incidence. Production and daily operation recovered quickly after the outbreak. Upon reflection and learning from coping with unexpected crisis, the management advocated a new corporate culture around the idea of "integrity of both people and products", and injected new meaning to BMCC's culture. This can be summarized as: (1) subjecting individual power to system; (2) improving the transparency of BMCC's business and management; (3) emphasizing the feasibility of strategy, that is to say the implementation of strategy should involve active participation of the employees and; (4) building a learning organization.

In the earlier years of the joint venture, Matsushita's management concept and approach such as 'profit first' had been dominating the core value influencing the way of working and organizing within the company. BMCC has been exploring the management approach suitable for the Chinese market and joint venture's development. In coping with the increasing competition and resolving crisis, the management of BMCC has accumulated valuable experience and meanwhile increased their market alertness. Its ability in maneuvering the products combined with technology improvement has made BMCC a leading player in the CRT market.

3.2.3 Technology evolution

BMCC is the only manufacturer in the industry with the complete range of CRT production line. In an increasingly changed market environment with continuous technological advancement and new product pressure, BMCC has been improving its technological adaptation and ability of continuous modification of its technology. There are three phases to BMCC's production line, as illustrated in Figure 1 in the appendix.

Phase I: July 1987- May1990.

Phase I includes two production lines. The first production line was put into operation in 1989, manufacturing CRT for 21", 24" and 25" range. As the market demand for bigger screen CRT television increased, the company responded by adjusting its product strategy and continuously modifying the production line to ensure optimal profit and market share stability.

In May 1990, the second line went into production to address the special demand of the market for small screens. It manufacturing CRT for 14 " and 15" serial, among which 15PF (1-ARC) is the finest used in small CRT television.

Phase II: July 1993 – December 1995.

During this phase, another two lines was put into production. The third line entered production in July 1993, manufacturing product range that covers 21" and 29", of which the 29" is flat screen (4:3) serial. These products are used in multimedia TV, consumer TV, digital SDTV and high end television.
The fourth production was put into use to produce CRT for the new 21" television, to meet the sustained demand for small to medium television.

Currently, all the first four product lines has completed depreciation and entered zero load mode production.

Phase III: May 1998 – September 2002.

In May 1998, the fifth product line went into production, producing CRT for 28" flat wide screen (16:9) and 29" serial. These are used for digital SDTV, multimedia television and high end television.

In September 2000, the sixth product line entered production. This line was designed to produce 29", 34" serials and 32" flat wide screen.

During the development of the three phases, the market, in particular the domestic market demonstrated increasing demand for big and super thin colored television as the result of the development in LCD and the market campaign of LCD television manufacturer. This also reflects the continuous changes in customer preferences. Wide screen and super thin CRT will become the means to compete against LCD in the high end market.

In September 2002, the seventh line entered production, producing PRT used in high quality projector television.

In addition to pursue technological improvement, BMCC is also a socially responsible company. This is demonstrated in its commitment to increase investment to control emission, energy consumption waste processing to address environmental issues, and has been highly commended by the government. It won the Award for Excellent Investment conferred by China Investment Association in March 2006, ISO14001 in December 1996 and Certificate for Occupational Safety, and Health Management System in March 2004.

4. **Discussion**

BMCC's development mirrors the process of strategy evolution and learning in many Chinese-Western joint ventures. In this case in particular, we have categorized BMCC's strategy evolution into three stages. It is evident that the whole process of strategy evolution is characterized by organizational learning in BMCC, in particular from exploitation in the early stages to exploration in the face of market change and strong competition. It highlights the tension between exploiting the 'best practices' transferred from Matsushita and exploring new opportunities for adaptation.

4.1 Strategy evolution

Two themes emerge from BMCC's strategy evolution: from rigidity to flexibility; and from internationalization to localization.

According to Ansoff (1988), in the process of strategic management, a firm can ensure strategic adaptability by improving the flexibility of its strategy. He further distinguished flexibility into internal flexibility and external flexibility. External flexibility is based on the strategic logic of product-market investment whilst internal flexibility relies on the organizing logic of resource mobility. Volberda (1998) defines internal flexibility as an organization's adaptability to changes in the environment. In BMCC's business practices, Matsushita's quotation had been the bible that guided BMCC's strategic choice and achieved good performance. As the market changed, Matsushita quotation was no longer able to meet the demand of different markets, for example, how to formulate strategy based on the changes in prices; how to improve the organization's ability to resolve work-related problems; and how to deal with unexpected incidents. BMCC's practices indicate that effective strategy will have to take into consideration the firm's situation and its market condition.

Another theme emerged from the case is localization. In a globalized economy, internationalization and localization are interdependent and contradictory. On the one hand, internationalization unifies business standards and norms, maximizes cost saving and takes the advantage of economy of scale. On the other hand, localization requires adaptation to the local market and adjustment of strategy, product, marketing and human resource management to the local condition. This will undoubtedly hike up cost.

Matsushita has successfully achieved its vision of building BMCC into a 'global model factory' through a variety of control mechanisms, namely ownership control (include

intellectual property rights control) through equity, channel control through brand and human resource control through system and culture. Nevertheless, Chinese and Japanese enterprises differed markedly not only in organizational system, strategy, management and way of doing business, but also in business culture and legal systems. A wholesale 'Japanization' might work initially, but as the joint venture grows and more and more crisis emerge, localization is inevitable.

For example, compared with its Japanese parent company, BMCC tended to use performance appraisal more than seniority in human resource management practices. From the organization's perspective, localization implies many things. The first is to use local managers in top management team. The second is that the product strategy and market strategy must reflect the characteristics and development of the local markets. The third is to develop local R & D expertise and build R & D systems to improve new product development capability. The fourth is to build effective sales channel and brand management systems. Finally is to embed local culture into the organization's culture and management. To sum up, localization is a type of value rather than means to an end. Localization should be measured in terms of how an organization can survive and grow by adapting itself to the local market.

4.2 Learning orientations

This case also illustrates the process of BMCC's adaptation in terms of technological learning, management learning and strategic learning. These learning are characterized by two broad types of learning activities between which BMCC divided attention and resources – exploration and exploitation. March also noted that the essence of exploitation is the refinement and extension of existing competencies, technologies and paradigms whilst the essence of exploration is experimenting with new alternatives.

In the initial stage of BMCC's development, its activities were primarily exploitative in nature. Learning was largely characterized by a one-way process, and this is evident in learning from its parent firm – Matsushita's technology, management approach as well as cultural values. The joint venture followed rigidly the Japanese way of working and organizing regardless of the differences in the Chinese context. It was able to access the successful experience of the parent company and to enhance the joint venture's competitiveness by minimizing cost in R & D and channel building, making it an effective 'model factory'. At this stage, technological learning, management learning and strategic learning were all exploitation oriented.

The strategic positioning of technology-led, differentiated, and complete product range coupled with Japanese management approaches and organizational structure allowed the joint venture to achieve the internal congruence had made BMCC a success in a relatively stable market without much competition. However, the strategy and organizational congruence that made BMCC a success for more than 10 years, in the major competitive and technological change in China, became a recipe for failure as evidenced from the production crisis in 2001.

Over the years of growth and development in China, BMCC realized the old Matsushita values such as 'profit first' and seniority that had been successfully guiding the company's strategy and way of organizing could be very limiting. It had become a constraint for the joint venture to adapt to the increasingly changing market. They had to look for new ways of coping with the market change, the demands of their customers and motivating the workforce, ways that would really work for the joint venture. The management was confronted with the critical strategic choice of how to maintain an appropriate balance between exploration and exploitation. As argued by Levinthal and March (1993, p.105), "The basic problem confronting an organization is to engage in sufficient exploitation to ensure its current viability and, at the same time, to devote enough energy to exploration to ensure its future viability." Evidence of exploratory learning can be found in BMCC's radical move away from the rigid control of Matsushita's quotation to engaging actively with its customers, and in the development of a performance-based human resource management system. Exploratory learning took place at the levels of strategic learning and management learning.

Technological innovation can be distinguished between exploratory innovation and exploitative innovation. Explorative innovations are radical innovations and are designed to meet the needs of emerging customers or markets (Benner and Tushman, 2003; Danneels, 2002). They offer new designs, create new markets, and develop new channels of distribution (Abernathy and Clark, 1985). Explorative innovations require new knowledge or departure from existing knowledge (Levinthal and March, 1993, McGrath 2001). In contrast, exploitative innovations are incremental innovations and are designed to meet the needs of existing customers or markets. They broaden existing knowledge and skills, improve established designs, expand existing products and services, and increase the efficiency of existing distribution channels. Therefore, exploitative innovations build on existing knowledge and reinforce existing skills, processes, and structures (Jansen et al, 2006).

It is evident from the process of BMCC's technology evolution that information search regarding market demand and enhanced learning capability have been the engine that propels the development of production technology. Over many years of learning and experimentation, BMCC have fully mastered the CRT development software and is able to conduct research and development, design and production independently which has come as a surprise for Matsushita.

BMCC's technology evolution has been typical of the tension between exploitation and exploration. First of all, all the seven production lines were introduced from its parent company with the help of Japanese technical staff. Each new product line was built upon the success experience of the previous ones and feedback from the market was used to continually refine its production range and process to satisfy customer demand. BMCC has effectively initiated such incremental changes in its technology and this has been a crucial part for BMCC's success so far. So learning at the technological level is more exploitation oriented although efforts have been made towards independent R & D.

The challenges faced by BMCC in terms of technology however, is that CRT technology is developing in a more diversified way. CRT, LCD and Plasma exist side by side. Although CRT television is still the mainstream TV in the market, LCD poses strong threat to its market position. On the positive side, CRT television has very mature technology and over more than 50 years' development, its quality and other specifications are second to none. In addition, through technology improvement it can also become digitalized, and they are still the most popular television among consumers given its quality and price.

Being aware of the challenges, BMCC has adopted more proactive technology strategy by building up its technological capability and financial resources and take part in the R & D of OLED, a more advanced technology than LCD and Plasma. OLED refers to Organic Light Emitting Display, a new high-tech display technology, but not yet commercialized. But the high quality picture and other special qualities and specifications are likely to make it the leading television product in future's market.

Apparently, in display sector, the evolution of technology is characterized by radical innovation rather than incremental innovation. For radical innovation, R & D capability is more important than market vision. This requires BMCC not only continuously count on Matsushita's technical support for exploitative learning, but also to engage explorative learning to embrace the technological and market change.

Evident from the case, BMCC's adaptation has taken place through both exploration and exploitation processes. These processes are linked to environmental changes, and further more, both exploration and exploitation are perceived critical for organizational survival and prosperity (March, 1991). Our findings resonate with previous research on exploratory and exploitative learning. Sidhu et al (2004) identified environmental dynamism, mission and strategy as key determinants of exploratory and exploitative learning orientation. According to them, the higher uncertainty generated by dynamism is likely to lead to exploratory learning. We had strong proof from its radical change in its relationship with the customers. Another observation the researchers have made is that a strong exploitation-centered mission may work against greater exploration, especially if an organization is doing well. BMCC's initial 'profit-focused' value provided strong evidence on this. Finally, organizations adopt a prospector strategy is more likely to engage in exploratory learning. The evidence from the case study indicates that BMCC's strategy may fall between the prospector and analyzer, and therefore we find both exploitation and exploration exist in the company in different aspects of organizational practices.

5. Managerial implications

The key issues we explored in this case have clear implications for management. In particular, issues regarding strategy evolution and learning orientations highlight the need for top managers in joint ventures to manage the tension between exploration and

exploitation according to the changes in customer preferences and the competitive environment and the organization's strategic orientation.

The BMCC case shows how each stage in a joint venture's strategy evolution is characterized by different types of learning moderated by environmental dynamism. Joint ventures will need to critically assess when and to what extent they 'exploit' parent's company's technological and management know-how, and when they need to explore new possibilities and to experiment with new ideas and practices suitable for the joint venture context.

Another implication is that although many joint ventures find it safer and more cost saving to exploit existing knowledge and experiences of parent companies, this would only bring them short-term success. In the long term, they might find themselves ended up simply as a 'model factory' or OEM manufacture without one's own R & D capability for independent and indigenous innovation. This will inevitably undermine the sustainable development and growth of the joint venture.

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