

A Holistic Framework of E-Business Strategy: The Case of Haier in China

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ABSTRACT

This paper proposes a conceptual framework of e-business strategy. It argues that such a framework must be holistic, dynamic and dialectical. This framework will assist both researchers and practitioners regarding the key issues of e-business strategy. Further, a case study of Haier from China reveals that all firms need to learn how to design effective e-business strategies, which should be built on a sound organizational form or business model. The case of Haier also suggests that the local firms from the developing countries need to be creative in formulating e-business strategies so as to operate effectively in the under-developed e-business environment. Strategic alliance is especially critical for the local firms with regard to their e-business success.

Keywords: framework; e-business; strategy

INTRODUCTION

Although many doubters regard it as a fad, we are convinced that e-business, as the convergence of digital technology, intellectual property and customer supremacy, has the potential to transform our society as much as the Industrial Revolution did. This conviction is based on our belief that e-business is facilitating a new

business paradigm—the *Paradigm of Network Capitalism*, which emphasizes the central role of interconnectivity in both configuration and coordination of business activities between various partners in an open network across interlinked value-adding chains, thus transcending the traditional boundaries of space, time, individuals and organizations (Afuah and Tucci, 2000; Dunning, 1995; Kalakota and Robinson, 2002; Li, 1998a, 2001a, 2001b; cf. Porter, 2001).

THE CONCEPTUAL FRAMEWORK OF E-BUSINESS

The Components of E-Business Framework

Four developments have occurred in the past few decades, and they seem to have been accelerating in recent years (Economist, 1999, 2000a, 2000b; Kalakota and Robinson, 2002; Li, 2001a, 2001b): (1) digital technologies (e.g., the Internet); (2) intellectual properties (e.g., information/knowledge); (3) consumer supremacy (e.g., customization and reduced cycle time); and (4) productivity growth (e.g., long-term economic growth without inflation). The first three elements can be viewed as the *antecedents* of e-business because they jointly define the conditions or drivers for the emergence and development of e-business, while the last can be viewed as the *consequence* of e-business because it defines the long-term effect and result of e-business. We argue that e-business (defined as *the integration of digital technology, intellectual property and customer supremacy with business activities, which alters, and often replaces, the conventional rules at both industrial and corporate levels*) is one of the core components and the primary drivers of the so-called "new" economy (defined as *the macro-economy undergoing a paradigm shift due to the convergence of digital technology, intellectual property and customer supremacy*). E-business seems to have the capability to change the competitive landscapes in the traditional industries, create new industries, and affect the configuration and coordination of firm-level business activities, especially such external activities as customer relationship management (CRM, which is about developing close cooperative relationships with key

customers by applying new technologies and sticking to long-term goals) and supply-chain management (SCM, which is about developing close cooperative relationships with key suppliers by applying new technologies and sticking to long-term goals), and such internal activities as business process reengineering (BPR, which is about streamlining and integrating internal execution processes for more efficient and effective operations) and enterprise resource planning (ERP, which is about streamlining and integrating information flows for better coordination of all internal resources) (Afuah and Tucci, 2000; Kalakota and Robinson, 2002; Li, 2001a, 2001b; cf. Porter, 2001).

The Central Theme of E-Business

The central theme shared by the above issues lies in the core concept of network (Afuah and Tucci, 2000; Kalakota and Robinson, 2002; Li, 2001a, 2001b; Rayport, 1996; Shapiro and Varian, 1999; The Economist, 2000c). The digital network technology is at the core of digital technology, which is the enabler of e-business. The social network of intellectual contributors is critical for the creation and exchange of information and other intellectual properties, which constitute the content of e-business. The business network of suppliers, customers and even competitors is shaping the new eco-system of the global economy, which is the effect of e-business. All these phenomena invoke the notion of network (even Porter [2001] acknowledges connectivity as the core of e-business), so we can define the emerging theme of e-business as the **network paradigm**. Borrowing from Kuhn (1970), we define *paradigm* as a set of basic guiding principles for organizational form or business model in terms of the configuration and coordina-

tion of business activities at the micro or firm level as well as economic structure or market system in terms of the configuration and coordination of economic activities at the macro or national level (Dunning, 1995; Li, 1998a). According to the above definition of paradigm, the concepts of organizational form and business model converge with the emerging notion of strategy—the so-called “organic” perspective of strategy (Farjoun, 2002; Li, 1995, 1997). In contrast to the traditional notion of strategy (whose epistemological basis is increasingly criticized as fragmented, static and linear, the “organic” view of strategy is holistic, dynamic and dialectical (see Farjoun, 2002; Li, 1995, 1997, 1998a, 1998b; Parkhe, 1993 for reviews). The broader view of strategy is particularly evident in the study of global strategy (Bartlett and Ghoshal, 1989; Li, 1995, 1997; Porter, 1990) and also in the study of e-business strategy (Afuah and Tucci, 2000; Kalakota and Robinson, 2002; Li, 2001a, 2001b). Such a view of strategy has been embraced by some scholars who study the generic strategy content (e.g., Hambrick and Fredrickson, 2001; Li, 1994, 1998a, 1998b).

According to the new views, organizational form, business model and strategy content overlap with each other, each consisting of two key components: (1) business configuration, and (2) business coordination. *Business configuration* refers to the scope of business coverage by a company, which is the traditional narrow notion of strategy (Porter, 1980). *Business coordination* refers to the style of business relationship within and outside a company (Bartlett and Ghoshal, 1989; Porter, 1990), including the modes for internal control and external market entry (Li, 1994, 1998b; Hambrick and Fredrickson, 2001). In short, focusing on the emerging phenomenon of highly specialized firms interconnected

through various modes of strategic alliance for a proper balance between paradoxical forces (Li, 1998a), the network paradigm seems to have the best prospect for addressing the paradoxes of e-business (paradox is defined as *an interactive and interdependent pair of opposite elements*, Li, 1995, 1998a), including growth-profit, customization-standardization, specialization-diversification, core-non-core, brick-click, competition-cooperation, control-trust, flexibility-continuity and separation-integration (Li, 2001a, 2001b).

A Working Model of E-Business Strategy

According to the central theme of e-business and in light of the new perspective of strategy, we propose here a working model of e-business strategy. The proposed working model contains two components: (1) a four-dimension typology of strategy content, and (2) a three-dimension typology of strategy process (Li, 1998b). This model is consistent with the argument that the concept of strategy should cover both the “spatial” (or “state”) aspects and the temporal (or “path”) aspects of strategy (Farjoun, 2002). The working model is a specific application of the network paradigm that is holistic, dynamic and dialectical in nature.

A Four-Dimension Typology of E-Business Strategy Content

A four-dimension typology of strategy content (Li, 1994, 1998b) can be used to measure the spatial content of e-business strategy. These four dimensions are (1) strategic target, (2) strategic thrust, (3) strategic posture and 4) strategic mode. Similar to the prevailing view of strategic goal (Farjoun, 2002), strategic target refers

to the means (i.e., to maximize volume size and/or margin rate) to achieve a firm's ultimate intent (i.e., to become the industry leader or the most admired in the world, Bartlett and Ghoshal, 1989). Similar to the prevailing view of strategic focus (Hambrick and Fredrickson, 2001; Porter, 1980), strategic thrust refers to the means (i.e., to lower cost and/or improve value) to achieve strategic target. Similar to the prevailing view of strategic position (Bartlett and Ghoshal, 1989; Hambrick and Fredrickson, 2001; Porter, 1980), strategic posture refers to the means (i.e., to configure broad and/or narrow scope of market coverage, supply-chain coverage, function coverage and location coverage) to achieve strategic thrust. Contrary to the prevailing view of strategy content, we incorporate the style or mode of coordination into our model of strategy content in accordance to the new "organic" perspective of strategy (Farjoun, 2002; Li, 1995, 1997, 1998a, 1998b). Strategic mode refers to the means (i.e., to coordinate business relationships both within and outside the firm with various control modes regarding internal execution (e.g., business process reengineering) and external market entry (e.g., strategic alliance) to achieve strategic posture. Many scholars of global strategy have recognized the critical role of coordination in global strategy (e.g., Bartlett and Ghoshal, 1989; Porter, 1990), and even some scholars of generic strategy have accepted at least external coordination modes as the integral part of strategy content (e.g., Hambrick and Fredrickson, 2001). The above four dimensions make up a holistic and dialectical ends-and-means hierarchy (Farjoun, 2002; Li, 1994, 1998b).

As it is generically applicable to all strategies, the above four-dimension typology can be applied to the special case of e-business strategy with necessary adapta-

tions according to the unique characteristics of e-business. In light of the central theme of e-business (i.e., network paradigm), we can refer to the study of network form for the application of the findings to the case of e-business. The key feature of network form is the distinction between core and non-core business activities and their configuration along the value-adding chains (Li, 1998a). This feature of network form is especially applicable to e-business in terms of business configuration scope (e.g., SCM design, brick and click configuration, etc.) as well as business coordination style (e.g., BPR, ERP and CRM). The other key feature of network form is the concurrent pursuit of seemingly paradoxical ends and means, such as achieving both high revenue volume and high profit margin, both low cost and high value, both broad and narrow scope, and both tight and loose control (Li, 2001a, 2001b). Below are the propositions about e-business strategy content.

P1: The strategic target for e-business is a concurrent pursuit of volume size and margin rate, with the focus of core business on margin rate while the focus of non-core business is on volume size, thus the expected effect of e-business strategy is an increase in both market share and profitability.

P2: The strategic thrust for e-business is a concurrent pursuit of low cost and high value, with the focus of core business on high value via customization while the focus of non-core business is on low cost via standardization, thus the expected effect of e-business strategy is a reduced cost and an enhanced value.

P3: The strategic posture for e-business is a concurrent configuration of narrow and broad scopes of business cover-

age in terms of market, supply-chain, function and location, with the focus of core business as in-house specialist with a narrow configuration at the firm level and the focus of non-core business as outsourcing generalist with a broad configuration at the network level.

P4: The strategic mode for e-business is a concurrent application of tight and loose coordination, with the focus of core business on tight coordination, both internal (e.g., ERP and BPR) and external (e.g., SCM and CRM), while the focus of non-core business is on loose coordination (e.g., e-marketplace). The distinction between SCM and e-marketplace is that SCM is firm-specific and firm-centric for core business while e-marketplace is community-generic for non-core business. A proper brick-and-click scheme should be one in which the bricks focus on the physical elements as their core while the clicks focus on the virtual elements as their core, but they collaborate as loosely coupled strategic partners (i.e., two separate yet closely coordinated units). However, the real and virtual elements of global presence should be a closely coupled integration.

A Three-Dimension Typology of E-Business Strategy Process

A three-dimension typology of strategy process (Li, 1998b) can be used to measure the temporal process of e-business strategy. The temporal aspect of business in general and strategy in particular has been largely ignored for too long (Farjoun, 2002; Li, 1998a, 1998b, 2003). These three dimensions are (1) strategic simultaneity, (2) strategic directionality; and

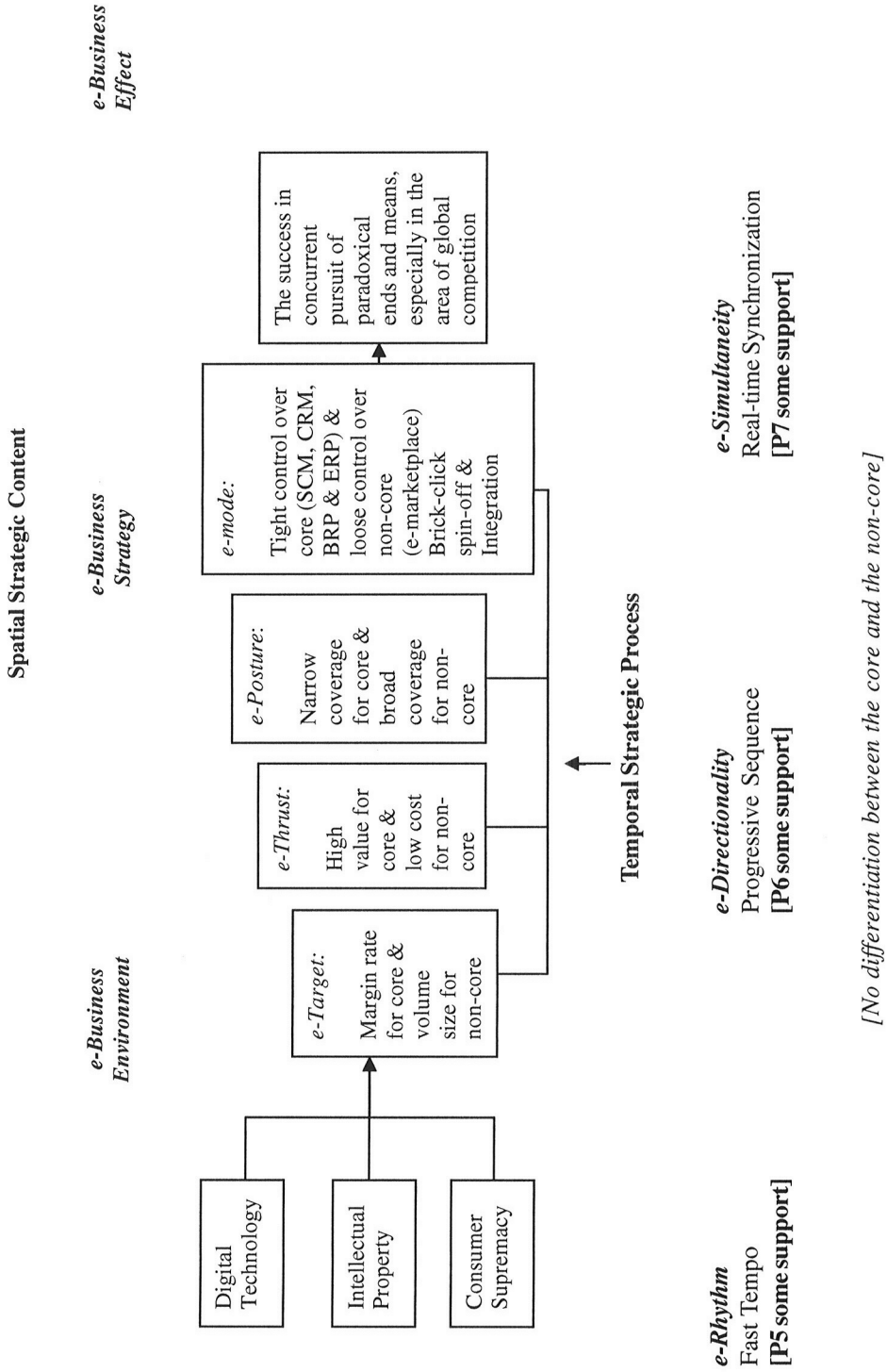
(3) strategic rhythm. Strategic simultaneity refers to the temporal synchronization of the strategic content events or activities that occur at a given point of time (Li, 1998b). Strategic directionality refers to the temporal sequence of the strategic content events or activities that occur at different points of time (Li, 1998b), such as the timing of market entry as a first-mover or a quick-follower and the phases of evolution (Hambrick and Fredrickson, 2001; Li, 1998b). Strategic rhythm refers to the temporal variation of the strategic content events or activities that occur at different tempos at different times (Li, 1998b), such as the tempo of activities (Hambrick and Federickson, 2001), especially for the latecomers committed to catching up (Li, 2003).

As it is generically applicable to all strategies, the above three-dimension typology can be applied to the special case of e-business strategy with necessary adaptations according to the unique characteristics of e-business. A fast tempo seems to be one of the key characteristics of e-business (Kalakota and Robinson, 2002; Li, 2001a, 2001b). A well-timed synchronization is another key feature of e-business in terms of instant access to information by all the members of an organization, a supply chain or a marketplace. The third key feature is the sequencing of different activities at different stages. Hence, we develop the following propositions with regard to the temporal process of e-business strategy:

P5: The strategic rhythm for e-business in general is a fast tempo, especially for the latecomers to the global competition, with a faster pace for core business while a slower pace for non-core business.

P6: The strategic simultaneity for e-business is a real-time synchronization of e-business and other programs, with

Figure 1: A Network-Based Conceptual Framework of e-Business Strategy



core business as the primary focus and non-core business as the secondary focus.

P7: The strategic directionality for e-business is a progressive sequence from a trial-and-error phase to a mature one, with an earlier entry timing for core business while a later entry timing for non-core business.

THE CASE EVIDENCE OF CHINA'S HAIER

Methodology

We chose to adopt the method of longitudinal case study because this method offers the best prospect for advancing our knowledge of strategic process (Eisenhardt, 1989; Numagami, 1998). We chose Haier for our case study of e-business in China due to four considerations. First, Haier is one of the most successful companies in China. Second, Haier is well-prepared for e-business. Third, Haier has successfully formulated and implemented an e-business strategy. Fourth, Haier has a clear strategic intent of internationalizing itself, which is closely related to its e-business strategy. We used *secondary data* from corporate brochures, corporate annual reports, books, newspaper/magazine reports, others' case studies, corporate websites and public information websites. Only those data that were corroborated from multiple sources were used.

China's e-Business Status

The prevailing view is that China is not yet ready for e-business due to the barriers of poor technical infrastructure, legal protection, payment system and consumer acceptance (Bin and Chen, 2003; Stylianou, Robbins and Jackson, 2003). However,

China has great potential for e-business in the future (Stylianou, Robbins and Jackson, 2003).

China's Haier Group

Restructured in 1985 as a small manufacturer of refrigerators burdened by a debt of RMB 1.47 million, Haier Group has not only survived a series of radical reforms but also has become one of the most successful companies in China. As a multinational company with an annual revenue of RMB72 billion (US\$8 billion) in 2002, Haier had thirteen overseas manufacturing plants and its international sales reached US\$1 billion in 2002, among which the U.S. market accounted for 25%. Haier produces a full line of electronic household appliances and other products in 42 major categories and more than 9,000 models. Haier ranks No. 1 in China's household appliance industry as measured by brand recognition and sales revenues. Haier has gained an international reputation by exporting to over 100 countries. In the global survey by *Euromonitor*, Haier was ranked as the world's No. 1 refrigerator brand, and also the world's fifth largest white appliance producer after Whirlpool, Electrolux, Bosch, Siemens and GE (Xinhua News Agency, 2002). Haier has achieved a high growth for 17 consecutive years with an annual average growth rate of 78% (Xinhua News Agency, 2002). Haier has been undergoing three key stages of corporate development (Sun, Ji and Wang, 2001):

1. Brand-building stage (1984-1991): It took Haier seven years to build a strong brand in refrigerators through a well-planned TQM (total quality management) program.
2. Diversification stage (1992-1998): It took Haier another seven years to di-

versify and broaden its product offerings.

3. Internationalization stage (1998-Present): Haier has been undergoing an internationalization program. Its strategic intent is to become one of Global Top 500 with a global brand.

Background of Haier's e-Business

The strategic intent of Haier's e-business

The overall long-term strategic intent or vision of Haier is to be one of the world's top 500 companies with a global brand. Haier views e-business as the most effective means to achieve Haier's strategic intent of joining the Global 500 Club.

Haier's readiness for e-business

Haier appeared ready for e-business when it launched its e-business initiatives. First, Haier had the strong commitment from its top management team, who has led Haier in its e-business effort. Haier's leadership was aware of the imperatives of e-business and the implications of the new economy. Mr. Zhang Ruimin, the CEO of Haier, points out: "Do e-business or die." Mr. Zhang saw e-business as an effective tool to offer more value-added services through customization, shortened cycle time and innovation, to reach out to the worldwide market, and to minimize overall cost (Yan and Hu, 2001). He also saw employees as the sources of self-innovation. According to him, each employee should become a boss of his or her own with enough flexibility (e.g., delegated decision-making power) and enough incentive (e.g., rewards closely linked to performance), as reflected by Haier's "Employee-as-SBU-Boss" program (Li and Liu, 2002).

Haier had laid a solid foundation for

the success of e-business with the implementation of two critical programs (Li and Liu, 2002). The first was Haier's ERP for building the technical infrastructure for information collecting and processing. Haier realized that digital information on various business functions was integrated for sharing by all parties, so as for a firm to adapt to the volatile market and survive in the new economy. The second was Haier's BPR. Haier implemented e-business programs together with its BPR programs because it realized that e-business was not simply about setting up a website or an information system; rather, it was about redesigning the ways firms used to conduct its business.

The Content of Haier's e-Business Strategy

Haier's e-target

The primary strategic targets for Haier's e-business were the revenue size, market share and revenue growth rate. These targets were based on Haier's long-term intent and vision of becoming one of the top 500 global players in the world. However, Haier appeared to pay much less attention to profit growth and profit margin. Further, there was no clear differentiation between Haier's core business and non-core businesses with regard to the choice of e-target, thus lacking the evidence to support the view that the e-target for core business would be profit-oriented while the e-target for non-core business would be revenue-oriented. This may be a source of Haier's problems with regard to the effect of its e-business strategy.

Haier's e-thrust

With the above strategic target in mind, Haier identified its strategic thrust as a concurrent pursuit of both low cost and

high value. Haier wanted to provide high value-added services along with superior products at the lowest total cost possible. Haier wanted to reduce its total working inventory and the associated working capital cost. It also wanted to reduce the cost of transaction by streamlining the commercial interface between business partners so as to share information. Haier also wanted to improve the value of its products with enhanced services and customization. Haier wanted to achieve the above ends not only in its domestic market but also in the global market. For example, Haier set up three key e-business objectives: (1) zero distance between customers and suppliers, (2) zero inventory, and (3) zero working capital. The first objective was directly related to the strategic thrust of high value by ways of product and service customization, as well as shortened cycle time in product development and logistic delivery, both of which required Haier's close cooperation with its customers and suppliers. Further, the objectives of zero inventory and zero working capital were directly related to the strategic thrust of low cost. However, there was no clear differentiation between Haier's core business and non-core businesses with regard to the choice of e-thrust, thus lacking the evidence to support the view that the e-thrust for core business would be value-oriented while the e-thrust for non-core business would be cost-oriented. Again, this may be a source of Haier's problems with regard to the effect of its e-business strategy.

Haier's e-posture

To accomplish its e-thrust, Haier chose both broad and narrow coverages for its configuration of business portfolio. Within its core business of household appliance sector, Haier produced 42 types of household appliances. It also diversified into

computer and cellular phone areas, which were somewhat related to its core business. Further, Haier had a certain level of vertical integration, and it had a fairly extensive supply chain. Nevertheless, the level of outsourcing of non-core operations in Haier was still rather limited. For example, Haier expanded its logistic unit to a great extent, so the logistic unit had an annual revenue over RMB20 billion (US\$2.4 billion) in 2002 or 27.7% of Haier's total annual sales. Further, Haier had a limited real global presence, which Haier tried to compensate for by establishing a strong virtual global presence. This implied that a real global presence could not be substituted by a virtual global presence, so Haier would have to work hard to establish its real global presence. Further, there was no clear differentiation between Haier's core business and non-core businesses with regard to the choice of e-posture, thus lacking the evidence to support the view that the e-posture for core business would be narrow while the e-posture for non-core business would be broad. This may another source of Haier's problems with regard to the effect of its e-business strategy.

Haier's e-mode

The most interesting among all the four dimensions of strategy content is e-mode. The strategic mode of Haier's e-business was clearly reflected by its e-business platform. Such a platform consisted of four elements. The first was Haier's SCM project, including its distributor management, supplier management and other corporate partnership management. The second was Haier's CRM project, including the programs for both institutional and individual consumers. The third was Haier's ERP project. The last and the most important was Haier's BPR project. The first two projects were closely tied with Haier's

B2B and B2C external networks, while the last two projects were closely tied to Haier's internal networks. The above four projects constituted Haier's e-business platform as its e-mode. Although they were all related to Haier's global effort, its SCM and CRM projects were more closely tied to Haier's global expansion.

Haier's SCM system as its external B2B network was built on the platform of *iHaier.com*. With this platform, Haier was able to seek its best suppliers, set up close partner relationships with their suppliers, and reduce the purchase cost while improving product quality. Haier planned to use this system not only for itself but also for other related companies. This platform had the functions of ordering, automated stock replenishment, payment processing and production control processes. This platform was built on an open architecture, where information was fully shared. Haier had not been a member of any neutral e-marketplaces yet. Further, *iHaier.com* limited itself only to the household appliance industry. Finally, Haier's platform only supported Haier's own procurement, even though Haier stated that it would also host third-party procurement in the future.

Haier's CRM system as its external B2C network was built on the platform of *eHaier.com*. This web platform had the function of taking online orders, but online payment was limited to selective cities only (most consumers paid upon delivery). However, Haier's B2C platform still only handled Haier's own products. It would carry other producers' products in the future. To support its B2C platform, Haier built one of the best distribution networks in China. Haier had more than 30 call centers in China's major cities, and more than 10,000 distributors that reached more than 60,000 rural areas in China. Further, Haier's B2C platform was able to process custom-

ized orders. Finally, Haier's B2C platform had a much weaker impact on the global consumers than that on the domestic consumers. Haier had been working hard to establish a global logistic distribution and delivery system to support its B2C and B2B platforms as well.

What is really unique about Haier's e-mode is its creative adaptation of the B2C model from the U.S. to China's special situations. Since many Chinese individual consumers did not have the direct access to the Internet at home, Haier adopted an innovative *B2B2C model*. Haier was trying to leverage its established distribution systems with its website system. Haier asked its distributors and retailers to provide the Internet access for its consumers. As a result, in addition to being the point of delivery, service and payment collection, Haier's distributors and retailers also serve as a point of providing product information, offering consultation or advice, and taking customized orders from the consumers who did not have the Internet access or did not feel comfortable placing online orders by themselves. Such a B2C platform was the unique feature of Haier's CRM system.

As discussed earlier, Haier had implemented an internal ERP system, which served as part of its IT system for its e-business strategy. The current problem of Haier's ERP system was that its internal logistic flows, capital flows and information flows were still separately handled by different internal sub-systems. This was due to the different times when various parts of the information systems were adopted. Haier would have to work hard to integrate its sub-systems and complete its internal ERP system. Haier had worked with many global IT partners (e.g., Lucent and SAP) and some consulting firms (e.g., McKinsey) for technical and

business advice. In a promising market with various entry barriers, such complementary alliances between local companies and foreign multinationals would be critical to the success of both types of companies (Chang, Chuang and Jan, 1998).

Haier had also restructured its organization and management process toward an e-management system through its continuous BPR program. Haier's BPR program had two major goals. First, it wanted to implement a shift from a traditional function structure to a flat customer-driven process-oriented market-chain structure. Second, it wanted to instill a new culture into the company, where an employee was responsible for customers and responsive to market signals rather than his or her boss.

The concrete examples of Haier's BRP system are its "Market Chain" program and its "Employee-as-SBU-Boss" program. The core value of the "Market Chain" program was to take customers (both external and internal) as the focus of all the activities. To accomplish that, Haier reorganized itself from the traditional functional structure to a process flow structure with four basic divisions: (1) commercial flow centers for acquiring sales orders, (2) workflow centers for manufacturing products, (3) logistic flow centers for distribution and delivery and (4) overseas centers for international activities. The central link between the four divisions was the flow of order information. In addition, the flows of capital and material were integrated with the flow of order information. Finally, the SCM and CRM systems were integrated with the above activities through the flow of order information. Together, the above activities constituted Haier's "Market Chain" program.

Besides the "Market Chain" program, Haier also implemented the so-called "Employee-as-SBU-Boss" program. First, ev-

ery unit in the company, regardless of its function or level, was granted the status of a profit center with full responsibilities of its own. Second, every employee, regardless of his or her function or level, was also granted the status of a profit center, with full responsibilities as if he or she was the boss of his or her own SBU. In short, the central theme of Haier's BRP was about the incorporation of external market competition into its internal operations so as to create an internal market network inside the company.

Further, the mode of Haier's entry into e-business was that of brick-click separation. Haier set up a separate unit with a small staff of 45 in 2000, Haier E-Business Co., which was responsible for the implementation of Haier's all e-business initiatives. This indicated that the e-business was not yet well integrated with the rest of Haier's business operations. Similarly, Haier's global presence was more virtual than real, although the trend was toward a better-balanced integration of its virtual and real elements.

Finally, there was no clear differentiation between Haier's core business and non-core businesses regarding the choice of e-mode, thus lacking the evidence to support the view that the e-mode for core business would be tight while the e-mode for non-core business would be loose. This is the final source of Haier's problems with regard to the effect of its e-business strategy.

The Process of Haier's e-Business Strategy

Haier's e-rhythm

Realizing that e-business was largely about the fast speed of information flow, capital flow and logistic flow, Haier accelerated all of its programs and projects. For instance, within the past three years, Haier

had made various changes to its organizational structure over forty times. Further, as a latecomer to the global competition, Haier had to accelerate its process of internationalization with whatever means available, including e-business.

More importantly, Haier saw speed as the source of its new core competence. Haier launched a series of projects (as part of its BPR program) to shorten the cycle time for new product development, global market access, logistic delivery and payment collection. The core of those projects was the application of e-business tools as the most effective in enhancing the speed of operations. For example, Haier ranked speed at the top of its three-pronged strategic initiative for 2002 (i.e., speed, innovation and SBU), where innovation and SBU were regarded as the means to achieve the end of speed. However, Haier did not differentiate its core business from its non-core business with regard to the tempo of e-business process.

Haier's e-directionality

Haier's e-business strategy had undergone a progressive sequence from an initial phase of trial-and-error to a later phase of maturity. Haier started its e-business program in 1998. Initially, Haier copied the model from the West to develop the websites, which did not work well in China. Later, Haier invented its unique and effective B2B2C model. Even later, Haier started to integrate its e-business effort with those of internationalization (which started in 1999) and BPR restructuring (which started in 1998). Despite the remaining problems, Haier's e-business effort is becoming increasingly more effective.

There were two good examples of e-directionality. The first was Haier's internationalization program, which underwent four phases. At the first phase, Haier

started to learn from the Western companies such as Dell for the Just-in-Time (JIT) system as well as GE for the diversification program. At the second phase, Haier started to join strategic alliances with the Western companies. At the third phase, Haier started to localize its overseas operations including local design, local production and local service. At the current fourth phase, Haier started to seriously build a global brand. The other example was Haier's logistic operation, which underwent three phases. At the first phase, Haier started to consolidate all the logistic operations into one business unit. At the second phase, Haier started to integrate its logistic unit with its SCM and CRM programs. At the third phase, Haier started to turn the logistic unit as a profit center that offers services to both internal customers and external customers (as the third-party logistic provider). However, Haier did not differentiate its core business from its non-core business with regard to the sequence of e-business process.

Haier's e-simultaneity

As indicated above, Haier did not integrate its e-business strategy with other initiatives at the early stages (e.g., the cases of brick-click separation and unbalanced virtual-real global presence), but Haier adjusted its approach later to incorporate them into a coherent stream of programs. The most significant integration had occurred in the areas of its global program and its restructuring program. In the last two years (2001 and 2002), there was a pattern of better synchronization with regard to e-business, internationalization and BPR, which would be much more pronounced in the years to come.

The best example of Haier's e-simultaneity was the link between the three e-business objectives (i.e., zero distance be-

tween customers and suppliers, zero inventory and zero working capital). The objective of zero distance implied that e-business was largely about meeting the real need of the customers, which could be accomplished via product and service customization, as well as shortened cycle time in product development and logistic delivery. Zero distance required well-synchronized cooperation between customers and suppliers. The objective of zero inventory implied the need for effective JIT, SCM and CRM systems, so the achievement of this objective relied heavily on the achievement of the objective of zero distance. Similarly, the achievement of the third objective (i.e., zero working capital) had to rely on the achievement of the above two objectives. Put differently, the three objectives were closely related, so a good synchronization among the three was critical. However, Haier did not differentiate its core business from its non-core business with regard to the synchronization of e-business process.

The Effect of Haier's e-Business Strategy

The overall effect of Haier's e-business strategy was generally positive. The effect of Haier's e-business strategy could be evaluated by three sets of measures. The first set was the measures of *reduced cycle time* and *enhanced customization* according to the objectives of zero distance and fast speed. The evidence strongly suggested that Haier's e-business strategy was very effective. For instance, the cycle time for developing new products was reduced from 4-6 months in 2000 to 2-3 months in 2002. Further, the cycle time for logistic distribution was reduced to a great extent. Haier could distribute its items in less than eight hours within major cities; less than 24

hours within the same province; and less than four days nationally inside China. This was also the case overseas. For instance, Haier reduced its delivery time in Europe by half during the past three years. The export delivery cycle time was reduced from more than 15 days in 2000 to less than seven days in 2002. Another example of the effect of e-business on Haier was that its cycle time from sale order to procurement order was reduced from more than seven days in 2000 to less than one hour in 2002. Also in 2002, Haier achieved a significant milestone by having a perfect 100% of ordering online. Finally, the procurement cycle was reduced from 10 days in 2000 to three days in 2002.

In terms of enhanced customization, Haier also achieved a lot. The customized orders accounted for more than 3% of the total orders, up from less than 1% in 2000. Further, newly innovated products accounted for more than 60% of its total sales in 2002. Haier was able to introduce new products with an average rate of 1.5 per day, and also apply new patents with an average rate of 2.6 per day. Let us take a closer look at one specific instance. When Haier announced its "customized refrigerator" in August, 2000, within just one month, it received orders of more than 1 million customized refrigerators, which was about one-third of Haier's annual sales of refrigerators. By 2002, about half of Haier's orders for refrigerators were customized.

The second set was the measures of *cost saving* and *cooperative value creation* according to the objectives of zero inventory and zero working capital. The evidence strongly suggests that Haier's e-business strategy was largely successful. For instance, the size of procurement staff was cut by one-third from 2000 to 2002, and the cost of procurement was dropping at an annual rate of 5%. Further, the average

inventory turnover time was reduced from more than 30 days in 2000 to less than 18 days in 2001 and further down to 10 days in 2002. With regard to the SCM program, the number of suppliers was reduced from more than 2,300 in 2000 to 721 in 2002, among which 59 were the world's top 500 companies. More than 70% of the suppliers participated in various joint R&D projects with Haier. There was also measured success in the CRM area where the goal was to help the customers succeed in their business ventures.

In terms of zero working capital, Haier also achieved a great deal. For instance, the turnover of its working capital for supply procurement was reduced from more than 36 days in 2000 to less than 10 days in 2002. Further, more than 80% of the online orders were paid online in 2002. During the past three years, the old inventory dropped by about 74%, the warehouse space utilization was improved by about 100%, and the working capital tied up with the inventory dropped by about 67%.

The last set was the measures of *overseas sale, profit and brand recognition according to the objective of internationalization*. Despite the increasingly large revenue base, Haier still achieved a high export growth rate. For instance, Haier's export sales grew over 100% in 2000, over 50% in 2001 and 37% in 2002. Haier had 62 overseas distributors covering more than 30,000 overseas distribution terminals. Haier's products reached more than 100 countries. Haier's export to the U.S. and Europe accounted for about 60% of its total export. Haier was one of the largest exporters in China.

Haier enjoyed a high market share in many overseas markets. For instance, Haier's small refrigerators had a market share of 25% in the U.S.; its freezers had a market share of 28% in Indonesia; its

air-conditioners had a market share of 60% in Uruguay; and its washing machines had a market share of 30% in Sri Lanka. In addition to the overseas markets, Haier's refrigerators had a domestic market share of 33.4%; its freezers had a domestic market share of 41.8%; its air conditioners had a domestic market share of 30.6%; and its washing machines had a domestic market share of 30.5%. In sum, the effect of Haier's e-business strategy was generally positive, but not without any problems.

The Remaining Problems of Haier

Despite its apparent success, Haier still faced many challenges. First, there was no proven e-business model either in China or abroad for Haier to copy. However, Haier was good at learning from the successful practices of other companies such as GE and Dell, and Haier was creative in developing its own unique e-business models (e.g., the B2B2C model) in a trial-and-error process. Second, the e-business conditions in China limited Haier's e-business expansion. Many of Haier's suppliers did not have adequate in-house information systems, and even Haier's own in-house IT system had not been fully integrated. Third, Haier was fighting an up-hill battle in its pursuit of global brand. Judged by revenue size, Haier was almost ready to join the Global Top 500 Club. However, Haier still lacked a strong global presence with a strong global brand.

Finally, there was a concern that Haier might have made several wrong choices for its e-business strategy content. It was controversial for Haier to focus so much on joining the Global Top 500 Club as its strategic intent and achieving revenue volume as its strategic target. Further, Haier might have to reexamine its strategic posture of broad diversification, which was

largely driven by its single-minded pursuit of the Global Top 500 Club membership. Haier might have expanded too far beyond the scope of its core competency and its managerial control. Haier has failed to differentiate its core business from its non-core business in both content and process of e-business strategy. This could be the most serious mistake for Haier, as it might have missed the biggest potential benefit of e-business—the concurrent pursuit of paradoxical ends via balanced means according to the holistic, dynamic and dialectical network paradigm.

Discussion About the Case Evidence

The case evidence can be summarized in Figure 2 to be analyzed against Figure 1.

In general, the case evidence of Haier provided partial support for most propositions. Specifically, the case evidence did not lend much support for Proposition 1 about the choice of strategic target. The case evidence provided partial support for the other six propositions. The partial support is largely due to the lack of Haier's differentiation between its core business from its non-core business regarding both the content and process of e-business strategy. The failure to make such distinction might have hindered Haier from benefiting fully from e-business, which could be the root problem of its current e-business strategy and would be the biggest obstacle to its future e-business success. The problem is related to such general problems in China as a pride-driven focus on large size, the under-development of component supply industries, and the general lack of effective legal protection. The significant practical implication is that a company must clarify its strategic core so as to build its e-

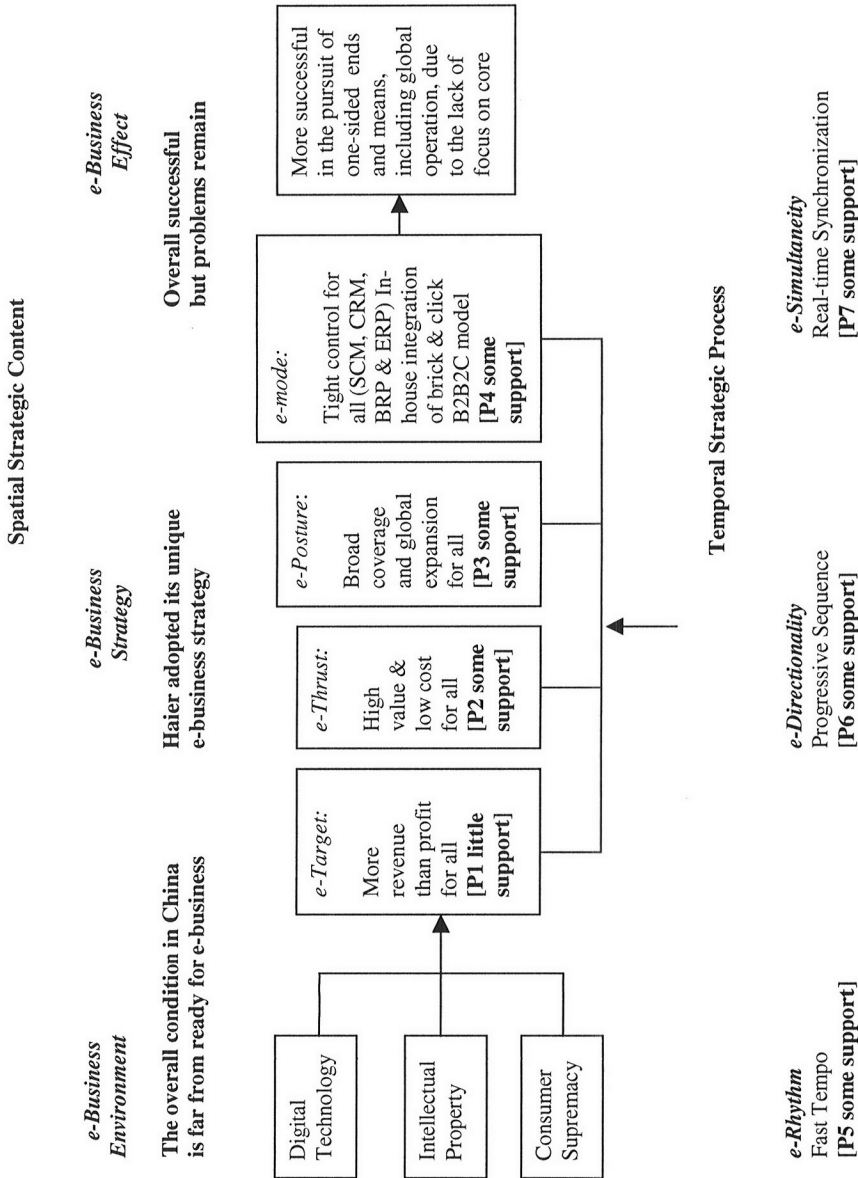
supply and e-demand chains around its core.

CONCLUSION

This paper has attempted to make two basic contributions. First, this paper has proposed a holistic, dynamic and dialectical conceptual framework of e-business. The proposed framework offers a working model by which a firm can map out its strategic choices with regard to the critical issues of e-business (e.g., the antecedents, content, process and consequence of e-business, such as the paradoxes of growth-profit, customization-standardization, specialization-diversification, core-non-core, competition-cooperation, tight-loose, brick-click and spatial-temporal). The paper has conducted a case study to test the proposed model. Further research, both conceptual and empirical, is needed to expand the application of the proposed framework.

Second, the paper has also provided practical lessons for the local firms in the developing countries to avoid the major pitfalls of e-business. The local firms need to be creative in adapting the business models from the West to their unique local conditions (e.g., Haier's B2B2C Model) so as to overcome the unique barriers in the developing countries. Strategic alliance with foreign partners is imperative for the local firms to effectively implement e-business strategies. The local firms must build their in-house information systems before initiating their e-business programs. They need to be patient and persistent with their internationalization programs. They particularly need to avoid the pitfall of a single-minded pursuit of one-dimensional objectives (e.g., the over-emphasis on growth target, cost thrust, broad posture, tight mode, fast tempo, non-synchronized coordination and premature leapfrogging sequence).

Figure 2: The Evidence of Haier's e-Business Strategy



REFERENCES

- Afuah, A. & Tucci, C.L. (2000). *Internet Business Models and Strategies: Text and Cases*. New York: McGraw-Hill.
- Arndt, M. (2002). Can Haier freeze out Whirlpool and GE? *Business Week Online* (April 15), http://www.businessweek.com/bwdaily/dnflash/apr2002/nf20020411_3930.htm.
- Bartlett, C.A. & Ghoshal, S. (1989). *Transnational Management*. New York: The Free Press.
- Bin, Q. & Chen, S. (2003). Cultural differences in e-commerce: A comparison between the U.S. and China. *Journal of Global Information Management*, 11(2), 48-55.
- Chang, T., Chuang, C. & Jan, W. (1998). International collaboration of law firms: Modes, motives and advantages. *Journal of World Business*, 33, 241-262.
- Dunning, J.H. (1995). Reappraising the eclectic paradigm in an age of alliance capitalism. *Journal of International Business Studies*, 26, 461-491.
- Economist. (1999). Survey: Business and the Internet. *Economist*, (June 26), s1-40.
- Economist. (2000a). Survey: E-commerce. *Economist*, (February 26), s1-54.
- Economist. (2000b). Survey: The new economy. *Economist*, (September 23), s1-45.
- Economist. (2000c). Survey: E-management. *Economist*, (November 9), s1-63.
- Eisenhardt, K.M. (1989). Building theories from case study research. *Academy of Management Review*, 14, 532-550.
- Farjoun, M. (2002). Towards an organic perspective on strategy. *Strategic Management Journal*, 23, 561-594.
- Financial Times. (1999). World's most respected companies: Entrepreneurs win high admiration. *Financial Times* (Special Edition, December 7) <http://specials.ft.com/ln/specials/sp41d2.htm>.
- Flannery, R. (2001). China goes global: The ambiguous Haier leads an international brand push by mainland multinationals. *Forbes*, (August 6), 36-45.
- GEO Award. (2000). GEO Conference 2000 highlights. A.T. Kearney, <http://atkearney.com/geoaward/conference.htm>.
- Hambrick, D.C. & Fredrickson, J.W. (2001). Are you sure you have a strategy? *Academy of Management Executive*, 15 (4), 48-59.
- Kalakota, R. & Robinson, M.M. (2001). *E-Business 2.0*. New York: Addison-Wesley.
- Kelly, K. (1998). *New Rules for the New Economy: 10 Radical Strategies for a Connected World*. New York: Penguin Group.
- Kuhn, T.S. (1970). *The Structure of Scientific Revolution*. Chicago: University of Chicago Press.
- Li, P.P. (2003). Toward a geocentric theory of multinational evolution: The implications from the Asian MNEs as late-comers. *Asian Pacific Journal of Management*, 20(2), 217-242.
- Li, P.P. (2001a). Towards a conceptual framework of e-business. *E-Business Review*, 1, 132-135.
- Li, P.P. (2001b). The paradoxes of e-business and the network paradigm. *Decision Line*, (May), 14-16.
- Li, P.P. (1998a). Towards a geocentric framework of organizational form. *Organization Studies*, 19, 829-861.
- Li, P.P. (1998b). The evolution of multinational firms from Asia. *Journal of Organizational Change Management*, 11, 321-337.
- Li, P.P. (1997). The unique nature of international joint venture in the People's

Republic of China . In *Advances in Chinese Industrial Studies* (Volume 5, pp. 13-34). [S. Stewart and A. Carver (Eds.)], Greenwich, CT: JAI.

Li, P.P. (1995). Inevitability, desirability and resolvability of paradox: A dialectic approach to global strategy. *Presented at the Annual Meeting of the Academy of Management*, Vancouver, Canada, August 5-8.

Li, P.P. (1994). Strategic profile of indigenous MNEs from NIEs: Case of South Korea and Taiwan. *The International Executive*, 34, 525-537.

Li, M. & Liu, Y. (2002). The foggy Haier. *Chinese Entrepreneur*, 208, 12-26.

Numagami, T. (1998). The infeasibility of invariant laws in management studies: A reflective dialogue in defense of case study. *Organization Science*, 9, 2-15.

Parkhe, A. (1993). "Messy" research, methodological redispositions, and theory development in international joint ventures. *Academy of Management Review*, 18, 227-268.

People's Daily. (2002). Haier takes lead in exporting electrical appliances. *People's Daily Online* (April 15), http://english.peopledaily.com.cn/200204/15/eng20020415_94065.html.

People's Daily. (2002). Fortune selects most favored foreign firms in China. *People's Daily Online* (June 13), http://english.peopledaily.com.cn/200206/13/eng20020613_97789.html.

Porter, M.E. (1980). *Competitive Strategy*. New York: The Free Press.

Porter, M.E. (1990). *The Competitive Advantage of Nations*. New York: The Free Press.

Porter, M.E. (2001). Strategy and the Internet. *Harvard Business Review*, 79(3),

63-78.

Rayport, J.F. (1996). The virus of marketing. *Fast Company*, 6, 68.

Rayport, J.F. & Jaworski, B.J. (2001). *E-Commerce*. New York: McGraw-Hill/Irwin.

Roberts, D. (2002). Baby steps for a Chinese giant. *Business Week Online*, (July 17), http://www.businessweek.com/bwdaily/dnflash/jul2002/nf20020717_8966.htm.

Roberts, D., Arndt, M. & Zammert, A. (2002). Haier's tough trip from China. *Business Week Online* (April 1) http://www.businessweek.com/magazine/content/02_13/b3776139.htm.

Shapiro, C. & Varian, H. (1999). *Information Rules*. Cambridge, MA: Harvard Business School Press.

Sprague, J. (2002). Haier reaches higher. *Fortune* (International Edition, September 16).

Sprague, J. (2002). China's manufacturing beachhead. *Fortune* (Industrial Management Edition, October 28).

Stylianou, A.C., Robbins, S.S. & Jackson, P. (2003). Perceptions and attitudes about e-commerce development in China: An exploratory study. *Journal of Global Information Management*, 11(2), 31-47.

Sun, J., Ji, J. & Wang, F. (2001). *Direct from Haier: The Growth of A Chinese Firm* (in Chinese). Beijing, China: Business Management Publishing House.

Yan, J & Hu, Y. (2001). *Haier: Made in China* (in Chinese). Hannan, China: Hanan Publishing House.

Xinhua News Agency. (2002). Haier rates as world's top refrigerator brand. *Xinhua News Agency*, (October 15), 1.

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