

The Relationship between Business-model Innovation and Firm Value: A Dynamic Perspective

Yung C. Ho, Hui C. Fang and Ming J. Hsieh

Abstract—When consistently innovative business-models can give companies a competitive advantage, longitudinal empirical research, which can reflect dynamic business-model changes, has yet to prove a definitive connection. This study consequently employs a dynamic perspective in conjunction with innovation theory to examine the relationship between the types of business-model innovation and firm value. This study tries to examine various types of business-model innovation in high-end and low-end technology industries such as HTC and the 7-Eleven chain stores with research periods of 14 years and 32 years, respectively. The empirical results suggest that adopting radical business-model innovation in addition to expanding new target markets can successfully lead to a competitive advantage. Sustained advanced technological competences and service/product innovation are the key successful factors in high-end and low-end technology industry business-models respectively. In sum up, the business-model innovation can yield a higher market value and financial value in high-end technology industries than low-end ones.

Keywords—Business-model, Dynamic Perspective, Firm Value, Innovation

I. INTRODUCTION

THE emergence of information and communications technology has deconstructed conventional organizational structures, blurred the business scopes of companies and

industries, and diversified methods of transmitting and creating value.

Regardless of established ages, companies have been able to use innovative business-models to reconstruct their business scopes, and successful cases have emerged (such as Dell, Apple, TSMC, etc.).

Starting around 2000, industries, governments, and scholars have been eagerly investigating the subject of business-models [1], [2]. After a decade of discussion, most scholars and practical managers agree that business-model innovation can successfully lead to a competitive advantage. However, some scholars point out that companies must continuously improve or innovate their business-models to maintain their competitive advantage in increasingly intense volatile environments [3], [4], [5]. This suggests that studying business-model is a strategic issue, and business-model is also a dynamic process of evolution and transformation [2], [4], [6]-[11].

However, there has been little empirical research to date on this subject [2], [5]. Drawing on contingency theory and dynamic capability theory, this study argues that studying business-model needs a dynamic perspective, and then uses longitudinal data concerning two companies since the time they were listed to investigate the development process of business-model innovation. The results of this study will help to close the aforementioned research gap.

Companies' innovation methods may consist of incremental innovation involving existing products or radical innovation in the form of extensions or breakthroughs involving existing technologies [12], [13]. This study employed innovation theory to investigate two dimensions of the development of business-model innovation. The first consists of innovation achieved through new arrangements in components [7], [14], the second consists of innovation through targeting markets. This study relies on analysis of these two dimensions to classify business-models as employing different types of innovation.

Y. C. Ho is a Professor of Department of Business Administration, National Chung Cheng University, 168, University Rd., Min-Hsiung, Chia-Yi, Taiwan (phone: 886-5-2720411-34300; e-mail: Bmaych@ccu.edu.tw).

H. C. Fang is a Post Doctoral Researcher of the Department of Business Administration at National Chung Cheng University, Taiwan (e-mail: hcfang90@yahoo.com.tw).

M. J. Hsieh is a Ph.D student of Department of Business Administration, National Chung Cheng University, Taiwan (e-mail: minlu7895@hotmail.com).

The research results can facilitate understanding of the business-model innovation process and its details.

Although scholars generally agree that an innovative business-model can yield a competitive advantage, this concept raises the question of whether different types of business-model innovation have different effects on firm value [2]. This study makes a significant contribution to fill this research gap by using longitudinal data analysis to examine the effect in different types of business-model innovation on firm value. In addition, since business-model innovation can be able to seize market opportunities in response to the external environment and the state of competition, the external environment is an important contingent factor affecting business-model changes and innovation [4], [15], [16]. When the industry environment in which a company is situated is highly complex, uncertain, and interdependent, this study raises two questions: Which type of business-model innovation vary? What kind of relationship exists between the type of innovation and firm value?

This study selected two companies—HTC and 7-Eleven (Taiwan)—as research subjects because of the different industry environments. This study observes the relationship between the developments of business-model innovation by the two companies since they were listed. This study has four objectives: 1) using a dynamic perspective to explain the necessity of continued business-model innovation; 2) gaining an understanding of the details of business-model innovation development by analyzing two dimensions of business-model innovation; 3) establishing the different types of business-model innovation; and 4) investigating the relationship between different types of business-models Innovation and firm values by using the industry environment as a contingent factor.

II. LITERATURE REVIEW

A. Definition and components of a business-model

Along with the emergence of the knowledge economy around 2000, the Internet has increased unfettered communication and enabled the transmission of vast amounts of diverse information in a highly economical fashion. Due to this inexpensive and effective information technology, companies gained a wider range of innovative business-models to choose. The question of how to innovate business-model can successfully yield a competitive advantage has become an important issue in the field of business strategy [11]. A better understanding of the definition of 'business-model' and its components has gradually materialized over the decade.

Osterwalder *et al.* [1] View a business-model as being the embodiment of a company's business strategy and the methods adopted to effectively utilize resources and provide optimal customer value. Shafer *et al.* [17] suggest that business-model is on the basis of the firm's strategic choices, which can create value in conjunction with value network partners and consequently yield profit. Teece [4] proposes that a business-model describes a company's mechanisms for creating, transmitting, and obtaining value. Casadesus-Masanell and Ricart [3] suggests that a business-model is an extension of a company's logic, its operating methods, and creating value for stakeholders. Zott and Amit [18] note that a focal firm's business-model is to exploit a business opportunity by creating value for the parties involved. The definitions of what a business-model is, as offered by these scholars, reveal that value, activities, and external linkage are common elements. This study defines a business-model as the framework by which a company engages in internal and external activities, and thereby enhances customer value.

With regard to research on the components of business-models, scholars propose general lists of the constituent elements of a business-model, which serve to flesh out their definitions. [19]-[21]. In addition, some scholars describe the details of key business-model elements and also allow the elements to be manipulated, a bit like building blocks. For instance, Morris *et al.* [15], propose that the six major elements of business-models are product, market, internal capability, competitive strategy, economics, and individuals/investors. Based on the studies of Chesbrough [6], Demil and Lecocq [7], this study breaks down business-models into three core components, and employs changes and innovation in components to explain the process of business-model innovation. The three core components are defined as follows:

(a)Value propositions: According to Amit and Zott [19], companies' value propositions reflect the content of their transactions with customers and their unique deployment of organizational resources.

(b)Competence: Competence refers to the capabilities and knowledge developed by the manager and the organization, and is able to improve, integrate, or modify the services. In order to facilitate assessment of innovation, this study defines the scope of competences to technological competences.

(c)Organizational structure: Organizational structure includes both organizational activities and relationships with other organizations for the purpose of integrating and using

their resources. This study defines the scope of organizational structure to value chain activities and links with external organizations (stakeholders) or special linking mechanisms.

B. Dynamic perspective of business-model innovation

The dynamic perspective used in this study to explain business-model innovation is based on two major theories: contingency theory and dynamic capability theory. In a changing environment, any competitive advantage is temporary, and companies must have sufficient strategic flexibility to quickly respond to the external environment to maintain a sustained competitive advantage [4], [21]-[24]. According to contingency theory, a business-model must possess flexibility and respond to the external environment [21].

The use of the business-model is a process of continuous selection, adaptation and improvement. With regard to empirical studies, the case studies of Chesbrough and Rosenbloom [25], Brink and Holmen [14] suggests that successful companies must continuously change the business-models since they were founded. Taking the Naturhouse health product franchise as an example, Sosna *et al.* [2] investigated how its managers changed their original business scopes and established a new business-model. Thus they examined the pathway by which the franchise gradually expanded into foreign markets.

This study proposes that business-model innovation is a cumulative process while newly-founded companies may rely heavily on their founders' experience and special expertise. Over the time, companies must employ business-model innovation to respond to changes in the external and internal environments, and anticipate market needs, in order to continue to create value for customers. This study consequently employs a dynamic perspective in observing the process of business-model innovation and resolves questions of how business-models can be innovated.

C. Types of business-model innovation

This study employs two manifests to investigate types of business-model innovation:

(a) Components of business-model

Innovation is unique to a firm and its history [13]. A company's innovative direction will certainly not be arbitrary, but rather be closely connected with the nature of the company's existing competences and range of its current products. It will also follow the pathway selected by the company in the past [7]. As a consequence, for any particular firm, the results of innovation will differ depending on changes

in the firm's technology and differences in its existing product technology. Smaller changes can be termed incremental innovation, while larger changes can be termed radical innovation [26]. This study employs this perspective to explain business-model innovation. Companies can achieve innovation through the rearrangement of the components of their existing business-model. The business-model is radical innovation when the degree of innovation as well as the number of affected components is high, incremental innovation when both elements are low.

(b) Target market

Innovations also differ in their target markets [13]. As a consequence, the degree of business-model innovation will be correlated with the distance between the new target market and the company's existing market. This study proposes that the development of business-model innovation can be analyzed from the point of view of a company's choice of existing or new target markets.

D. Business-model innovation and firm value

An innovative business-model can yield a competitive advantage, and therefore have a positive influence on firm value [27]. However, there has been little research on how different types of business-model innovation affect firm value. In addition, firm value comprises the two major aspects of market value and financial value. Of these, market value is connected with economic rents (market response) and radical innovation, while financial performance is connected with normal profits and incremental innovation [28]. This study is concerned about the questions of whether business-model innovation can improve the financial performance of both high-end and low-end technology companies, and whether it can yield a highly positive response.

III. RESEARCH DESIGN

This study employed case studies with explorative methodology in analysis [29]. After selecting HTC and 7-Eleven (Taiwan) as research subjects, this study collected longitudinal data on the two companies since they were established, and investigated the relationship between the development of business-model innovation and firm value. HTC and 7-Eleven were chosen as the subjects of this study for two reasons. First, both of these two companies have made clear changes in their business-model design, and these changes are observable and meaningful in this study. Second, the two companies are respectively representative high-end and low-end technology industries.

HTC is a representative high-end technology firm, was established in 1997, and listed in 2002. Its business-model has changed dramatically from OEM to ODM and then to OBM, demonstrating tremendous innovation. HTC's innovation has been accompanied by rapid growth in sales and market value. HTC is clearly a highly representative subject in business-model research. 7-Eleven was selected as a representative low-end technology firm. 7-Eleven was Taiwan's first chain convenience store when it was established in 1979, and remains the leading convenience store brand. In 2010, it had 4,750 stores nationwide and a market share of over 51%; its market share is more double that of its closest competitor. 7-Eleven continues to engage in service innovation by exploiting its channel and brand advantage. It has joined forces with other firms from different industries to offer a wide range of innovative services. This study's data sources consisted of the financial database of the official Market Observation Post System, TEJ, company web sites, annual reports, monographs, biographies, and reports in magazines and newspapers. Data coding at the database source and recording by the recorders were both subjected to triangulation test.

The three dependent variables in this study consisted of sales growth rate, financial value (ROE), and market value (MV). The two independent variables consisted of types of business-model innovation and target markets. Following the suggestion of [14], the type of business-model innovation was taken to consist of either radical or incremental innovation. If a business-model had only one innovative component, it was taken to represent incremental innovation. If a business-model simultaneously had at least two innovative components, it was considered to be representative of radical innovation. Target markets were classified as new and existing markets. The criterion to distinguish the two markets is whether a company has reliable information concerning the preferences of customers in its target markets [30]. Finally, the moderating variable in this study is industry technology as a proxy of environmental turbulence.

IV. EMPIRICAL CASES

A. HTC

HTC was founded in 1997, and since that time has striven to produce fine, world-class products. As a consequence, HTC has achieved several global technological firsts and introduced a number of acclaimed products. For instance, HTC introduced the first pocket PC in 1998 and the first wireless pocket PC using the Microsoft operating system in 2002; it began mass producing the world's most compact smart phone in 2004.

During the 13-year period from 1997 to 2010, HTC's business-model has undergone three bursts of revolutionary innovation.

This study divided the evolution of HTC's business-model into three stages in order to investigate the arrangement of components and design (Table I). During the first stage (1997 – 2001), HTC was a specialized PDA designer and OEM. Because HTC was an OEM and ODM firm, the value that it transmitted to its major ICT brand firm customers consisted chiefly of low cost and high efficiency. Due to HTC's technology development efforts, and its links to external strategic partners such as Microsoft, it was able to acquire and integrate key technologies. This enabled HTC to develop highly competitive new products such as PDAs. This laid a solid foundation for HTC's subsequent R&D and quality improvement efforts.

During the second stage (2002-2005), although HTC still continued to play a conventional ODM role in its value chain, it entered the field of communications technology, successfully developed high-end cell phones, and shifted its focus to communications products. In conjunction with its external partners, HTC adopted an innovative business-model emphasizing customized wireless communications products. This enabled the company to shift from contract manufacturing for major brands to entering markets in cooperation with European telecoms, placing it in much more direct contact with its ultimate customers. During this cooperation process, HTC satisfied the needs of the market through the custom R&D of high-end devices in conjunction with its telecom partners. This business-model not only enabled telecoms to obtain their own brand cell phones, but also encouraged customers to use services and functions greatly which provided by the telecom through the telecom's participation in product design, so that increased the telecoms' profits. The R&D manufacturing experience of customized cell phone enabled HTC to accumulate much more direct knowledge of consumer markets than ordinary ODM firms; it also established good relationships with marketing and service systems.

During the third stage (from 2006 to the present), HTC launched its global brand strategy and took steps to promote its own brand. The company continued to introduce new forms of cell phones annually, and differentiated its products from Apple's i-phone through its very complete smart phone line. Relying on hardware and software integration capabilities accumulated during the first two stages, HTC could develop innovative capabilities and participate in operating system drafting (such as via the Google-led Open Handset Alliance; OHA) at an early period. As a result, HTC was able to introduce

the first touch-control smart phone in 2007, followed by the stylish Touch Diamond in 2008.

It subsequently introduced the world's first Android cell phone in conjunction with Google and the leading mobile communications firm T-mobile in 2009, and remained a global smart phone leader in 2010. These successes confirmed HTC's industry leadership and gave it a commanding presence among Google's search engine developers. Although many other major international telecoms had introduced their own Android cell phones by 2011, HTC's ongoing innovation in such areas as user experience meant that it no longer had to depend on monopolization of the Android operating system to attract consumers to buy its products. As a consequence, HTC's market value became the world's second cell phone brand behind Apple in April 2011.

In the first stage, HTC's three innovative components consisted of new product forms, technological competence, and external partners, and add another component, transmitting value, in the second and third stages. As a consequence, HTC's business-model innovation constituted radical innovation throughout three stages (Table I). In the first stage, because HTC was newly established, all its customers were also new. In the second stage, it inherited roughly 40% of its customers from the existing contract manufacturers; the remaining 60% of its customers were telecom partners attracted by HTC's innovative business-model. In the third stage, 90% of HTC's customers were direct consumers participating in its new business-model. Fig. 1 shows the relationship between HTC's business-model innovation and its target markets (Table II) during the three stages of its development. HTC's firm value is shown in Table III.

TABLE I
BUSINESS-MODEL COMPONENTS OF HTC

Component / Stage	1997-2001 (I)	2002-2005 (II)	2006-2011(III)
A. Value proposition	Low cost, high efficiency	<i>Enhancing telecoms' profitability and flexibly responding to the market</i>	<i>Innovation, enhancing user experience</i>
(a) Value delivery			
(b) New product forms	<i>PDA's</i>	Providing telecoms with customized high-end cell phones	<i>Branded smartphone</i>
B. Technological competence	Hardware	<i>2G communications R&D and product design</i>	<i>3G communications R&D and product design</i>
	<i>Operating system integration</i>	Operating system integration	<i>Operating platform integration</i>
C. Structure			
(a) Value chain activities	OEM+ODM	ODM	OBM
(b) External partners	<i>Microsoft</i>	<i>Global telecoms</i>	<i>OHA</i>

Bolded and italicized items are key elements of HTC's innovative business-model

TABLE II
HTC'S TARGET MARKETS

Market / Stage	1997-2001 (I)	2002-2005 (II)	2006-2011(III)
New	Global ICT brands (100%)	Telecoms (60%)	Consumer market (90%)
Existing		Global ICT brands (40%)	Telecoms (10%)

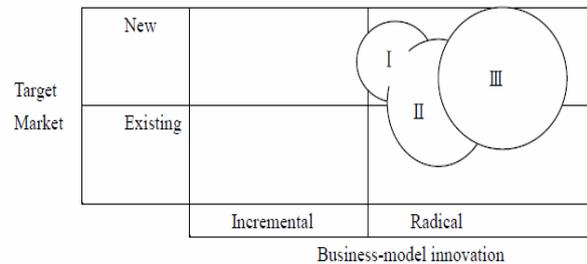


Fig. 1 Types of business-model innovation of HTC

TABLE III
FIRM VALUE OF HTC UNIT: USD MILLION

Item / Year	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sales	583	622	1072	2247	3203	3579	4808	4395	7290
Growth of Sales (%)	-	6.7	72.3	109.6	42.5	11.7	34.3	-8.6	65.9
ROE (%)	39	31	41	69	77	59	49	36	56
MV ^a	710	850	1124	3565	11075	9572	13821	9939	14253

^a Market Value = The stock price × the number of shares of outstanding

B. 7-Eleven convenience stores

7-Eleven was established in 1979, and was the first chain convenience store to offer 24-hour service in Taiwan. It has remained the leading convenience store brand in Taiwan, and currently has a market share of over 51%. Apart from being a general retail channel, 7-Eleven positions itself as a multifunctional "community service center" able to satisfy all consumer needs, and it seeks to lead consumer trends and change consumers' lifestyles. This study divides the development of 7-Eleven's business-model into three stages. During the first stage (1979-1990), 7-Eleven first began 24-hour service and sold convenience products. Because the company had just been established, it placed its emphasis on increasing its number of stores so that it could achieve economies of scale. It also established a logistics system capable of achieving the goals of convenience and efficiency.

During the second stage (1991-2001), 7-Eleven adopted a POS sales management system, and promoted the sharing of high-quality information between 7-Eleven headquarters,

franchise stores, and upstream vendors. The POS system helped franchise stores perform sales analysis. In addition, 7-Eleven headquarters also communicated the consumer tastes and needs that it had discovered through its analysis to vendors, allowing the revision of products.

7-Eleven established a "manufacturing and sales alliance" system with upstream vendors, and worked together with manufacturers to develop products meeting consumers' needs; these products were exclusively sold at 7-Eleven stores. 7-Eleven further provided a real-time "vendor collaboration management system" to all vendors. This system allowed vendors to query sales of their products and the state of inventory, which facilitated their own production scheduling and inventory management. 7-Eleven regularly provided quality management assistance to its vendors, ensuring stability and consistent quality throughout its supply chain. 7-Eleven headquarters consequently used online procedures to ensure extensive, free-flowing information interchange between upstream and downstream members of its supply chain. 7-Eleven's awareness of consumers' needs ensured that it could transmit correct, prompt value via the development of appropriate new products.

During the third stage (2002- 2011), 7-Eleven stepped outside its up-and downstream supply chain, and embarked on innovation of diversified services in conjunction with various strategic partners. For instance, 7-Eleven now offers such services as advance ordering of traditional New Year dishes pre-ordered, iCash services, financial ATM services, and acceptance of bill payments, express service, and ibon e-commerce. Due to links with firms in other industries, 7-Eleven stores are able to provide innovative services going far beyond those offered by conventional convenience stores, creating value exceeding consumers' expectations.

The customer knowledge that 7-Eleven has obtained from its POS system and large network of stores is employed in new product development. For instance, apart from accurate consumer intelligence, the success of 7-Eleven's City-cafe can also be attributed to small-scale experiments at demonstration stores, followed by gradual revision, and re-introduction. The 7-Eleven chain is no longer just a convenience store channel, but is rather a source of service innovation in conjunction with partners in other industries. 7-Eleven's ability to steer consumer behavior is the ultimate guarantee of its brand value.

In the first stage, two innovative components of new service forms and value chain activities are included. In the second stage, three components of new service forms, technological competence, and external partners are shown, and add another

component, transmission of value, in the third stage (Table IV).

7-Eleven consequently pursued radical innovation throughout the three stages of its business-model development. Since 7-Eleven was newly established during the first stage, it chiefly sought customers among persons who would ordinarily go to traditional sundries stores, and its customers were therefore all new. In the second stage, roughly 50% of its customers were inherited from the first stage, and the remaining 50% consisted of customers attracted by the chain's new stores and new services. During the third stage, more than 60% of its customers were attracted by the chain's new, innovative services, and the company has also sought to enhance the loyalty of the existing customers constituting the remaining 40% (Table V). Fig. 2 shows the relationship between 7-Eleven's business-model innovation and target markets during its three stages of development. Table VI summarizes 7-Eleven's firm value.

TABLE IV
BUSINESS-MODEL COMPONENTS OF 7-ELEVEN CHAIN STORES

Component / Stage	1979-1990 (I)	1991-2001 (II)	2002-2011(III)
A. Value proposition	Convenience	<i>Prompt, reliable convenience</i>	<i>Outstanding convenience surpassing expectations</i>
(a)Value delivery			
(b)New service form	Providing conventional convenience store products with 24-hour service	Plentiful convenience store product lines	<i>Service innovation much better than expected from a convenience store</i>
B. Technological competence	Economies of scale Establishment of a logistics system	<i>Adoption of POS</i> Integration of supply chain information	Ability to develop forward-looking products reflecting the market's needs
C. Structure			
(a)Value chain activities	<i>Chain store</i>	Vertical integration	<i>Vertical + horizontal integration</i>
(b)External partners	Franchise stores	<i>Upstream vendor</i>	<i>Diversified alliances with vendors and strategic partners</i>

Bolded and italicized items are key elements of 7-Eleven's innovative business-model

TABLE V
TARGET MARKETS OF 7-ELEVEN CHAIN STORES

Market / Stage	1979-1990 (I)	1991-2001 (II)	2002-2011(III)
New	Customers shifting from traditional market (100%)	New customers from continuing expansion efforts (50%)	New customers attracted by innovative services (60%)
Existing		Customers shifting from traditional market (50%)	Continuing efforts to boost loyalty (40%)

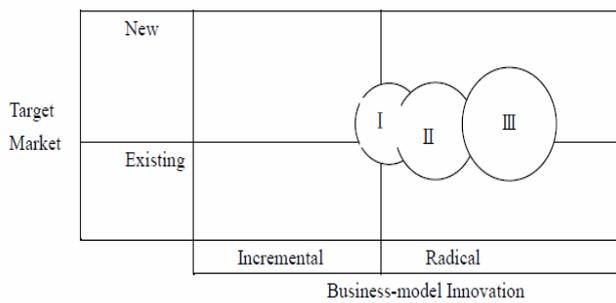


Fig. 2 Types of business-model innovation of 7-Eleven chain stores

TABLE VI

FIRM VALUE OF 7-ELEVEN CHAIN STORES UNIT: USD MILLION

Item / Year	1980-1996	1997	1998	1999	2000	2001
Sales	0.03-101.2	119	126	154	184	193
Growth of sales (%)	-	17.6	5.9	22.2	19.5	4.9
ROE (%)	-	22	22	22	22	20
MV ^a	-	1218	1291	1577	2182	1600
Franchise	27-1318	1588	1896	2241	2641	2908

Item / Year	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sales	209	225	242	292	307	312	324	308	364
Growth of sales (%)	8.3	7.7	7.6	20.7	5.1	1.6	3.8	-4.9	18.2
ROE (%)	24	29	22	25	25	23	22	23	25
MV ^a	1332	1204	1555	1679	2026	2389	2723	2480	3345
Franchise	3187	3469	3680	4037	4385	4705	4800	4750	4750

^a Market Value = The stock price × the number of shares of outstanding

V. FINDINGS AND DISCUSSION

This study has the following major findings:

- 1) Both HTC and 7-Eleven have continued to rearrange and change the components of their business-models throughout at stages of their development. This finding echoes the suggestion of Teece [4], Demil and Lacoq [7], that a business-model is a process of continuous selection, adaptation, and improvement. In other words, the form and content of business-model innovation must be revised and suggested to reflect changes in a company's internal and external environment.
- 2) Among the components of the two companies' innovative business-models, cooperation with external strategic partners is an important common method of innovation (Table I and Table IV). Acquiring new technologies from, exchanging resources with, or sharing information with external partners can help achieve the goals of an innovative business-model. This finding is consistent with the proposal that the unit of business-model analysis may span

boundaries [18]. In addition, the focus of arrangement of components depends on different industry environments. For instance, HTC emphasized innovation in technological capabilities, while 7-Eleven stressed service innovation and the transmission of value. We can see that innovation does not necessarily require advanced technological change; as long as business-model innovation can create unique value, which can be successful. This finding answers the question of how should a firm adopt innovative business-model.

- 3) A comparison of the types of business-model innovation employed by the two companies reveals that they both emphasized radical innovation and expansion into new target markets (Figures 1 and 2). However, situated in different industry environments, HTC's business-model innovation was a 13-years evolutionary process, while 7-Eleven's innovation process took 31 years. As a consequence, HTC's degree of innovation, acquisition of new customers, and speed of innovation were all notably fast and extensive. Nevertheless, regardless of high-end or low-end technology company, a relatively high degree of business-model innovation, along with continued expansion into new target markets and scurry of new needs, is necessary to successfully maintain a competitive advantage.

- 4) Both two companies' market values exhibited positive growth trends (Tables III and Table VI). Because the business-model innovation of both HTC and 7-Eleven emphasized radical innovation, this study concludes that radical business-model innovation can enhance market value, in that those companies get better performance.

- 5) With regard to the moderating effect of industry environment on business-model innovation and firm value, the rapid, large-scale innovation of the high-end technology firm(HTC) has a very positive influence on the company's sales growth (except when sales fell during the 2009 financial crisis), market value, and financial value (Table III

- 6). In view of HTC's industry environment and development of its business-model innovation, we could conclude that continuous, rapid, radical innovation can enable a firm to survive and enjoy sustained profitability in high-end technology industries. 7-Eleven has maintained a high market share and excellent brand equity (along with positive sales growth) through a considerable degree of innovation. Although the market value of this company has grown rapidly, it has not gained extraordinary profits. The reason for this is that 7-Eleven is situated in a conventional industry with market demand approaching saturation. Unlike those

high-end technology firms that have opportunities for high levels of profitability, 7-Eleven has limited new markets to introduce innovative services.

VI. CONCLUSION

This study employed a dynamic perspective in conjunction with longitudinal data to investigate the process of business-model innovation at the two companies HTC and 7-Eleven since they were listed, and the relationship between business-model innovation and firm value. The findings of this study not only facilitate understanding of the process of business-models, but also shed light on different types of business-model innovation. They confirm the relationship between business-model innovation and firm value. The major finding of this study is that business-model innovation is a boundary spanning process that must involve connections and joint innovation with external strategic partners for achieving relatively significant and rapid innovation results.

Business-model innovation is a dynamic process reflecting internal and external environmental changes. In order to maintain success, companies should get continuous innovation, accumulate knowledge, and perform adjustments [10]. Additionally regardless of high-end or low-end technology company, it must pursue a radical business-model innovation and expand into new target markets to successfully sustain a competitive advantage. High-end technology firms require radical, rapid business-model innovation to achieve success, while innovation of technological capabilities is the key component. As soon as business-model innovation is successful, it can yield a high market value and financial value for a high-end technology firm. Compare with high-end technology industries, low-end technology industries require radical but slower business-model innovation and service/product innovation to success.

This study is an explorative study employing the case study method to investigate the development of business-model innovation and the relationship between business-model innovation and firm value. While the focus of this study has been on the relationship between business-model innovation and firm value, there are other variables that may affect firm value. In addition, companies may use business-model innovation to increase customer value, and thereby increase firm value. However, the limitations of this study include assessment of business-model and the other definitions of business-model components. In the future, scholars may conduct quantitative empirical verification from this study's conclusions.

REFERENCES

- [1] A. Osterwalder, Y. Pigneur, and C. L. Tucci, "Clarifying business models: origins, present, and future of the concept," *Communications of the Association for Information Systems*, Vol.16, 2005, pp. 1-25.
- [2] M. Sosna, R. N. Treviño-Rodríguez, and S. R. Velamuri, "Business Model Innovation through Trial-and-Error learning: The Naturhouse Case," *Long Range Planning*, Vol. 43, Issues 2-3, 2010, pp. 383-407.
- [3] R. Casadesus-Masanell, and J. E. Ricart, "From strategy to business models and onto tactics," *Long Range Planning*, Vol.43, 2010, pp.195-215.
- [4] D. J. Teece, , "Business models, business strategy and innovation", *Long Range Planning*, Vol.43. 2010, pp. 172-194.
- [5] B. W. Wirtz, O. Schilke, and S. Ullrich, "Strategic development of internet business models: implications of the Web 2.0 for creating value on the internet," *Long Range Planning*, Vol.43, Issues 2-3, 2010, pp. 272-290.
- [6] H. Chesbrough, "Business model innovation: opportunities and barriers", *Long Range Planning*, Vol. 43, 2010, pp. 354-363.
- [7] B. Demil, and X. Lecocq, "Business model evolution: in search of dynamic consistency, " *Long Range Planning*, Vol. 43(2/3), 2010, pp. 227-246.
- [8] Y. L. Doz , and M. Kosonen, "Embedding strategic agility: A leadership agenda for accelerating business model renewal," *Long Range Planning*, Vol.43, Issues 2-3, 2010, pp. 370-382.
- [9] Y.C. Ho, H. C. Fang, and J. F. Lin, "Value Co-creation in Business Models: Evidence from Three Cases Analysis in Taiwan," *The Business Review, Cambridge*, Vol.15, Issues 2, 2010, pp. 171-177
- [10] H. Itami, & K. Nishino, "Killing two birds with one stone: Profit for now and learning for the future," *Long Range Planning*, Vol.43, Issues 2-3, 2010, pp. 364-369.
- [11] R. G. McGrath, "Business models: a discovery driven approach," *Long Range Planning*, Vol.43, 2010, pp. 247-261.
- [12] K. M. Eisenhardt, and B. N. Tabrizi, "Accelerating Adaptive Processes- Product Innovation in the Global Computer Industry," *Administrative Science Quarterly*, Vol.40, Issues 1, 1995, pp. 84-110
- [13] M. Tushman, W. K. Smith, R. C. Wood, G. Westerman and C. O'Reilly, "Organizational designs and innovation streams", *Industrial and Corporate Change*, Vol.19, Issues 5, 2010, pp. 331-1366.
- [14] J. Brink, and M. Holmen, "Capabilities and radical changes of the business models of new Bioscience firms", *Creativity and Innovation Management*, Vol. 18, Issue.2, 2009, pp.109-120.
- [15] M. Morris, M. Schindehutte, and J. Allen, "The entrepreneur's business model: Toward a unified perspective, " *Journal of Business Research*, Vol.58, Issues 6, 2005, pp. 726-735.
- [16] L. Schweizer, "Concepts and evolution of business models," *Journal of General Management*, Vol.31, Issues 2, 2005, pp. 37-56.
- [17] S. M. Shafer, H. J. Smith, and J. C. Linder, "The power of business models," *Business Horizons*, Vol.48, Issues 3, 2005, pp. 199-207.
- [18] C. Zott, and R. Amit, , "Business model design: an activity system perspective", *Long Range Planning*, Vol.43, 2010, pp. 216-226.

- [19] R. Amit, and C. Zott, "Value creation in e-business", *Strategic Management Journal*, Vol.22, Issue.6-7, 2001, pp. 493-520.
- [20] J. C. Linder, and S. Cantrell, "Changing business models: surveying the landscape", *Accenture Institute for Strategic Change*. 2000.
- [21] J. Margretta, "Why Business Models Matter." *Harvard Business Review*, Vol.80, Issues 5, 2002, pp. 86-92.
- [22] K. M. Eisenhardt, and J. A. Martin, "Dynamic Capabilities: What Are They?," *Strategic Management Journal*, Vol.21, Issues 10-11, 2000, pp. 1105-1121.
- [23] D. G. Sirmon, M. A. Hitt, J-L. Arregle and J. T. Campbell, "The dynamic interplay of capability strengths and weaknesses: investigating the bases of temporary competitive advantage," *Strategic Management Journal*, Vol.31: 2010, pp. 1386-1409.
- [24] D. J. Teece, G. Pisano, and A. Shuen, "Dynamic Capabilities and Strategic Management," *Strategic Management Journal*, Vol.18, Issues 7, 1997, pp. 509-533
- [25] H. Chesbrough, and R. S. Rosenbloom, "The role of the business model in capturing value from innovation: Evidence from Xerox Corporation's technology spin-off companies," *Industrial and Corporate Change*, Vol.11, Issues 3, 2002, pp. 529-555
- [26] H. Gatignon, M. L. Tushman, W. Smith, and P. Anderson, "A structural approach to assessing innovation: construct development of innovation locus, type, and characteristics", *Management Science*, Vol.48, Issues 9, 2002, pp. 1103-1122.
- [27] C. Zott, and R. Amit, "Business model design and the performance of entrepreneurial firms," *Organization Science*, Vol.18, Issues 2, 2007, pp. 181-199.
- [28] A. B. Sorescu, and J. Spanjol, "Innovation's effect on firm value and risk: insights from consumer packaged goods", *Journal of Marketing*, Vol.70, 2008, pp. 114-132.
- [29] R. K. Yin, "Case Study Research: Design and Methods," Sage Publications, London, 3rd ed. 2003.
- [30] D. Leonard-Barton, "Wellsprings of knowledge: building and sustaining the sources of innovation", Boston, Mass: Harvard Business School press. 1995.