New venture strategies in a developing country: Identifying a typology and examining growth patterns through case studies

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Abstract

This study explores the static and dynamic patterns of new venture strategy and growth. We developed a three-dimensional integrative framework on new venture strategies, proposed seven strategic types, and examined the dynamic patterns of internationalization and growth of new ventures. From successful new venture cases in Korea, each strategic type shows differences in environmental characteristics and competitive behaviors. Also, we found that new ventures enter the global market by following two-step internationalization processes. We observed two different growth patterns influenced by initial conditions, entrepreneur’s management ability, and technology strategy of new ventures.

Keywords: New venture strategy; Growth patterns; Internationalization

1. Executive summary

This study explores the static and dynamic patterns of new ventures’ strategy and growth. The purposes of this study are to: (i) develop an integrative framework on new venture strategies in a developing country; (ii) delineate different types of new venture strategies.
based on market characteristics, technological capabilities, and performance; and (iii) identify growth patterns of these strategic types for new ventures from a dynamic perspective.

We developed a three-dimensional integrative framework on new venture strategies. Target market (local vs. global), product/market maturity (existing vs. emerging), and level of technological capability (follower vs. pioneer) are used as key dimensions to classify competitive strategies of new ventures in the process of seeking business opportunities. Seven strategic types of new venture strategy are proposed: (i) reactive imitation, (ii) proactive localization, (iii) import substitution, (iv) creative imitation, (v) early-market entry, (vi) global niche, and (vii) global innovation.

Based on five successful Korean new venture cases, the characteristics and performance of each strategic type are investigated and comparisons of strategic types (static analysis) and growth patterns (dynamic analysis) are made. Firms of different strategic types show different behavioral patterns in marketing and technology strategies and face different difficulties and managerial issues. From the analysis, this study suggests many different competitive strategies to seek attractive business opportunities for start-ups from a global perspective.

We examined dynamic patterns of the growth and internationalization of new ventures. In the internationalization of new ventures, we found the creative imitation type played an important role as a stepping-stone and a milestone for globalization. When new ventures in a developing country grow into the global market, a two-step growth pattern—(i) migration into creative imitation in the local market and (ii) transition from creative imitation to global player in the global market—is the most reasonable growth strategy to become a global venture.

One of the interesting findings of the case studies is to examine the different patterns of strategic evolution. Successful new ventures can grow in the local market and/or enter the global market. From our case studies, we observed two different growth patterns: ‘growth through strategic replication’ and ‘growth through strategic change.’ These differences come from whether new ventures are pursuing a similar strategy over time or different strategies. Growth patterns and speed of change of successful new ventures vary according to: (i) initial conditions facing firms at the time of founding, (ii) entrepreneurs’ characteristics and management abilities, and (iii) technology strategy to develop and accumulate technological capability.

Although this exploratory study needs more empirical investigation in different settings to enhance external validity of the results, it holds several managerial and policy implications. In particular, the competitive strategy framework set forth in this paper can help new ventures to choose the right strategies among different business opportunity sets in a given situation and to find an appropriate growth pattern. This study shows several patterns of globalization and growth for new ventures in developing countries. It can provide new ventures with meaningful guidelines for growth and globalization with a dynamic perspective.

2. Introduction

Today, the knowledge-based economy has been accelerated by entrepreneurship, the central forces of technological innovation and economic development (OECD, 1998; Hitt
et al., 2001). The prosperity of the US economy during the 1990s has been based on the value creation of start-ups in the information and communication technology (ICT) sectors in Silicon Valley (Saxenian, 1994). Policymakers around the world have initiated a variety of policies to foster entrepreneurship in their countries. While it is difficult to build sustainable entrepreneurial regions, there are some successful emerging regions, such as Taiwan and Israel, where entrepreneurship has mushroomed and contributed to technological innovation and regional economic development (Mathews, 1997; Trajtenberg, 1999). Since late 1997, when the financial crisis shook up some Asian countries, the Korean government promoted entrepreneurship to reform the Korean economic structure dominated by large conglomerates, known as Chaebols like Samsung and Hyundai. Under the Korean government’s supportive polices, many entrepreneurs have been venturing into risky new fields rather than getting more stable jobs (Lee, 2000; Lee et al., 2001).

Researchers have regarded entrepreneurship as ‘processes to pursue opportunity without regard to resources currently controlled’ (Stevenson and Jarillo, 1990) and as ‘organizational behavior based on strategic posture for pursuing opportunities’ (Covin and Slevin, 1991; Lumpkin and Dess, 1996; Zahra, 1993). To identify and exploit promising business opportunities is one of the key entrepreneurial processes (Shane and Venkataraman, 2000). For entrepreneurs, the ability to find attractive opportunities and marshal internal and external resources are key success factors for higher performance and long-term survival.

While there is increasing interest in entrepreneurship, there is relatively little research on competitive strategies and growth patterns of new ventures from a global perspective. Prior studies have focused on the static difference in new venture strategies rather than dynamic changes (Carter et al., 1994; Gartner et al., 1989; McDougall and Robinson, 1990). Furthermore, because there has been so much focus on entrepreneurship in the developed world, researchers have paid little attention to competitive strategies and growth patterns of new ventures in developing countries. Also, there are few comparisons of new venture strategies between advanced countries and developing ones. Historically new ventures in advanced nations have been recognized as the sources of innovation that change technological frontiers and the competitive landscape (Schumpeter, 1934; Utterback, 1994). New ventures in developing countries also have a disproportionate importance on domestic job creation and economic development. Despite the significant role of new ventures, relatively little is known about competitive strategy and growth patterns of new ventures in developing countries.

The purposes of this study are to: (i) develop an integrative framework to classify competitive strategies of new ventures in a developing country; (ii) delineate differentiating characteristics among new venture strategic types based on market characteristics, technological capabilities, and performance; and (iii) identify growth patterns of new ventures from a dynamic perspective.

This paper is composed of six sections. Following this introduction, Section 3 is a literature review of new venture strategy. A conceptual framework on new venture strategy is developed and growth patterns are outlined in Section 4. In Section 5, exploratory case studies to address new venture strategies and growth patterns from five successful Korean new ventures are the focus. Section 6 analyses and discusses the cases based on the research
framework developed earlier in the paper. Finally, this paper concludes with suggestions about managerial implications for new ventures to compete in the global business environment.

3. Literature review

In the entrepreneurial process, the creation of a new organization and entry into new product markets are essential processes for the growth of a new venture (Katz and Gartner, 1988; Vesper, 1990). The wave of technological innovations accelerated by new ventures has generated numerous business opportunities and changed competitive environment. Following Schumpeter’s (1934) view of new ventures as sources of innovation, the engines of creative destruction, researchers have investigated the characteristics of innovations and dynamic competition between new ventures and incumbents. Historically new ventures have pioneered new industries with technologically superior products (Cooper and Schendel, 1976; Tushman and Anderson, 1986; Henderson and Clark, 1990; Utterback, 1994). New ventures have outperformed incumbents with first-mover or pioneer advantages. Lieberman and Montgomery (1988, 1998) developed a theoretical framework on first-mover (dis)advantages and proposed technological leadership, preemption of assets, and buyer switching costs as the sources of pioneering advantages. However, pioneers cannot always be winners and sometimes late-comers exploit many advantages from free-riding on the first-mover’s investment, the resolution of technological and market uncertainty, shifts in technology or customer needs, and incumbent inertia. There have been a number of conceptual and empirical studies on the pioneering advantages in the strategy, marketing literature, and entrepreneurship fields (Covin et al., 1999; Golder and Tellis, 1993; Kerin et al., 1992; Robinson and Fornell, 1985; Robinson et al., 1992; Schnaars, 1994).

However, most knowledge on pioneering advantages is based on the experiences of firms in advanced countries without any thought to global perspective. There are few studies on the strategies of technological followers (Cho et al., 1998; Forbes and Wield, 2000; Hobday, 1995; Kim, 1997). Previous studies have shown that technological followers in developing nations have accumulated their technological capabilities ranging from process or manufacturing-based capabilities to product or design-based capabilities (Forbes and Wield, 2000; Kim, 1997).

Recently, a number of new ventures have identified and pursued business opportunities beyond the local market from their inception. Traditionally, international business studies have been interested in established and large multinational companies and, thus, have developed many theories to explain diverse characteristics and behaviors of these firms (Caves, 1982; Vernon, 1966). For example, the stage theory of internalization has suggested that a company incrementally progresses from being a local firm to becoming an international business (Johanson and Vahlne, 1977, 1990). These numerous theories of international business hardly explain the increasingly global phenomenon of the emergence of new ventures that are international from their beginning (McDougall et al., 1994). These international new ventures (INVs) pursue business opportunities across national borders for growth and value creation from their beginning (McDougall and Oviatt, 1997). Recently,
some studies suggested a framework to identify different types of INVs (Oviatt and McDougall, 1994), unveiled characteristics of INVs, and investigated the relationship between internationalization and new venture performance. For instance, INVs are different from domestic new ventures based on competitive strategy and industry structure characteristics (McDougall, 1989). Studies have shown that there are positive relationships between internationalization, organizational characteristics and performance (Bloodgood et al., 1996; McDougall and Oviatt, 1996). Other empirical studies shed light on the relationship between internationalization and growth of new ventures. Under the knowledge-based and learning views of international expansion, earlier initiation of internationalization and greater knowledge intensity were associated with faster international growth (Autio et al., 2000). In addition, early internationalization is related to the new venture’s attitude on internationalization, resources and collaboration with other organizations, and the new venture’s performance (Preece et al., 1999; Shrader, 2001; Zahra et al., 2000).

Further research on international entrepreneurship is required to examine the characteristics of INVs, antecedents and outcomes of internationalization, and the relationship between internationalization and new venture growth. More research on INVs, especially in developing countries, is required in order to understand how they identify business opportunities in other countries and strategically grow into international competitive markets beyond local markets.

4. An integrative framework on new venture strategy

As noted, one of the main purposes of this paper is to provide a conceptual framework on new venture strategies to pursue business opportunities. Particularly, this framework seeks to address new venture strategies in developing countries that are different from those in advanced countries. The framework also provides some growth patterns and explains internationalization of new high-tech ventures in developing countries.

4.1. A research framework on strategic types

We developed a framework with three dimensions: (i) technological capability (follower vs. pioneer), (ii) product-market maturity (existing vs. emerging), and (iii) target market (local vs. global). All three dimensions are key factors affecting new venture’s performance. We briefly introduce each dimension and then explain the framework and strategic types.

The first dimension used in the framework is the level of technological capability that firms develop products and processes. Technological capability has been regarded as one of the most important factors in the performance of new ventures (Adler, 1989; Covin et al., 1999; Porter, 1983; Zahra, 1996; Zahra and Bogner, 1999). Innovators generate new technological knowledge and make their technological design of products and processes widely accepted industry standards or dominant designs. In contrast, imitators follow technological trajectories and improve existing products initiated by innovators (Utterback, 1994). However, traditional categorization of the firm into either innovator or imitator does not provide a complete background of the dynamic situation faced by latecomers. The
business opportunities open to these late arrivals are diverse. In many cases, they have exhibited dynamic growth patterns when faced with the challenge of the catching-up process (Cho et al., 1998).

The second dimension of the framework is the product-market maturity. Product-market maturity is related to the stage of product life cycle. Researchers conceptualized the development of the product-market as a series of stages—such as introduction, growth, maturity, and decline stages (Anderson and Zeithaml, 1984; Hambrick et al., 1982)—and explained the evolution of the market (e.g., Rogers, 1962). These stages of the product-market life cycle are associated with changes in the competitive environment around the sources of competitive advantage (Anderson and Zeithaml, 1984). New ventures with superior technological capabilities are apt to enter in the early stages that provide business opportunity to capture the new demand in a fast-growing market. Many empirical studies have consistently supported the view that new ventures entering into growing industries have higher performance than others that are in the maturity or decline stage (Covin and Slevein, 1990; Eisenhardt and Schoonhoven, 1990; Robinson, 1999; Sandberg and Hofer, 1987; Tsai et al., 1991). One of the important features in technology-intensive industry is that the successive technological changes have shortened product life cycles so that existing products quickly become obsolete. Under these circumstances, we can classify the development stage of the product market into two: emerging and existing market. Emerging markets refer to both the introduction and growth stages and existing markets indicate other stages, namely maturity and decline.

To develop an integrative framework on new venture strategy, we first developed a basic typology combining the level of technological capabilities (follower vs. pioneer) and product-market maturity (existing vs. emerging), as shown in Fig. 1. This basic typology is useful to assess the attractiveness of business opportunities when new ventures are assumed to compete only in a specific region or geographical market. However, with only two dimensions, we

![Fig. 1. Strategic types of new ventures: projection of two different competitive markets](image-url)
cannot explain strategic differences in two separate geographical markets and the emergence of INVs. As a result, another dimension is needed to build a more comprehensive framework on new venture strategies.

The third dimension, target market, addresses questions about where most of customers are and how many value chain activities are coordinated across different countries. The target market can be defined as the geographical scope of market that new ventures operate in and enter into. The target market can be simply divided into two markets, i.e., local (or domestic) market and global (or international) market. With accelerated globalization and rapid diffusion of new products and services in high-tech industries, new ventures can target the global market from the inception. Empirical studies on entrepreneurship show that INVs have successfully faced the challenge of globalization in different industry structures, used a variety of competitive strategies, and had differing levels of resources (Bloodgood et al., 1996; McDougall and Oviatt, 1996; Precece et al., 1999).

We developed a preliminary framework on strategic types of new ventures in a developing country. Fig. 1 shows two basic typologies representing local (L) and global (G) markets, respectively, at different heights within the diagram. Further differentiation occurs where, for example, ‘L-I’ means a local follower focusing on the ‘locally’ existing market, while ‘G-IV’ means a global pioneer in the ‘globally’ emerging market. But, these two matrices are not completely separated but partly overlapped because of the acceleration of globalization and speedy diffusion of new products in technology-intensive industries. Recently, the time lag derived from geographical distance has been reduced dramatically in supply and demand for new products. It means that customers in geographically separated markets demand some new products simultaneously and new ventures in local markets can develop and supply new product for global customers. This tendency integrated dispersed global markets into one market. When we project two basic typologies along with target market dimension, as shown in Fig. 1, we can portray seven grayed cells on the plane of technological capability and product-market maturity.

Fig. 2. A framework on new venture strategies
Finally, we developed a comprehensive framework with three dimensions—technological capabilities, product-market maturity, and target market. Fig. 2 shows that there are seven different strategic types (cells) to seek and pursue business opportunities, such as (i) reactive imitation, (ii) proactive localization, (iii) import substitution, (iv) creative imitation, (v) global niche, (vi) early market entry, and (vii) global innovation. These seven new venture strategies represent not all new ventures but, in fact, are a more comprehensive framework than any other classification. Of the seven new venture strategies, the first three strategies (reactive imitation, proactive localization, import substitution) focus on the local market, three other strategic types (global niche, early market entry, global innovation) target the global market, and the last one (creative imitation) is derived from an overlapped cell of two geographical markets.

The framework of this paper can provide a more comprehensive perspective on strategic type for both local and global markets. Using the framework, we can compare new ventures’ strategic types within a single industry, among multiple industries, and also between countries. However, this framework contains some assumptions. We assume that many business opportunities exist in each cell and one of the key entrepreneurial processes is to identify and assess these opportunities. The proposed framework concerns product-based technology-intensive industries. Neither service nor process-oriented industries are examined. These industries have experienced turbulent competitive landscapes by technological changes (Bettis and Hitt, 1995). Also, the intensity of competition is higher in the global market than in the local market, because of many strong players in the global market.

4.2. Seven types of new venture strategy in a developing country

New ventures use different strategies to seek business opportunities in fast changing competitive environments. Seven strategic types shown in Fig. 2 can be helpful to explain how new ventures in different competitive markets set strategies to develop organizational capabilities and get higher performance. Different characteristics among new venture strategies are summarized in Table 1.

Reactive imitator (local followers in the local existing market): Reactive imitators are representatives of traditional small- and medium-sized enterprises (SMEs) that focus on the already existing market in the maturity or decline stage of market development. They are very reluctant to invest their resources into R&D activities. They usually imitate competitors’ products and services so that they do not have technological capabilities important for innovations.

Import substitution (local pioneers in the local existing market): Despite sizeable markets and well-known customer needs, local firms are hardly able to seize local product markets due to inferior technological capabilities. In these markets, multinational corporations (MNCs) and global innovators are offering technologically superior products to local customers and dominate the local market. Local large firms and SMEs could neither produce the technologically sophisticated products nor have sufficient technological knowledge to develop products with similar levels of technological function and quality. Because of the high price of these high-tech products, some local customers demand a low-price substitute or
some components of the product. If the local customers are competing in the global market based on cost advantages, these firms need low-priced products or components for global competition and profitability. The opportunity for import substitution exists here where local firms demand local suppliers with low-priced and comparably functioning products. For example, import substitution has traditionally been one of the key stages in the industrialization and development processes of high-tech industries in Korea. Government-supported research institutes have invested resources to acquire key technologies with major impact on technological and economic development of the nation. Competitive advantage, when new technology-based firms (NTBFs) pursue import substitution, depends on unusual technological abilities to make products with similar or slightly lower quality than competitors and the ability to attract and maintain reliable customers that benefit from reduced costs.
**Proactive localization** (local followers in the local emerging market): Technological and market uncertainty are common and present unavoidable risks for all firms in developing new products and entering new markets. If a firm can reduce at least one of the two risks in business, the business opportunity becomes more attractive than others. When new ventures use other firms’ already proven and widely used technologies, local firms can reduce technological uncertainty on R&D investment. They develop a new local market with new technology and products of other firms. For example, they are local partners of foreign companies to enter into these local markets. These local new ventures develop a local new market with globally emerging products and adjust technology and products to local customers’ needs. The performance and growth of these new ventures using proactive localization depends on the potential size and growth of the local market in new products, reliable and trustable strategic alliance with foreign partners for new products and core technologies, and entry of other firms and competition in the market.

**Creative imitation** (local pioneers/global followers in the local emerging/global existing market): One of the distinctive strategic types is the new venture using creative imitation for different geographical markets—global and local markets, in contrast to other new ventures focusing on either the local or global market. New ventures that pursue creative imitation have technological capabilities in the emerging industries in the local market. Also, they are followers in the existing global market, although other local new ventures hardly enter the global market. Creative imitators differ from import substitution because they are in emerging industries and the boundary of competition is the global market. They have similar technological capabilities to those of the import substitution type in the existing local market, and face higher market uncertainty because they pursue the globally existing but locally emerging market. The competitive advantages of the creative imitation type generally count on the first-mover advantages and technological capabilities in the local market and follower advantages in the global market. We can divide creative imitation into two phases according to the target market of new ventures. Creative imitation I (local pioneer in the local emerging market) just focuses on the local market, while creative imitation II (global follower in the global existing market) becomes a global player in the global market.

**Global niche** (global pioneers in the global existing market): The typical competitive pattern of industry shifts to price-based competition by the mass production of standardized products and intensified competition (Utterback, 1994). Only a small number of firms dominate the market with low costs on mass production and sustain their positions in protection of high entry barriers due to heavy capital investment and complementary assets for new entrants. But these mass-producing firms cannot serve all customers with the same standardized products and services. If new ventures are specialized in some unique sectors, they can exploit technological differentiation. New ventures can focus on small and segmented niche markets very well and command a price premium for specialized products and services. The competitive activity of global market players is enhancing technological capability to serve the products in the particular business areas. There are business opportunities for new ventures with unique technological capabilities, because other global
leaders neither have incentives to enter into these markets where the slow growth rates and small size are unattractive nor have technological capabilities to supply specialized products that satisfy customers’ specific requirements.

**Early market entry** (global followers in the global emerging market): The waves of technological innovations have accelerated technological changes and shortened product life cycles. In emerging industries, there are often a number of competing technologies and differently designed products developed by global innovators. In addition to a few successful global innovators, some fast followers in global markets can grow very fast because they can understand the technological and market changes and implement business strategies quickly. Their technology strategies focus on the timely commercialization of products in combination with the existing knowledge base and new ones without regard to the boundary of firms and geographical markets. Only new ventures with significant technological capabilities can follow up the rapid technological changes in the global market. The competitive advantages of this type are derived from the timing based on the global market. As market development progresses, the opportunities in the emerging market will be reduced.

**Global innovator** (global pioneers in the global emerging market): New industries are created through the invention and commercialization of new technology and through the application of existing technology to the new products. New ventures have played a central role in creating new markets and sources of innovation. The early stages of technological development typically involve competition between different technologies and different design configurations. In a new industry, the essential condition for being able to compete is to possess the technology and knowledge necessary to produce the products or services. The distinguishing characteristic of technology-intensive industries, especially information technology (IT) sectors, is the importance of technological standards to compete with other products, firms, and technological community. The global innovator can set their technological specification as platforms, dominant designs, and industry standards through active participation in the international technological community. The success of pioneers depends on the (i) sustainability of first-mover advantages, (ii) emergence of competing technologies, (iii) complementary assets, and (iv) entry timing of competitors.

5. **Case studies on successful Korean new ventures**

To identify meaningful venture strategies and investigate relationships among strategic types, performance, and growth patterns of new ventures, we conducted case studies on five successful Korean new ventures in diverse product/market sectors and analyzed their growth histories from inception to recent years. Firms were chosen to represent different strategies and growth paths to pursue business opportunities across different product/market sectors over their histories. Case studies in diverse sectors can be useful in investigating how each firm has grown in context to the others and in comparing similar strategies in different competitive environments.
5.1. Samples and research methods

All of the five cases in this paper are technology-based Korean new ventures less than 15 years from their inceptions. It is an appropriate time period to examine and analyze the dynamic changes of new venture strategies over time. All firms were established and pursued business opportunities when large conglomerates, known as Chaebols, dominated the Korean economy in the late 1980s and early 1990s. The history and growth strategy of these firms have shown how local new ventures have succeeded in local markets and grown into the global market.

All case firms are publicly held and listed on either the Korea Stock Exchange (KSE) market or the Korean Securities Dealers Automated Quotation System (KOSDAQ) market similar to NASDAQ in the United States. All firms are mainly hardware-based manufacturers in competitive and technology-intensive industries with rapid technological changes. Each case was developed by in-depth interviews with founders and top-level managers involved from its early stage. Additionally, we collected and investigated various archival data, such as articles in business magazines and prospectus for investors. We focused on the characteristics and patterns of business opportunities, internationalization processes, and the performance of new ventures over time.

This exploratory case study investigated new venture strategies with the proposed framework composed of three dimensions: technological capabilities, product/market maturity, and target market. Technological capabilities are measured by the intensity of R&D in terms of human resources and investment in the last three years. Product/market maturity refers to the stage in the product life cycle. Target market is measured by the intensity of internationalization (ratio of export to total sales) and the number of foreign subsidiaries. Finally, venture performance was measured by the size of total sales, average sales growth rate and return on assets (ROA) in the last three years. Also, growth strategies were classified based on the business history of each firm, taking into consideration time periods that each firm was in business and the technology and market conditions at that time.

5.2. Case 1: Firm C (CNC)

Firm C was founded by graduate students from the Korea Advanced Institute of Science and Technology (KAIST), a research-oriented Graduate School of Applied Science and Engineering. They started up the company with the ambition of developing their own CNC machine tools imported from advanced countries. At that time, a group of Japanese and German firms were global leaders and dominated the global CNC market. In point of fact, one Japanese market leader held more than 60% of the global market and about 90% of Korea’s CNC controller market. There were no local firms with the technological capability to support the needs of domestic customers and compete with global giants in the domestic market.

Firm C first developed a CNC Index Controller and concentrated on CNC controllers. It was hard for local new ventures to penetrate the domestic market due to the low reputation of new ventures. Through active collaborations with large local customers, they developed a
number of products and penetrated the domestic market. At the end of 1999, Firm C had
grown to 248 employees with sales of 41 billion won (about US$34 million). Recently, the
company diversified into the IT sector based on accumulated technology on precision and
mechanical engineering. Also, it served as a leading firm in the domestic market in the
development of key components in the mechanical fields, and cooperated with other
companies and academic universities.

5.3. Case 2: Firm P (PCS)

The development history of Firm P, which was founded by a group of entrepreneurial teams
in 1992, shows how local new venture has seized business opportunities in the emerging
markets, namely pagers and mobile handsets. The Korean mobile telecommunication market
has dramatically grown in the 1990s. It has now become one of the important global markets. In
the process of liberalization and reforms of the Korean telecommunication market in the 1990s,
the Korean government licensed new telecommunication services providers to enter into these
markets, including wireless paging service and personal communication service (PCS) based
on the commercialization of digital mobile technologies.

With the entry of newly licensed paging service providers, the number of subscribers to these
services dramatically increased from 1.45 million in 1992 to 15 million in 1997. In addition, the
competitive environment was attractive for start-ups to gain high performance in the market
because of the late entry of large and other firms. Firm P has developed many pagers and served
rapidly changing customer needs with diverse functions and modern designs. During this
period, Firm P has rapidly grown into one of successful pager producers in the domestic market
and also exported their pagers to other countries.

However, the long-term prospect of the pager market was not high due to the introduction of
PCS services launched in 1997. Most Korean customers changed their mobile telecommuni-
cation services from one-way wireless paging to two-way cellular and PCS services. All Korean
handset manufacturers have to use key technologies and components of a US-based global
pioneer with patents on Code Division Multiple Access (CDMA) technologies, one of the
global wireless communication standards. Firm P entered the PCS mobile handset market and
supplied their products to PCS service providers. However, it was difficult for the new venture
to enter the domestic mobile handset market, which was dominated by large firms like
Samsung, LG, and Hyundai. In 1998, Firm P established a strategic partnership with Motorola,
one of the global leaders in the telecommunication market, in order to supply CDMA mobile
handsets for local and global markets.

5.4. Case 3: Firm T (Telecom)

Firm T was founded by an entrepreneur with education and business experience in the US
in order to offer business system integration services to Korean clients in 1990. Now this firm
has grown into one of market leaders in the Korean computer telephony integration (CTI)
market. In its early years, Firm T experienced difficulty in finding attractive and profitable
business opportunities. They introduced new products that had already succeeded in the US
to Korean customers and developed customized software development services for local customers. The first successful business opportunity of Firm T was influenced by new ventures in New York where the founder was educated and did business. They localized advanced IT solutions and provided these new products and services to large customers in the telecommunication and banking industries in Korea.

Since the mid-1990s, the demands on advanced telecommunication solutions gradually increased in many sectors, from telecommunications to retailing. In the emerging market, Firm T could grow rapidly where total market size dramatically increased and competition was intensified by the late entry of numerous start-ups and large firms. Along with localizing many advanced solutions for local customers, Firm T continuously developed many business intelligence systems based on CTI technologies. It expanded its products into emerging markets such as mobile and intelligent telecommunication systems. Firm T also established its first foreign subsidiary in other developing country to grow into the global market. The total sales of Firm T surged more than tenfold in just 3 years from 5 billion won in 1996 to 55 billion won in 1999.

5.5. Case 4: Firm A (ASIC)

Firm A has become a very successful new venture by timely adapting technological and market changes. It was also founded by seven graduate colleagues majoring in electronic engineering from Seoul National University, one of the most prominent universities in Korea. They founded a new venture to utilize technological knowledge learned at the university and built a successful technology-based new venture in Korea. This team had confidence in its technological capabilities but it hardly made money in the early stages.

In 1992, Firm A developed a technologically advanced new product by using imaging process technologies and was awarded several technological achievement prizes. In contrast to its technological superiority, it did not succeed in this market and faced many problems such as difficulty in penetrating the local market, which was dominated by large local firms, and insufficient R&D and operating funds. Because the venture capital market was underdeveloped at that time in Korea, Firm A had financial problems to keep operations going and developing new products. The entrepreneurial team was not satisfied with the deepening gap between its academic knowledge and the needs of industry. Team members learned that technological superiority does not automatically bring market performance and understanding customer needs are very important for success.

Digital technologies have been emergent since the 1990s. Related markets have also gradually emerged since that time. Firm A identified that their core technologies could be applied to digital products and proclaimed digital home appliances as its core businesses. It developed and introduced new products based on the ASIC technologies, a karaoke machine for home use in 1992, karaoke with CD-ROM in 1994, and video CD players in 1995. Later, Firm A started producing digital set-top boxes for digital satellite broadcasting, considered an emerging market related to digital multimedia. Digital set-top boxes have been very popular in Europe, while there was no market in Korea. They developed and shipped its set-top box in 1996 and established its first foreign subsidiaries, a manufacturing factory in the United
Kingdom for targeting European markets in 1997. It expanded its foreign subsidiaries into other countries in Europe and the Middle East. Recently, it established a joint venture in Silicon Valley with Samsung Electronics, a global leader in the DRAM industries.

The performance of Firm A has skyrocketed since it entered into and focused on the globally emerging digital set-top market. Its sales have grown from 14 billion Korean won in 1997 to 140 billion won (about US$123 million) in 1999. Most of sales (99%) have come from foreign markets, especially in Europe.

5.6. Case 5: Firm M (medical)

Firm M, spun off from KAIST, is one of the most successful high-tech ventures in Korea. Firm M was established by seven graduate students and technicians involved in research projects to develop ultrasonic scanner technology funded jointly by the government and a local medical equipment manufacturer. The research projects were initiated to substitute imported high-priced foreign products and serve growing demands in the local market. When the local medical equipment company decided to pull out of the project, however, research team was not able to find a suitable alternative industry partner to provide more research fund and commercialize the result of projects.

In 1985, the team, led by a key founder, decided to start a new venture to commercialize their research projects. The domestic market, however, was small, approximately US$13 million in size with about a 20% growth rate. The first generation products, largely linear-only types, met the growing needs of the domestic market, in spite of technical unreliability. The quality of later products was gradually improved. They enhanced their technological capabilities through heavily R&D investment, technological cooperation with leading local universities and foreign research institutes, and acquisition of a foreign competitor with state-of-the-art technologies. Based on the intensive efforts of its technology development, Firm M progressively moved from linear-only models to more complex and sophisticated product markets and recently developed advanced and digital ultrasound equipment.

Beyond the small local market, Firm M expanded into the global market in its early stage of development. They first exported products to other developing countries in 1987, only two years after inception. In addition, they continuously established foreign subsidiaries and exported their sophisticated products with lower prices to compete with other global competitors. To penetrate into the global market, they initially focused on developing countries where there were customer needs for products with relatively low-prices similar to Korea. Recently, it has directly invested and expanded into the global market with the establishment of its first foreign subsidiaries in the US in 1992. It has aggressively established another ten foreign subsidiaries since that time. Firm M has dramatically grown to 314 employees with sales of 212 billion won (about US$145 million), with approximately 70% of sales coming from overseas markets. Although Firm M is still a small company compared to its global competitors, it has successfully grown from a local high-tech venture to a global firm to pursue business opportunities continuously.

1 The growth history of Firm M has also been developed in other studies (e.g., Kim, 1997; Lee, 2000).
<table>
<thead>
<tr>
<th>Characteristics of firms</th>
<th>Firm C</th>
<th>Firm P</th>
<th>Firm T</th>
<th>Firm A</th>
<th>Firm M</th>
</tr>
</thead>
<tbody>
<tr>
<td>CEO</td>
<td>Founder/owner</td>
<td>Founder/owner</td>
<td>Founder/owner</td>
<td>Founder/owner</td>
<td>Founder/owner</td>
</tr>
<tr>
<td>Major product market</td>
<td>CNC</td>
<td>Mobile handset</td>
<td>IT-based solution (CTI)</td>
<td>Digital set-top box</td>
<td>Electronic medical equipment</td>
</tr>
<tr>
<td>Growth strategies and products</td>
<td>Import substitution (88–)</td>
<td>Creative imitation (91–96)</td>
<td>Proactive localization (90–93)</td>
<td>Import substitution (89–91)</td>
<td>Creative imitation-I (85–86)</td>
</tr>
<tr>
<td></td>
<td>CNC/ Applied industrial system</td>
<td>Pager</td>
<td>CDMA mobile handset</td>
<td>VMS, CTI</td>
<td>Linear ultrasound scanner</td>
</tr>
<tr>
<td></td>
<td>Creative imitation (97–)</td>
<td>Creative imitation (94–97)</td>
<td>Creative imitation (94–97)</td>
<td>Creative imitation-II (94–95)</td>
<td>Creative imitation-II (87–91)</td>
</tr>
<tr>
<td></td>
<td>CDMA mobile handset</td>
<td>IT-based applied solutions</td>
<td>Digital home appliances</td>
<td>Digital home appliances</td>
<td>Linear/sector/ convex ultrasound scanner</td>
</tr>
<tr>
<td></td>
<td>Creative imitation (98–)</td>
<td>Early-market entry (96–)</td>
<td>Digital set-top box</td>
<td>Global niche (92–)</td>
<td>Digital ultrasound scanner</td>
</tr>
<tr>
<td>Technological capabilities</td>
<td>Ratio of R&amp;D employees</td>
<td>20%</td>
<td>23%</td>
<td>38%</td>
<td>45%</td>
</tr>
<tr>
<td></td>
<td>R&amp;D investment</td>
<td>17%</td>
<td>6%</td>
<td>6%</td>
<td>11%</td>
</tr>
<tr>
<td>Internationalization</td>
<td>Export ratio</td>
<td>None</td>
<td>14%</td>
<td>12%</td>
<td>69%</td>
</tr>
<tr>
<td></td>
<td>Growth rate of export</td>
<td>None</td>
<td>62%</td>
<td>127%</td>
<td>535%</td>
</tr>
<tr>
<td>Foreign subsidiaries</td>
<td>None</td>
<td>None</td>
<td>One</td>
<td>4 subsidiaries</td>
<td>11 subsidiaries</td>
</tr>
<tr>
<td>Performance (1999)</td>
<td>Sales</td>
<td>41 billion won (US$34 million)</td>
<td>227 billion won (US$189 million)</td>
<td>55 billion won (US$46 million)</td>
<td>54 billion won (US$118 million)</td>
</tr>
<tr>
<td></td>
<td>Sales growth</td>
<td>67%</td>
<td>240%</td>
<td>76%</td>
<td>95%</td>
</tr>
<tr>
<td></td>
<td>ROA</td>
<td>10%</td>
<td>4%</td>
<td>17%</td>
<td>3%</td>
</tr>
<tr>
<td></td>
<td># of employees (1999)</td>
<td>248 employees</td>
<td>433 employees</td>
<td>164 employees</td>
<td>113 employees</td>
</tr>
</tbody>
</table>

The export ratio, sales growth, and ROA of new ventures are the average of the last 3 years (1997–1999).
Table 2 shows how the five case firms have successfully grown into the local and global markets. It also summarizes general characteristics of each firm, strategies for business opportunities and performances, and growth patterns in their development processes.

6. Analysis and discussion

Based on the framework and case studies, this paper identifies seven new venture strategic types and several growth patterns of new ventures in Korea. These static and dynamic perspectives help us to understand how local new ventures compete in the local market and grow into global markets.

6.1. Competitive strategies and performance of new high-tech ventures

One of the most important problems entrepreneurial and top management teams face is to find and pursue promising business opportunities (Shane and Venkataraman, 2000). To enter into and compete in a specific product market requires strategic choices. Entrepreneurs have to assess the attractiveness of an opportunity in terms of product market maturity, technological capability, and target market. However all new ventures do not offer the same choice set when it comes to business opportunities. This indicates that, while some product-market choices seem to be attractive, new ventures cannot pursue such business opportunities without relevant technological capabilities and resources. The choice set in new venture strategy can vary on the dimensions that entrepreneurs consider to be the most important and on the resources that they can marshal. If entrepreneurs consider the target market, especially if they prefer the local market to the global market, they should pursue one of the strategies suitable for local markets—creative imitation, proactive localization, import substitution, and reactive imitation. If new ventures have technological capabilities similar to those of local followers, they should pursue reactive imitation or proactive localization.

Three dimensions—technological capability, product market maturity, and target market—are also regarded as key determinants of new venture performance, as discussed in an earlier section. It means that new ventures have a chance to get higher performances by entering into emerging markets rather than existing markets, expanding their market to global markets beyond the local area, and building technological capabilities superior to competitors. The new venture’s performance differences are related to risks in technologies and markets that the new ventures are pursuing. The performance can be explained by the trade-off relationship between risks and the returns from risk-taking. The higher the risks, the more the returns, and the lower the risks, the less the returns. New ventures in diverse international market countries should undertake higher risks than new ventures in local home markets. Generally, new ventures focusing on only the local market would have lower risks than global ventures with higher uncertainty. Also, emerging markets are more risky than existing markets because of the uncertainty about customer needs and the unpredictable demands of new products.
6.2. Internationalization of local new ventures

The internationalization of new ventures is one of the interesting topics on entrepreneurship research. INVs are not uniquely featured organizational forms found in advanced countries but can be more general ones found in all countries. INVs can target global markets from inception, if they develop products and services for these markets with sufficient resources. Some Korean new ventures also pursue business opportunities in other countries and become INVs in terms of the coordination of value chain activities and sales derived from overseas. Some Korean entrepreneurs have started their new ventures targeting global markets armed with advanced technological capabilities from their incubating organizations usually leading global firms, research institutes, and universities. While global pioneers lead markets as technological innovators and fill global niches basically as INVs, local pioneers have some options: early market entry into the global market, creative imitation in both markets, or import substitution in the local market. These diverse alternatives for new ventures can be a distinguishing feature of INVs in a developing country.

Although internationalization is influenced by many factors, it basically depends on strategic choices of new ventures with a positive attitude toward internationalization. The difficult decisions to make are choosing when to enter into the global market, which areas they should venture into, and how to access and penetrate selected markets. Recent studies on INVs show the importance of early initiation of internationalization. The earlier a new venture enters into the global market, the greater its strategic inertia toward the international market and the ability to build knowledge and capabilities necessary for global competition (Autio et al., 2000). Another significant decision is to select the specific market to enter. Prior studies on international business suggest that geographical proximity, cultural differences, general socioeconomic status, and technological development stages can be criteria to make decisions on internationalization.

One interesting finding from this study concerns the internationalization process of new ventures in developing countries. When local new ventures grow into the global market, they follow a two-step process from local market to global market: migration toward creative imitation and transition toward global players. The first step is the new venture’s movement toward creative imitation cells within the framework of Fig. 2. A local new venture can pursue creative imitation from inception or move from other strategic types by changing their major products market from already grown product markets to growing ones or building technological capabilities in the same product and service market. This movement may be driven by creative imitation’s higher growth potential than of other types in the local market because creative imitation is located in local and global markets. We found the important role of creative imitations in the internationalization of local new ventures. It plays the role of a stepping-stone or a gateway between two different competitive markets.

After this movement toward creative imitation, local new ventures can become INVs that compete in the global market. These firms can pursue one of several global strategies, such as creative imitation, early market entry, global niche, or global innovation. INVs in this stage
change most of their organizational attributes and processes with a global perspective. The changes include the coordination of production process, utilization of necessary resources like financial and technological resources, and management of top management team and human resources.

6.3. Growth patterns along strategic types of new ventures

We can now better understand new ventures’ dynamic growth patterns, one of the most important and least studied topics in entrepreneurship research. The growth of new ventures can be understood as the process to search and pursue new opportunities continuously. These changes in product and service markets are critical events that affect competitive posture, resource allocation, future performance, and long-term survival. We found two different growth patterns from case studies on Korean new ventures. While all new ventures have successfully grown, they have experienced different growth patterns that represent distinguishing characteristics in the selection of major products markets and strategic behaviors for competition.

One pattern is growth through strategic replication initiated by Firms C and P. This growth pattern does not mean that new ventures do nothing to compete in the market because the technology and market conditions are changing. It means that new ventures pursue similar strategies even if they diversify into new markets with similar characteristics of previous ones in terms of three dimensions: technological capability, product-market maturity, and the geographical target market. Firm P’s case shows this growth pattern through strategic replication when it moved from the pager market to the digital mobile handset market according to product maturity. Firm P has successfully grown into a mobile handset manufacturer, while seeming to stay in the creative imitator cell.

The other pattern is growth through strategic change, found at Firms T, A, and M. New ventures can pursue more attractive business opportunities by accumulating technological capabilities and changing their product and target markets. New ventures that are willing to grow generally change their product markets from already matured ones to growing ones, accumulate more technological capabilities, and enter into other geographical markets beyond specific regions and countries. The firms following this growth pattern move along the cells in Fig. 2. For example, local new ventures can grow from import substitution, through creative imitation, to early market entry.

We also found other growth patterns depending on a new venture’s strategic orientation—whether a firm’s growth (based on subsequent opportunity identification) is mainly led by market or technology development. From Fig. 3, which depicts the dynamic patterns of strategic changes for the five case firms under study, we can observe another growth pattern. Some firms (Firms P, T, and A) move along the product/market dimension (market-oriented growth pattern), while others (Firms C and M) move along the technology capability dimension (technology-oriented growth pattern). All successful firms have made timely adaptations to market changes and consistently invested in building and accumulating their technological capabilities. Each firm’s vision and level of capabilities developed over time has influenced the strategic orientation of new ventures.
Although these observations are based on a limited number of cases and need more structured analysis, they give useful managerial implications for high-tech new ventures. Table 3 summaries dynamic growth patterns of case firms.

6.4. Key factors affecting growth patterns and strategic changes

There are many factors affecting the growth patterns and the speed of change in new ventures. Based on case analyses, this paper has derived the following three factors as important determinants of growth patterns. First, the initial conditions of new ventures can affect strategic decisions and future growth (Stinchcombe, 1965; Boeker, 1989). Initial founding conditions of both organizational and environmental factors can impact on the subsequent strategy and organizational systems and determine whether or not new ventures can change over the course of their lives. These initial conditions are also significantly related to the performance and growth of new ventures (Bamford et al., 1999; Cooper et al., 1994; Eisenhardt and Schoonhoven, 1990; Romanelli, 1989). The importance of initial conditions of new ventures is emphasized by the difficulty of strategic changes. In this paper, the initial new venture strategy, especially the first product market and technological capability, are the most critical factors for the performance and future growth potential of new ventures. Initial new venture strategy determined by these two factors may direct and constrain future strategic change and the scope of strategic decisions.

Second, entrepreneurs’ management capabilities of new ventures can have a profound impact on many organizational decisions. According to existing entrepreneurship studies, the characteristics of entrepreneurs and founding teams are very important to anticipate the success of new ventures. Founding teams’ experiences in related industries, educational and
functional background, and social network characteristics are related to a new venture’s performance (Cooper et al., 1994; Eisenhardt and Schoonhoven, 1990). These characteristics are related to the ability to adapt to external changes with necessary internal capability and to achieve higher new venture performance.

A final significant factor is technology strategy and efforts to accumulate technological capabilities. In contrast to initial conditions given at the time of founding, this factor depends on the strategic choices and learning processes of new ventures. There are numerous elements of technology strategy like the extent of R&D investment and acquisition of core technologies. In addition to the positive relationship between technology strategy and performance, only successful learning firms can accumulate technological capability, one of the key determinants of new venture strategy. In technologically fast changing industries, as one firm cannot develop in every technological area, new ventures build strategic partnerships with other organizations to utilize the state-of-the-art technology.

7. Summary and conclusions

The main purpose of this paper has been to provide a global framework for new venture strategies and to analyze growth patterns in pursuing different business opportunities. Different from previous research focused on an industry- or country-specific context, we
developed a more comprehensive framework with an integrated viewpoint of local and global markets. Three factors were used to classify new venture strategies—technological capability (follower vs. pioneer), product-market maturity (existing vs. emerging), and target market (local vs. global market). We made a classification of seven different strategic types and described the characteristics of each venture strategy. We found that local new ventures with proper technological capabilities can pursue business opportunity in the global context.

We also analyzed five successful Korean new ventures to investigate their different competitive strategies and growth histories over time. Using the framework suggested in this paper, each case showed these firms have survived in the local market and grown into the global market. Also, we identified two different growth patterns of strategy: strategic replication or strategic change within the framework. The growth patterns and the speed of change of successful new ventures vary according to (i) initial conditions of the firms such as domestic market size, (ii) entrepreneurs’ management abilities, and (iii) the degree of technological efforts of the firms for capability accumulation.

It was also found that, in the internationalization process, creative imitation is very important as a stepping-stone and a milestone for globalization. When new ventures in a developing country grow through strategic change, the preliminary results show that a two-step growth pattern—(i) migration into creative imitation in the local market and (ii) transition from creative imitation to becoming a global player in the global market—is the most reasonable growth strategy to become a global venture.

As this study is an exploratory one, it has limitations as a theoretical and practical framework. Because of the small number of cases, the findings cannot necessarily be generalized and no failure cases were included in this study. Most of all, we need to develop more refined research models with hypotheses from the static and dynamic viewpoints. In addition, empirical studies with more samples on diverse settings are needed.

Future research could focus on the development of more extensive theories on new venture strategy and growth. The empirical test of strategic types and performance will contribute to explain which competitive and growth strategies are attractive in a given local or global market. Also, this study can be extended into comparisons of advanced countries with developing countries. This study can also serve as a starting point to compare and examine the differences of new venture strategies and growth patterns among countries.

Despite its limitations, this study contains several managerial and policy implications. The framework of new venture strategic types can help venture firms formulate the right strategies in a given situation and to find appropriate growth strategies. In particular, this study shows several growth patterns into the global market for new ventures in a developing country. It can provide new ventures in the local market with meaningful guidelines for growth and globalization. Also, it can be useful to further the understanding of the characteristics of business opportunities for new ventures in developing countries and competitive environment when each firm seek its opportunities. It can help new ventures build competitive strategies to enhance performance and suggest directions for growth. Finally, policymakers should consider the dynamic characteristics of the growth patterns and strategic changes of the firm derived from this study when they build diverse policies to support and promote entrepreneurship in each country.
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References


Vernon, R., 1966. International investment and international trade in the product cycle. Q. J. Econ. 80, 190–207.


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