A study of the born global venture corporation's performance & characteristics

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[English Abstract]

In accordance with the internationalization of the corporate environment, an increasing number of venture firms are attempting to internationalize at the early stage of inception, and the phenomenon cannot be fully explained with the existing stage-based model of internationalization of corporations. A so-called born global venture (BGV) can be found in the high tech industry, which features a high concentration of R&D and competitiveness. Existing empirical studies have covered the environment of BGV, the characteristics of corporate capabilities, and business performance relative to internationalization. In terms of business performance, however, there were some conflicting outcomes, and it was deemed that the discussion of marketing strategies that have a sizable influence over business performance had not been fully explored. Thus, this study analyzed the corporate capabilities of BGV, marketing strategies, and business performance compared with non-BGV, which are not included in the category of BGV in terms of growth, profitability, and market performance. As a result, BGV differs from non-BGV in the ability to utilize corporate knowledge and overseas experience and in the marketing strategies sought by the two. As for business performance, while BGV performance was higher in growth and market performance, profitability did not differ from non-BGVs.

Keywords: Born global venture (BGV), corporate capability, marketing strategy, business performance

I. Research Background

Internationalization is one of the important growth strategies for a business. Normally, the internationalization of a business begins at the mature and saturation stages of the domestic market (Caves, 1982) and it has taken the following steps: an accidental order from overseas develops into the direct and indirect export stage; a company launches an overseas business unit and/or enters into an overseas partnership; and the company finally evolves into a globally integrated multinational corporation (Aharoni, 1966; Czinkota and Johnston, 1981).

While a study of internationalization centering on large enterprises tends to focus on large enterprises in a mature industry, internationalization takes place from the early stage of inception against the backdrop of the recent technology innovation process and changes in the economic environment. Therefore, the current stage-based model has limitations in explaining such phenomena (Coviello and Munro, 1995; McNaughton, 2000; Oviatt and McDougall, 1994; Oviatt and McDougall, 1997). The phenomenon expressed by various terminologies, including "infant multinationals" (Lindqvist, 1991), "international new venture" (INV; Oviatt & McDougall, 1994), or "born global venture" (BGV; Oviatt & McDougall, 1999), was treated in the current literature as an exception (e.g. Welch and Loustarinen, 1988). However, scholars who study entrepreneurship tend to treat the recent BGV phenomenon not as an exception but as an important strategy for venture corporations. In other words, more and more people agree with an idea that those venture firms established by management with extensive international experience tend to respond to overseas market demand by combining management's international experience and resources from a variety of different countries (Coviello and Munro, 1992; Hoy, Pivoda and Mackrle, 1992; McDougall and Oviatt, 1991).

Due to the differences from the domestic market, business internationalization encounters uncertainties about international competitiveness that differ from the domestic market; naturally, firms require new capabilities to overcome such differences (Bartlett & Ghoshal, 1991). By definition, however, venture corporations are venerable firms that have relatively limited resources compared with traditional firms and lack full

legitimacy for customers and providers (Stinchcombe, 1965); consequently, they would be likely to have insufficient capacity to respond to new competitive uncertainties. While venture enterprises enjoy flexibility, speed, and a risk-seeking attitude as advantages, they face the challenges of internationalized competition owing to their limited technological, financial, and managerial resources (Figenbaum & Karnani, 1991).

Nevertheless, why do venture enterprises attempt internationalization so early like that? It can be explained by industry-specific and company specific factors. The existing literature either explains it by emphasizing the mobility of know-how, entrepreneurship, and/or capability (Liesch and Knight, 1999; and Oviatt and McDougall, 1994) or by highlighting the significance of an informal network as a catalyst for the internationalization phenomenon (Coviello and Munro, 1997). However, the literature does not provide a comprehensive explanation with theories as to what type of firms engage in early internationalization strategies or whether BGV as a strategy has a positive influence on business performance (Oviatt & McDougall, 1999). In addition to a study of catalytic factors to stimulate businesses to transcend the fixed internationalization stage in the process of business internationalization, this research aims to verify whether the BGV strategy to quickly penetrate the overseas market begets a positive influence on business performance.

Chapter 2 addresses the definition of BGV and the internationalization strategy, and chapter 3 will review the existing literature regarding the characteristics of BGV to set up a hypotheses for the research. Chapter 4 presents an empirical analysis of the previous chapter and fleshes out the debate details. Chapter 5 draws conclusions about the outcome of the research and its strategic meaning.

II. Literature Review of Born Global Venture (BGV)

1 Definition of BGV

BGVs are enterprises that globally exert their business activities and competition in very homogenous globalized industries and have their own niche markets in the

globalized world (Jolly et al., 1992; Ray, 1989). BGV is defined as an enterprise that uses resources from different countries and seeks to sell products and services in many countries in an attempt to secure a competitive advantage by obtaining raw materials, human resources, and financing not from one country, but from an internationalized aspect from inception (Oviatt & McDougall, 1994). Unlike Korean firms that gradually seek to become multinational firms, BGVs are venture firms that actively adopt and implement internationalization strategies. Firms with risk-avoiding tendencies would avoid committing resources to overseas markets before acquiring full experience in the domestic market or before the domestic market reached the mature stage (Buckley, 1989; Kaufmann, 1995). BGVs are more interested in overseas markets than the domestic market, and many venture firms advance into overseas markets first rather than the domestic market (Almor, 2000; Bloodgood, Sapienza & Almeida, 1996; Coviello & Munro, 1995; McNaughton, 2000; Oviatt & McDougall, 1994; Oviatt & McDougall, 1997; Rasmussen & Madsen, 2002; Rennie, 1993).

Though it is possible to define BGV in conceptual terms, there is no unified, concrete definition among researchers on what features can identify a BGV. There is no absolute theoretical or empirical criterion on BGV (Rasmussen & Madsen, 2002). In fact, for a business to be categorized as BGV, the degree of internationalization matters. It is a matter of whether the degree of internationalization includes those engaged in Foreign Direct Investment (FDI) only or includes the early stages of export and import internationalization or not.

In previous studies of BGVs, the operational definitions of BGV were made individually by different researchers based on arbitrary criteria, so there is no unified definition. First, when BGV is defined by the age of businesses, the time lag of for the start of internationalization from business inception determines whether a company is a BGV. McKinsey categorized those companies that sought internationalization within two years of inception as BGV (McKinsey & Co, 1993); other researchers use a time lag of six years between inception and internationalization (Zahra, Irel, & Hitt, 2000), seven years (Jolly, Alahuhta, & Jeannet, 1992), or eight years (McDougall, Shane, & Oviatt, 1994) for determining whether a business is a BGV, thereby using relative criteria.

Some researchers use export intensity, the ratio of the amount of export to total amount of sales as a criterion. In this case, some use a rather generous criterion of min. 25% of export intensity (Knight & Cavusgil, 1996), while others use the stricter criterion of 75% (McKinsey & Co, 1993). Using both time lag and export intensity, in some cases, BGV is defined by businesses that entered the overseas market within three years of establishment and have a min. 25% of export intensity (Knight & Cavusgil, 1996); Madsen, Rasmussen & Servais (2000) or within two years with 75% export intensity (McKinsey & Co, 1993).

2 Theories of BGV internationalization strategies

Do the strategic characteristics of BGVs differ from that depicted by existing internationalization? Though there is a range of theories explaining business internationalization, the stage model represented by the Uppsala model is a theory that elucidates in what circumstance businesses select the internationalization mode but is rather short of being a theoretical explanation of when businesses seek internationalization.

The stage model is a time dependent, determinism-based model and has the limitation of failing to consider the strategic factors of businesses. Johanson & Vahlne (1990) suggested in the following three cases when the stage model would not be appropriate in terms of business internationalization: first, when a company has abundant resources; second, when the overseas market is stable and homogeneous with the domestic market so that it is easy to learn about the overseas market; and third, as the overseas market to newly enter and the market the company has already experienced are very similar, prior experience is applicable to the new market. And Hashai & Almor (2004) maintained that studies of BGV are in line with studies of existing multinational enterprises (MNE), and they presented empirical results showing that the internationalization of a venture company starts from exports in a psychologically closed market first. They also asserted, however, that BGV is merely a time-concentrated phenomenon of existing business internationalization.

However, transcending the fixed stage of internationalization and omitting the important stages in the realization of FDI (Welch & Loustarinen, 1988; Sullivan & Bauerschmidt 1990) are the empirical evidence that the internationalization process of venture firms is not simply a time-concentrated process. In addition, venture firms, based on innovative technologies, by definition do not have much experience, are limited in resources because of their small size, the market they have entered is volatile, and they do not have sufficient experience in the market (Oviatt & McDougall, 1994). Thus, BGV does not fall into the same category as the three cases above proposed by Johanson & Vahlne.

The internationalization theory delineated by the stage model includes the size of the business as a very important variable. The size of the business is related to the resources utilized by the business and the vertically integrated organization, which secured the economy of scale in R&D, production, and the various parts of marketing, efficiently exchanges production and market information (Stopford & Wells, 1972); its market status as a monopoly serves as a competitive advantage (Dunning, 1981; Porter, 1990). However, although the competitive advantage arising from such an economy of scale would be a significant resource on its own, other competitive advantages play a role in internationalization and other factors make BGV possible (Oviatt & McDougall, 1994).

New economic, technological, and social environmental change offers a source of new competitive advantage. Increases in international communications, transportation speeds, quality, and efficiency have reduced transaction costs in international exchanges (Porter, 1990). The expanding homogeneity of the world market facilitates the understanding of different markets (Hedlund & Kverneland, 1985), while the human resources movement (Johnston, 1991) and the internationalization of financial sources (Petricof, 1989) provide enterprises with a business environment where it is relatively easy to create internationalization strategies. Under these circumstances, the importance of the source of a competitive advantage for those firms that rely on economy of scale and new and sustainable sources for a competitive advantage lies in uniqueness of a company's resources (Barney, 1991; Hamel & Prahalad). Therefore, today's BGV stems from new changes in the business environment, and the switch of a competitive

advantage to a firm-specific asset for a company can be explained by resource based perspectives.

The reason firms try to internationalize is to utilize the global market as a strategic opportunity. Because most BGVs are knowledge-intensive businesses that sell independently developed technology based products (Almor, 2000; Shrader, 2001; Zahra et al., 2000), international activities are an important source for a competitive advantage for knowledge-intensive businesses, and it can be said that knowledge-intensive industries are global (Korbin, 1991). To develop competitive technology, it is necessary to connect or integrate markets in different countries. The high correlation between R&D expenditures and international competitiveness proves that there is reciprocal relationship between R&D concentration and global competitiveness (Kogut, 1991).

For firms with a high concentration of R&D, it is very important to have intelligence gathering on a global scale (Kodama, 1992), and the complexity and immense expanse of R&D make it difficult to fully cover R&D expenditures in the domestic market (Korbin, 1991). Therefore, to continue R&D, firms need to step out of the domestic market and expand into overseas markets. Eventually, the strategy of early and prompt internationalization becomes a new window of opportunity for venture companies in a technology-intensive industry in today's management environment, and it is their strategic choice rather than a stage-based approach.

III. Study Issues Regarding BGV's Business Performance and Characteristics

1 BGV business performance

Firms can stabilize their profits by trying the internationalization strategy (Caves, 1982) and increase the survival opportunity (Hitt et al., 1994). If a firm internationalizes, it can make the most out of new market opportunities and apply their capabilities and/or products to bring about growth and increased profitability (Kim, Hwang & Burgers, 1993). A study by Feeser & Willard (1990) found that venture firms

with higher growth earn higher incomes in overseas markets than those with low growth. Empirical research demonstrated a positive relationship between the intensity of internationalization by venture firms and profits from sales (Bloodgood et al., 1996).

On the other hand, a study by Tyebjee (1990) suggested that while venture firms pursue internationalization to cover high R&D costs in their specialized niche market, the profitability of internationalized venture firms is lower relative to domestic firms due to the high costs required for overseas markets. Empirical research by 62 American venture firms (McDougall & Oviatt, 1996) showed that while the internationalization of venture firms tends to increase market share, it does not affect the firms' ROI (return on investment) and further explained that the outcomes from either the increase in market share includes the effect of ROI or the history of internationalization that is not sufficient to increase earning rates.

As shown in existing overseas research, there is no clear relationship between BGV strategy and business performance. In the case of Korean venture firms, would BGVs that try early internationalization have higher business performance than non-BGVs? While overseas markets are larger than the limited domestic market and offer more opportunities for business growth, entering overseas markets requires high costs and risks. In particular, nascent firms do not have sufficient resources and manpower to pay the immense costs for overseas market penetration and the costs arising from the process of satisfying more complicated conditions than those of the domestic market, which would exert a negative influence over the profitability of a venture firm.

[Research question 1] Can Korean venture companies obtain higher business performance by pursuing BGV strategies?

2 BGV's corporate capability and characteristics of their marketing strategies

What features of a firm makes it BGV or non-BGV? In general, studies of BGV focus on technology-based firms (Shrader, 2001; Zahra et al., 2000). As most venture firms are so-called new technology-based firms (NTBF) with high technology-intensity, BGV's industrial/environmental features are high risks from short product life cycles and high

tech (Coviello & Munro, 1992,1994), and the categorization as a company belonging to a knowledge/technology intensive industry (Oviatt & McDougall, 1994,1995) is not very useful. Because for rapidly globalizing knowledge-intensive industries (Korbin, 1991), BGVs would be commonplace for businesses.

Knowledge-based industries are featured by a volatile environment with rapid technological transformations, short product life cycles, and high market related uncertainties in a highly competitive market due to competitors' quick responses that make it difficult to forecast the market (Coviello & Munro, 1994). A shortened product life cycle due to rapid technological change induces globalization of the market (Vernon, 1966), and if the domestic competition is too severe, overseas markets could be an alternative. So for firms exposed to such an environment, quickly seeking internationalization would be an appropriate response strategy. Technology-based industry has the burden of high fixed costs and R&D expenditures (Eisenhardt & Schoonhoven, 1990). Venture firms with a high concentration of R&D try to quickly recover the high fixed costs by rapid internationalization strategies to expand and broadly utilize the market (Jolly, et al., 1992) with a strategic objective to pursue internationalization to utilize the window of opportunity via R&D. (Ray, 1989)

Why do some venture firms with similar characteristics pursue early internationalization while others do not? The answer to that question can be sought from the characteristics of resources and the strategies of different firms. If a firm owns heterogeneous and tacit resources that competitors find hard to copy, the firm could earn higher performance than competitors (Hunt, 2000). In the perspective of resource advantage, a firm's resources encompass financial, physical, legal, humanistic, organizational, information, and relationship resources, and for a firm to secure a competitive advantage through these resources, they should not be easily imitated. It is becoming more important to have technology encompassing knowledge (e.g. Barney, 1986; Grant & Baden-Fuller, 1995); in particular, it is a source of competitive advantage for a firm to have knowledge competence not just as the possession of knowledge but in the process of creating and integrating knowledge (Kim, Hyeong-jun, 1999).

When a firm pursues internationalization strategies, it needs more resources than merely targeting the domestic market and requires information about unfamiliar overseas markets. Therefore, the past view was to insist that internationalization would take place gradually as a venture firm with limited resources that gradually obtains sufficient knowledge of overseas markets (Forsgren & Johanson, 1992). However, if a venture company considers itself to have the knowledge to pursue an internationalization strategy or to have the strategic opportunity to utilize current knowledge and facilitate technology development through internationalization, the company will pursue early internationalization. If a firm has a lot of knowledge about the overseas market, it can lower the recognized costs for pursuing internationalization strategies and quickly try internationalization (Ericsson et al 1997).

Many studies that explain internationalization based on the knowledge based framework identify overseas experience as a major variable in determining whether to use resources to enter overseas markets. A variety of empirical studies see international experience as a major variable in expediting internationalization (Bloodgood, Sapienza & Almeida, 1996; Reuber & Fischer, 1997). A firm's overseas experience is a tacit resource that cannot be easily imitated by competitors.

By definition, venture firms do not have sufficient experience. Venture firms that lack technological experience and marketing experience have significant hindrance in seeking internationalization strategies (Brush, 1992; Jolly et al., 1992). However, an individual's experience can complement the firm's experience (Cooper & Dunkelberg, 1986). In particular, venture firms with insufficient organizational competence are likely to rely on the capability of founders, and the more extensive the individual's overseas experience, the higher possibility that the venture firm will attempt early internationalization. In explaining the internationalization of venture firms, the existing literature reports that the founders' knowledge or vision is an important element for a firm when aggressively seeking internationalization (Barkema & Vermeulen, 1998; Autio, Sapienza, & Almeida, 2000). For venture firms, early internationalization rewards them with increased learning opportunities in terms of business's organization or technology (Barkema & Vermeulen, 1998; Ghoshal, 1987) and allows the firms to develop skills that

bring about a competitive advantage and a technological competitive edge (Dodgson, 1993; McDougall & Oviatt, 1996). In other words, specific knowledge makes it possible for a firm to achieve early internationalization, where firms are provided with an opportunity to secure new knowledge through internationalization. There is no doubt that it all depends on a firm's ability to seize the opportunities to acquire new knowledge. To successfully utilize external knowledge or technological capabilities, it is necessary for firms to develop the capacity to absorb such knowledge (Cohen & Levinthal, 1990).

Therefore, among the various venture firms in a similar environment, those firms that fall into the category of BGV should have the following qualities: a firm-specific resource, such as the founders' overseas experience to secure a competitive advantage in overseas markets based on an overseas-oriented vision; and absorptive capacity to overcome market and technological uncertainties, which is indispensable for entering overseas markets.

[Research question 2] Among Korean venture firms, do BGVs have firm-specific resources (founders' overseas experience, overseas-oriented vision, organization' absorptive capacity, etc.)?

Which marketing strategies pursued by BGVs are accentuated and how different are these strategies compared with those of non-BGVs? If firms seek to internationalize, their strategic responses to the risk accompanying internationalization (Miller, 1996) and the environment between the domestic and overseas market are not the same. Thus, firms are involved in a range of marketing strategies depending on the market environment. This study adopts Porter's competitive strategies and Miles & Snow's four strategic types and accordingly categorizes them into four different types: quality differentiation strategy, cost leadership strategy, market diversification strategy, and early entering strategy to analyze the characteristics.

In view of studies on BGV, the higher the product differentiation and competitiveness, the faster the internationalization strategy is sought (Bloodgood, Sapienza & Almeida, 1996; Reuber & Fischer, 1997). Also, the higher the importance of quality

differentiation (Kaynak, Ghuari & Olofsson-Bredenlow, 1987) and customer service (Quinn, 1992), the more sales firms seek overseas markets. The price advantage strategy draws a sharp contrast to the differentiation strategy. The past internationalization of Korean firms is largely dependent upon price advantage. For venture firms, it is also possible to pursue an internationalization strategy through price advantage. However, the existing literature shows that BGVs belong to R&D intensive industries (Eisenhardt & Schoonhoven, 1990) and are exposed to a volatile environment such as markets in the introduction/maturity stage on product life cycle. In this situation, low-price strategy that would not offset high fixed costs; consequently, it would be more effective to obtain better marketing outcomes by targeting a so-called premium market where the weight of prices is not great (Buzzel & Gale, 1987; Gold & Tellis, 1993). Thus, BGVs are likely to pursue a differentiation strategy that emphasizes uniqueness rather than a cost advantage strategy based on prime costs (Almeida & Kogut, 1997).

Market diversification is a marketing strategy that is closely related to the scope of the market and the degree to which it satisfies the various needs of customers. Venture firms seek a deep niche market strategy (Kohn, 1997). In a volatile environment, in particular, venture firms with a narrow product assortment bear significant risks (Dowling & McGee, 1994). It is necessary to have strategies to secure opportunities for income from various markets and to provide a product assortment to meet the various customer needs. It is key strategy for venture firms to provide a wide product assortment (Biggadike, 1976; McDougall & Robinson, 1990) and it would be especially suitable for market strategy of venture firms that the more volatile a market is, the broader its product assortment, even if it accompanies higher costs. Also the diversity of product assortment related to customization. Whether or not a venture firm has the ability to customize is an important factor in determining entry into overseas markets (Murray, 1996; Robert & Senturia, 1997). As the volatility of overseas market is higher than that of the domestic market, it is likely that BGVs pursue strategy with high market diversity.

There are various advantages for a market leader from a strategy of early entry. While an imitation strategy would be one option against the risk of internationalization (Miller, 1996), as asserted by Dunning, an imitation strategy is a temporary strategy in

an oligopolistic market and it is not a common strategy for venture firms (Oviatt & McDougall, 1995). Through a case study of a New Zealand company, Chetty & Campbell-Hunt (2004) presented empirical evidence that BGVs quickly enter different overseas markets. Aside from technology and knowledge, venture firms do not have sufficient other resources so that they are likely to pursue early market entry based on innovative technology in response to the risks arising from internationalization.

[Research question 3] Among Korean venture firms, what are the characteristics of BGV's marketing strategies?

IV. Empirical Analysis

Using structured questionnaires, surveys were carried out on venture firms in Daejeon and Seoul between November and December 2005. In the case of Daejeon, the survey took the form of a one-on-one interview, while in Seoul, questionnaires were collected via home-delivery service (retrieval rate: about 17%) to receive responses from 200 firms (100 in Seoul and 100 in Daejeon). This study selected as respondents 84 companies in 86 companies established during 1999 and 2000. The reason it limited the establishment year of companies was, following existing studies, to categorize venture firms that pursued internationalization strategy in five to six years from establishment as BGVs and especially to reduce environmental factors that might affect business performance by business experience. Thus, firms with similar establishment years were selected as study subjects.

There were 52 firms (61.9%) that internationalized themselves from the 84 samples and depending on the types of internationalization, firms engaged in direct investment, co-production (marketing), and licensing were classified as BGV while those who only carry out export as an internationalization and the proportion of export in total sales was less than 50% were classified as non-BGV. Eventually, there were 34 (40.5%) BGVs and 50 non-BGVs (59.5). The BGVs sought an internationalization strategy within 2.2 years

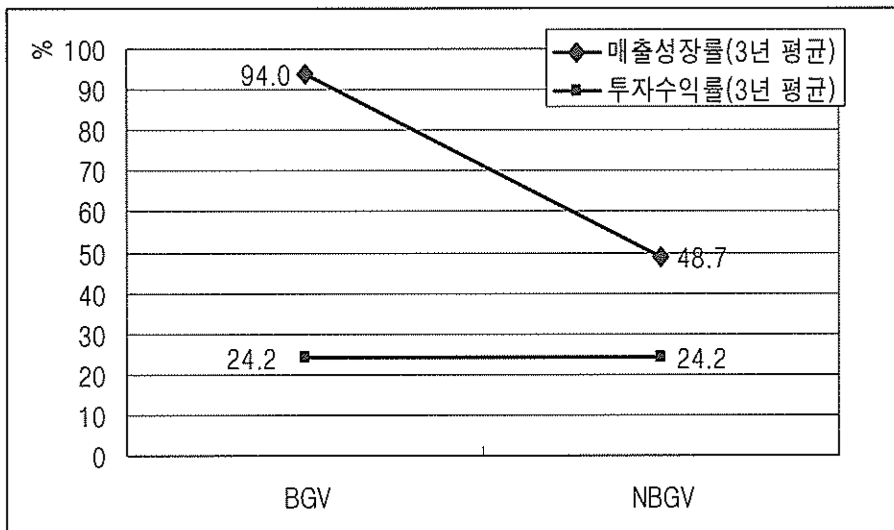
(S = 1.56) from establishment on average. It was found that average BGVs enter the overseas market within approximately 2.2 years (S=0.28) from their inception. BGV is located on the product life cycle at the introduction-maturity stage (79.4%) whereas 50% of non-BGVs belong to the introduction-maturity stage, indicating significant differences in their product life cycles (X2 = 0.04). For the regional distribution between BGVs and non-BGVs, there were no significant differences in terms of regions (X2 = 0.62) because they were located in Seoul (61.8%:70.0%) and Daejeon (38.2%:30.0%). In addition, there were no differences in industry (X2 = 0.88) because they were in IT (55.9%:60.0%), BT (26.5%,26.0%), MT (8.8%:4.0%), and others (8.8%:10.0%). As for product forms (complete product vs. components and materials) and product types (consumer vs. industrial material), there was no significant difference (X2 = 1.86, X2 = 0.97).

1. Difference analysis between business performance of BGV and non-BGV

The business performance variables were measured using different categories: business growth, profitability, market performance, and overall performance (coefficient of reliability = 0.846). To measure growth, two items—average sales growth rate for three years (ratio scale) and return on investment against competitors (5-point scales)—were used. Profitability was measured by the average sales growth rate for three years (ratio scale) and return on investment against competitors (5-point scales). While there were various indicators to gauge market performance, this study measured it by market share vis-à-vis competitors and competitiveness vis-à-vis competitors, and overall performance was measured by one item.

	BGV	Non-BGV	t values (p)
Sales growth vis-à-vis competitors	3.56	3.22	1.829 (0.071)*
Sales growth (3-year average)	94	48.731	2.449 (0.017)**
Return on investment vis-à-vis competitors	3.38	3.12	1.522 (0.132)
Return on investment (3-year average)	24.21	24.23	-0.004 (0.997)
Market performance	3.7794	3.38	2.489 (0.0015)**
Overall performance	3.76	3.28	2.581 (0.012)**

Table 1. The Comperision of Business Performance between BGV and Non-BGV



매출 성장률(sales growth rate)(3 years average) / 투자 수익률 (return on investment)(3years average)

Figure 1. The Comperision of Business Performance between BGV and Non-BGV

While the difference in business performance between BGV and non-BGV was significant between the two groups, the three-year average ROI and ROI vis-à-vis

competitors did not show a difference between the groups. It was found that the difference in overall performance between the two was significant.

Such an outcome coincides with that of the study by McDougall & Oviatt (1996). McDougall & Oviatt showed that while BGVs fare better than non-BGVs in terms of market share, there was no difference in ROI. In addition, it was also similar to Tyebjee's (1990) study outcome that as costs involving overseas market entrance were relatively higher than those of the domestic market, profitability was lower in internationalized venture firms than domestic firms.

If a venture firm pursues early internationalization, the growth rate could be higher than those competing within a relatively limited domestic market. However, it also increases the costs that firms must bear. Thus, the return on investment of BGVs does not differ from that of non-BGVs, and BGVs' return on investment will vary according to the degree of advancement of internationalization (McDougall & Oviatt, 1996). Therefore, the profitability of BGVs will be affected by the strategic changes during internationalization.

2. BGV firm-specific resources and characteristics of marketing strategies

The differences in environmental features between BGVs and non-BGVs have been regarded as important factors; however, there were no differences in industrial distribution (X2 = 0.88) between the two business groups or in product types and forms. In the end, high-tech venture firms are exposed to competitively intensive, homogeneous environments because there are a number of competitors in a volatile environment. In fact, there was no difference between BGVs and non-BGVs regarding recognition of the volatility and hostility of the industrial environment in which the firms operated (volatility: t-value = 0.06, hostility: t-value = -0.37).

Difference in firm-specific resources between BGVs and non-BGVs: This study measured firm-specific resources with absorptive capacity technological knowledge possessed by the CEO and founding members (coefficient of reliability = 0.72), overseas experience (coefficient of reliability = 0.70), and overseas orientation variables (coefficient

of reliability = 0.67) to compare the two business groups. Absorptive capacity refers to the ability to acquire knowledge from outside, to generate it as a competitive advantage, and is determined by the quantity and quality of knowledge of the existing business and the ability to integrate external and internal knowledge to expand it further (Russ & Camp, 1997). The absorptive capacity regarding technological knowledge is related to the firm's R&D investment and the ability to use knowledge during the R&D process. In this study, absorptive capacity was measured by quantitative indicators (total number of employees vis-à-vis research staff and sales vis-à-vis R&D investment (three-year average) and the ability to use knowledge during the R&D process (coefficient of reliability = 0.72).

As for a quantitative indicator of R&D investment, there was no difference between the two groups in terms of the proportion of research staff to total number of employees: BGV had 0.42 persons (S:0.04) and non-BGV had 0.45 persons (0.03). Also, for the three-year average R&D concentration rate, BGV was 32% (S:6.99) and non-BGV was 156% (S:119.7), showing no significant difference.

However, there was a significant difference between the two groups in the ability to use knowledge during the R&D process. As both BGV and non-BGV are technology-based venture firms, it can be said that there was no difference in terms of the degree of investment. Compared to non-BGV, however, BGV can be viewed as a company with the ability to effectively use the resources invested in R&D. In other words, the R&D department of the BGV demonstrated relatively higher R&D productivity to develop high value-added technology with effective teamwork between the R&D department and other departments. Thus, the quantity of input was less important than the qualitative capability to use it.

Table 2 Comparison of Corporate Features of BGVs and non-BGVs

	BGV	Non-BGV	t value (p)
Knowledge utilization ability	3.67	3.22	2.78 (0.007)**
Founding members' overseas experience	3.72	3.17	2.63 (0.01)**
Founding members' overseas orientation	3.75	3.54	1.23 (0.22)
Founding members' technological capability	4.07	4.02	0.27 (0.78)

Regarding the CEO and founding members' capability, the comparison of BGV and non-BGV only shows a significant difference in the founding members' overseas experience while showing no differences in overseas orientation and technological capability. The significant difference in overseas experience by the CEO coincides with previous studies (Barkema & Vermeulen, 1998; Autio, Sapienza & Almeida, 2000). However, the founders' overseas orientation differs from previous studies. The result arises from the fact that though most venture firms have the will to advance into overseas markets, they could not make an early entry due to their capability and for strategic reasons. As a result, BGVs and non-BGVs are different in firm-specific capabilities. A venture firm that uses knowledge during the R&D process and a CEO with extensive overseas experience tends to seek early internationalization.

Differences in marketing strategies between BGV and non-BGV: as suggested above, marketing strategies were classified into the quality differentiation strategy (coefficient of reliability = 0.75), price strategy (coefficient of reliability = 0.71), market diversification strategy (coefficient of reliability = 0.60), and early market entry (coefficient of reliability = 0.63) to measure the individual strategies of venture firms.

As the target of the survey was venture firms, both BGVs and non-BGVs focused on the quality differentiation strategy while relatively neglecting the price advantage strategy. However, compared to non-BGVs, BGVs tended to seek the quality differentiation strategy, market diversification strategy, and early market entry strategy more whereas non-BGVs tended to pursue the price advantage strategy.

Table 3 Comparison of Marketing Strategies by BGV and non-BGV

	BGV	Non-BGV	t value (p)
Quality differentiation strategy	4.16	3.91	1.81 (0.075)*
Price advantage strategy	2.62	3.01	-2.42 (0.018)**
Market diversification strategy	3.82	3.37	2.69 (0.009)**
Early market entry strategy	3.88	3.37	2.23 (0.03)**

It is similar to previous findings that the greater the advantage of product differentiation (Bloodgood, Sapienza & Almeida, 1996; Reuber & Fischer, 1997) and the more customer service is emphasized (Quinn, 1992), the faster firms carry out an internationalization strategy. In other words, BGVs are firms that seek an early market entrance strategy based on quality differentiation. In addition, while BGVs follow a concentration strategy in a niche market, they place relatively greater emphasis on a market diversification strategy in that they offer a wide range of product assortment to meet customer needs within the market. It can be a strategy to widen a firm's customer base in a market with high environmental volatility (Biggadike, 1976; McDougall & Robinson, 1990). In particular, BGVs do not pursue a price-based strategy. The fact that early internationalization strategy-seeking firms do not pursue a price advantage but a quality differentiation strategy could be an important variable in the BGV phenomenon that cannot be fully explained by the stage-based international model.

The outcomes ($X2 = 23.6$, $p = 0.000$, -2 log Likelihood $= 87.954$, classification accuracy $= 73.5\%$) obtained by the binary Logit analysis include the ability to use knowledge ($\beta = 0.969$, $p = 0.02$), founding members' overseas experience ($\beta = 0.629$, $p = 0.038$), market diversification strategy ($\beta = 0.706$, $p = 0.034$), and price advantage strategy ($\beta = -0.765$, $p = 0.042$) while the quality differentiation strategy and early market entry strategy was statistically meaningless. In the end, BGVs are likely to pursue early internationalization under the following conditions: their founding members have extensive overseas experience; and their ability to use knowledge is high. BGVs are firms that pursue a product assortment strategy and differentiation and early market entry strategy rather than price-based strategies.

V. Conclusion and limits of the study

This study concluded that the internationalization of new technology venture firms was not made in a stage-by-stage process as explained by the existing stage-based model, but was rather an active strategic choice based on firm-specific resources. The study revealed the characteristics of Korea's new technology-based venture firms that attempted internationalization within five years of establishment to view the difference in business performance compared with other venture firms.

In summary, the study outcomes were as follows: first, firms that selected an early internationalization strategy had higher ability to use knowledge than those that did not so they fared better in terms of R&D productivity and absorptive capacity (i.e., more effective communication between different teams within an organization. While high R&D concentration was a common feature of venture firms, BGVs tended to place greater emphasis on qualitative ability to effectively use invested resources rather than quantitative investment. As in studies that explained BGVs according to the founders' spirit and capability (e.g. Liesch & Knight, 1999,etc), the overseas experience of founding members was shown to make it possible to pursue early internationalization strategy by reducing recognized risks and uncertainty accompanying internationalization.

Second, BGVs sought a differentiation strategy with a variety of product assortments and tried to preempt the market early to enjoy the 1st Mover Advantage, rather than executing price advantage-related strategies. While most venture firms pursued a product differentiation strategy, BGVs sought those strategies more aggressively than non-BGVs. Therefore, venture firms that attempt to enter overseas markets promptly should diversify their product assortments and equip themselves with the ability to carry out a customization service strategy while quickly entering the market with new product development.

Third, BGVs expected positive business performance, such as fast sales growth and relatively high market share from early internationalization. However, profitability was not significantly different than non-BGVs due to costs generated by overseas market penetration.

Although this study presented several meaningful research outcomes, there were some limitations. The reason venture firms tried to pursue early internationalization was to procure the necessary resources for overseas markets (Bonacorsi, 1992); subsequently, they needed a formal and informal network for that purpose. For venture firms that did not have the required resources for an internationalization strategy, international cooperation and partnerships were vital (Coviello & Munro, 1997; McNaughton & Bell, 1999). This study did not cover the ability of a firm to build a cooperative network so will be necessary to complement in a future study.

While it would also be a common limitation in any BGV research, this study defined BGV based on the researcher's subjective view. As mentioned earlier, there is no unified definition of BGV in the study of BGV. It can be conceptualized as firms that actively carry out internationalized activities in overseas markets and have access to overseas networks and overseas financial markets (McKinsey Co. 1993). However, as existing studies define BGVs as the temporal difference into overseas market entry including establishment and exports or as the proportion of exports to total sales, there can be a difference in individual research outcomes from the subjective views of researchers. However, the study did not simply define BGV in terms of temporal differences but considered the type of internationalization and export concentration to adopt more strict

conditions in the definition of BGVs. Another limitation was the restriction in differentiating BGVs and non-BGVs as the number of samples used for this research was not sufficient.

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