



Qing Lu

Venture Capital Investment Strategy in Emerging Markets

A Resource Approach



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Summary

In this study, we apply resource theory and knowledge-based theory to analyze the competitive advantage of VC firms in emerging markets and explore how VC firms accumulate their knowledge and build networks through their investment strategies in such markets. We summarize four mechanisms of knowledge accumulation, learning by jointing venture, learning by hiring, learning by doing, and learning by observing. We further highlight the foreign and local VC firm's differences in VC investment decision process and syndication strategy. This study has shown that VC knowledge affects its usage of learning mechanisms and together they affect VC investment strategies in emerging markets.

In our case study, it is found that VC firm characteristic such as firm nationality and governing structure significantly affects VC's usage of the four learning mechanisms. Though facing some knowledge deficiencies in initial days, new VC firms can use their advantages in certain knowledge or networks to exchange for complementary capacities, and thus help the adjustment to the new environment.

In our study on VC investment decision process, we compare the VC deal source and management criteria differences between foreign and local VC firms. We find that foreign VC firms obtain more solicited deals and less unsolicited deals from networks compared to local firms, and foreign VC firms put less emphasis on the managerial experience compared to local firms.

These findings can be explained by knowledge differences between foreign and local VC firms. On the deal source, the weakness of their local networks causes foreign firms to get less unsolicited deals from networks, but their advantage in general knowledge, particularly the industry knowledge, enables them to search for high-quality deals by themselves and obtains more solicited deals as the result. On the management criteria for due diligence, the advantage of foreign VC firms in general knowledge enables them to put less emphasis on managerial experience in the evaluation of venture management team.

In our study on VC syndication process, we have focused on VC syndication motives and their syndication frequencies. While VC firms join syndication mainly for risk sharing and there are no differences between local and foreign ones in risk sharing and overall knowledge sharing motives, foreign VC firms are more likely to join syndication for deal reciprocity and acquiring local knowledge compared to local ones. Furthermore, a VC firm with few years of local experience joins syndication more frequently compared to a firm with more local experience even though the former may have a long history in other VC markets.

These findings can be explained by the VC learning. First, foreign firms are more interested in learning local knowledge and building networks through syndication due to their relative weakness in local knowledge and local networks, and thus they may be more likely to join syndication for deal reciprocity and local knowledge. Second, VC firms with longer years of local experiences would have less to learn in syndication but more to be learned by their partners. They are thus less interested in syndicated deals.

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CHAPTER 1 INTRODUCTION

1.1. Overview

Venture capital¹ (VC) has been established as an intermediate external source of financing for small and medium sized enterprises (SMEs). As the amount of capital managed by venture capitalists has steadily increased over the years, their impact on the success of SMEs has correspondingly increased. The size of total funds managed by VC firms in the U.S. has experienced tremendous growth from about US\$30b in the early 1990s, to a new height of US\$153.9b in 2000, which has contributed significantly to the growth of high technology sectors in the U.S. The success of the VC market in the U.S. has helped the country to maintain the dominant position in the world economy over the last few decades.

Since the 1980s, inspired by the U.S. success, many less developed countries have started to develop their own VC industries. Currently, the boom of VC investments has spread across markets in most developing countries, or called emerging markets. For example, the VC investment activities have emerged across most Asian Pacific countries since the middle of 1980s (Leinbach, 1991). Though the VC history is not very long since its initial development, Asian Pacific countries have experienced a boom in terms of both VC funds and VC pool in the last two decades (AVCJ, 2003). The whole VC pool in Asia Pacific markets developed from US\$22b in 1991 to US\$81b in 2000, and there were 1,404 VC funds existing in Asia Pacific countries at the end of 2000, which increased nearly 500 per cent in comparison to 1991. These VC firms invested US\$12b in 2000, pushing the VC investment portfolio in Asia Pacific countries to US\$40b.

The importance of VC industry has attracted more and more academic research interests in this area (see review papers such as Fried and Hisrich (1988), Barry (1994), and Wright and Robbie (1998)). Many theoretical and empirical studies have been undertaken to describe the various aspects of VC (e.g., Sahlman, 1990; Bygrave and Timmons, 1992; Gompers and Lerner, 1999), which have led to a better understanding of the VC industry and helped venture capitalists and entrepreneurs to improve their performance, as well as regulatory bodies in their policy making. However, in general, academic research still lags well behind the growth of the VC industry (Wright and Robbie, 1998). In addition, since VC research is generally viewed as a sub-field of corporate finance, it has seldom drawn perspectives from other research streams such as strategy management and organization theory. However, though VC investment is a kind of equity investment, it is quite different from mainstream corporate finance due to the low market efficiency and liquidity of VC market (Wright and Robbie, 1998), and the market context is also different in various VC markets. Finance approach, which normally assumes market efficiency and low transaction cost, is thus inadequate to address many

¹ Here we adopt the broad concept of VC used in Europe and Asia, i.e., all formal private equity financing, covering both early stage investments, regarded as the classic VC, and later stage ones, even including

research questions in VC field. Furthermore, most VC studies so far are based on Western developed countries, and VC investment behaviors in emerging markets are much under-researched with few research papers (e.g., Wang, Wang, and Lu, 2003; Bruton, Ahlstrom, and Yeh, 2004). Given the importance of VC industry for economic growth in these markets, more research work is needed to support the VC market growth.

Therefore, the purpose of this study is to analyze VC investment strategy in emerging markets with an approach seldom used in VC literature, namely, resource theory and its further development, knowledge-based theory. Resource theory, or resource-based view of firm, is widely used in organization theory and strategy literature (Wernerfelt, 1984; Barney, 1991). Knowledge-based theory further highlights the importance of knowledge in knowledge-intensive industries (Nonaka, 1994; Grant, 1996; Kogut and Zander, 1996). Different from the dominant finance approach used in VC literature, knowledge-based theory is anchored in the knowledge heterogeneity and thus can easily take the market context and VC knowledge differences into the approach. Thus applying knowledge-based theory to study VC behavior in emerging markets can provide fresh insights for better understanding of VC investment behaviors in emerging markets. Particularly, in this study, we apply knowledge-based theory to explore how a VC firm accumulates its knowledge and builds networks in an emerging market through its investment strategy. Through an interview-based field study, we have summarized four mechanisms of the knowledge accumulation, learning by jointing venture, learning by hiring, learning by doing, and learning by observing. We especially pay attention to the latter two mechanisms, which correspond to two aspects of VC investment strategy, namely, VC investment decision process and syndication strategy. We further highlight the knowledge differences between foreign and local VC firms, and develop hypotheses thereby, and test these hypotheses with empirical data from Singapore market. The analysis has shown VC knowledge affects its usage of learning mechanisms and together they affect VC investment strategies in emerging markets.

The rest of the thesis is organized as follows. In the rest of this chapter, I provide a summary of VC literature with a brief description of VC industry and the VC investment process in developed markets. In Chapter 2, I explore the institutional and cultural contexts in emerging markets and review the studies of VC behaviors in emerging markets. A literature review on knowledge-based theory is also given there. Then, the theoretical framework is developed in Chapter 3 by analyzing VC knowledge and means to accumulate the knowledge. I further analyze the difference in knowledge and other resources between foreign and local VC firms in emerging markets. In Chapter 4, I apply the framework to VC investment decision process and syndication strategy, and develop four testable hypotheses. In Chapter 5, the methodology for both interview and survey study is discussed, including the samples and measurements. Chapter 6 presents interview results to provide an in-depth understanding on the knowledge base of VC firms in Singapore as well as the usage of various

learning mechanisms. Then, the empirical results from survey study are presented in Chapter 7. Lastly, findings are summarized in Chapter 8 with discussions from various aspects.

1.2. How Does VC Work?

The private equity market is where the VC firm operates. It is much more imperfect in comparison to the public equity market. There is severe information asymmetry between companies and investors in the market. Companies in this market are new start-ups and small entrepreneurial ventures, often possessing technology that is promising but typically untested and unknown to outside investors. Different from the public equity market, where investors can easily find intermediaries such as underwriters and auditors to certify the quality of a listed company, the private equity market is not well regulated and there are few financial intermediaries. Therefore, investors in this market are often difficult to find qualified intermediaries to verify the claims of these small companies, particularly concerning the valuation of their intangible assets such as new technology, the main value of these ventures.

Furthermore, the private equity market is illiquid in nature and thus the equity there is difficult to trade in comparison to the public market. Therefore, investors have to spend much more effort (which means high transaction cost) to find someone to buy their equities (often at a great discount). As the result of information asymmetry and market illiquidity, the private equity market is very inefficient and may even totally fail. In this market, high quality ventures with promising future are mixed with unpromising ones, and investors have great difficulty to differentiate between them. The market inefficiency restricts the ability of high quality ventures to raise funds and commercialize their new technologies, which causes adverse selection, similar to the "lemons market" in Akerlof (1970), where buyers only pay for the average value without knowing the true value of goods in the market. As a result, high-quality goods would be driven out of the market and only low-quality goods are left there. Similarly, in the private equity market, high quality ventures may be under-funded, while the risky capital is difficult to find high-return ventures to invest in.

Besides the adverse selection problem in the private equity market, the founding team of these ventures is often strong in technology but weak in management and marketing. Being small firms, it is difficult for them to recruit managerial professionals, even though they know the participation of these professionals is often essential for the venture success. An interesting case recorded in Bygrave and Timmons (1992, p209-210) is a good example. A professional marketing manager initially rejected the offer from a high-tech firm, and only its VC partner's visitation and persuasion changed his decision. Later events proved that his presence in that firm was critical for its subsequent growth. Furthermore, people in a small venture work closely and tend to develop conformity of thinking, which may cause critical mistakes in the venture management. In summary, these problems may cause a venture to fail

even with a promising product /service, and thus some innovative mechanisms are required to help high-quality ventures to survive and prosper in the private equity market.

VC is one of the important mechanisms, first developed in the U.S., to overcome these problems in the private equity market². Many VC firms are independent partnership management firms, managing several VC funds or partnerships, which are normally formed by limited partnership³.

In the context of VC, the partnership normally has limited life (ten years, in most cases). In a limited partnership structure, there are two parties, namely, general partners and limited partners. Limited partners are patient public institutional investors seeking long-term high returns, serving as passive shareholders. General partners are venture capitalists, who are professional investment managers with various backgrounds such as entrepreneurs or senior managers in industrial corporations. They are experienced in moving start-up companies along the development path (Sahlman, 1990). General partners actively manage the partnership, and are mainly rewarded by bountiful profit sharing to motivate them to bear risk for high returns willingly. While they normally put a nominal capital (normally one-percent) to the partnership, they can usually share up to twenty-percent profits as monetary incentives.

The partnership system enables VC firms to be patient long-term investors, who are willing to wait for years before the harvest and thus they can bear with the low liquidity in the private equity market. Furthermore, through bountiful profit sharing, the partnership system helps VC firms to retain experienced venture capitalists, whose industry and investment experience has equipped them for the difficult task of searching for promising ventures in the high-risk private equity market. Thus VC firms can serve the role of market intermediary in the private equity market and partly overcome the problem of adverse selection.

Besides serving as market intermediary by identifying promising ventures, VC firms also function as professional service providers by helping the venture growth with their financial capital and various value-added services. These services include bringing in industry knowledge and insights for strategic planning, helping to recruit key members into the management team, coaching inexperienced entrepreneurs, and motivating the young venture for long-term sustainable growth (Bygrave and Timmons, 1992). All these value-added services are essential for venture success and make VC firms more than mere capital providers in the growth of entrepreneurial firms.

In summary, VC firms play two important roles in the private equity market. They are both market intermediaries who help long-term investors searching for promising ventures to invest in, and

² Besides formal institutional VC firms, some informal investors also operate in this market and perform similar roles such as business angels. However, in this study, we restrict our discussion only on formal VC firms.

³ Besides independent VC firms, there are other types of VC firms such as finance-affiliated and corporate VC firms. Funds under their management are often perpetuated, and the compensation for their investment managers is often lower. For more details, please see Wang, Wang, and Lu (2002).

professional service provider to help the growth of young ventures. As the result, VC industry is highly successful in the U.S. Though ventures supported by VC firms occupy only a small percentage of SMEs (Berger and Udell, 1998), they have led the growth of many new high-tech industries such as semiconductor, computer, software, and biotechnology and fundamentally changed the way in which we live and work. For example, VC firms have helped many young start-ups to compete against big companies in the birth of the local area network (LAN) industry (Von Burg and Kenney, 2000). Also, many brand names in IT industry such as Apple, Lotus, Sun, and Compaq are firms supported by VCs in their early days.

1.3. VC Investment Process

Here we provide a short summary of the VC investment process as the background of our research. Wright and Robbie (1998) classified the VC investment process into four stages: fund raising, assessment, monitoring, and investment realization. VC investment strategy discussed in this study would mainly be strategies in the stage of assessment and monitoring, though we may refer to the other two stages occasionally.

First, at the fund raising stage, a VC firm needs to raise funds from public institutional investors (if the VC firm is independent) or from parental or related institutions (if the firm is not independent). The latter type can be finance-affiliated, corporate-owned or government funded. Traditionally, most VC firms are independent, whose funds are normally with limited life (ten years, in most cases) in order to control the possible conflict of interests between VC managers and fund providers (Sahlman, 1990). Survival of such a firm greatly relies on their fund raising ability, which largely depends on the reputation of the venture capitalists and the performance of previous VC funds of that VC firm (Gompers, 1996).

Second, at the assessment stage, a VC firm seeks possible investment opportunities, values them through initial screening and further due diligence, makes investment decisions (e.g., Tyebejee and Bruno, 1984; Hall and Hofer, 1993), and structures deals by legal contracts (Gompers and Lerner, 1996). At this stage, the VC firm uses its industry knowledge and investment experience to identify promising ventures and negotiate proper contracts to align the interests of management teams with itself. Theoretical work of this stage mainly focuses on information asymmetry faced by venture capitalists and the adverse selection problem as a result of this asymmetry (Amit, Glosten, and Muller, 1990).

Third, at the monitoring stage, the venture often experiences rapid growth. During this phase, venture capitalists need to monitor the venture closely and make further investment decisions as their investments are often made in stages (Gompers, 1995). Venture capitalists also actively involve in making strategic decisions for the venture and contribute to the venture growth by offering various

value-added services. It is also the period for entrepreneurs to learn management skills from venture capitalists (Black and Gilson, 1998). The dominant theoretical model to describe this stage is the agency model (e.g., Sahlman, 1990; Sapienza and Gupta, 1994; Bruton, Fried, and Hisrich, 2000).

In the agency model, a principal delegates some decision-making responsibility to an agent due to various reasons such as information asymmetry. However, the objectives of the agent may conflict with that of the principal (Eisenhardt, 1989a). Therefore, the research work has focused on how to control this conflict. Applying this model to VC studies, the venture capitalist is viewed as the principal and the entrepreneur as the agent. VC studies of this stage typically focus on how the venture capitalists monitor and motivate the entrepreneurs to work for the venture success. For example, Gompers and Lerner have used the agency model to explain various aspects of VC behavior in the U.S. such as detailed legal contracts (Gompers and Lerner, 1996), geographical localization of ventures supported by a VC firm (Lerner, 1995), and stage financing (Gompers, 1995). However, while this theory helps at one level of understanding, it does not incorporate the dynamic nature of interactions in this relationship (Cable and Shane, 1997), and also fails to address the social contexts within which this relationship is situated. Therefore, agency theory is not sufficient to explain the complex behaviors between venture capitalists and entrepreneurs. Models from game theory such as prisoners' dilemma could be better in studying such relationships (Cable and Shane, 1997).

Finally, the last stage of the VC process is the investment realization or exit, during which the VC firm exits from the venture via acquisition or launch of an IPO (initial public offering). The VC firm is rewarded bountifully if the venture is successful. Its past contribution to the venture growth is reflected in the market valuation premium on VC-backed IPOs (e.g., Barry, Muscarella, Peavy, and Vetsuypens, 1990; Megginson and Weiss, 1991; Brav and Gompers, 1997). However, VC firm would gain very little or even lose significantly if the venture is not so successful and it has to exit through liquidation of the venture (often in the case of significant loss) or equity buyback by the venture (moderate gain or loss) (Gladstone, 1988).

In summary, VC firms are exposed to great risk in their investment process but could also reap high returns by investing in promising entrepreneurial companies and their valuable help for the success of these companies.