

The Role of Venture Capital in China's Technology Entrepreneurship Development

by

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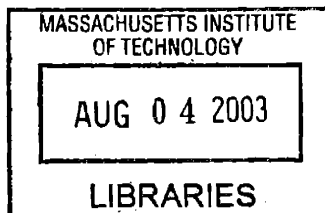
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Abstract

China has placed the commercialization of science and technology innovations as one of the nation's most important long-term development strategies. In the birthplace of venture capital (VC), venture investment has been the fuel of high technology entrepreneurship development, which transformed US economy from a manufacturing- to a knowledge-based economy. By examining the formation and operation of China's venture capital (VC) industry, this study attempts to discover the role of different types of venture capital in China's technology entrepreneurship development. Four categories of venture capital operations, government funds, government leveraged funds, State Owned Enterprise (SOE) funds, and foreign funds, are identified by their sources of funding. Four venture capital operations, NewMargin, Business Incubator of Zhongguancun Haidian Science Park, Legend Capital, and IDG Technology Venture are examined as the base of analysis. The cases are chosen because they are the leading firms in their respective categories. Case studies show that the government is not only the regulator but also an active participant in China's venture capital industry. The active involvement of the government has both positive and negative impacts on the industry, venture capital funds, and entrepreneurial firms. The government's early involvement provided seeds for China's venture capital industry, but its regulations on financial market that are skewed towards the reform of state owned enterprises suffocate the growth of the venture capital industry. The case studies indicate that the bigger the government stakes in a venture capital fund, the greater the correlation between the fund's portfolio and the country's long term technological development goals. Distinctions between US and Chinese venture capital firms are also discussed.

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1. Introduction

Since China started its economic reform in 1978, entrepreneurship has been a major driver for the country's phenomenal growth. Entrepreneurs emerged from urban and rural areas alike, and have created a private economic force that did not exist and a social class that was prohibited during the first 30 years in the history of Red China. Early generations of entrepreneurs enjoyed their most visible success in trade and manufacturing related businesses. The scale of the nation's manufacturing capability earned China the nickname of "the world's factory floor." But gradually, several drivers have been making China a fertile ground for technology entrepreneurship. First, as the Chinese economy start to move towards a knowledge-based economy, the demand for technologies that improve productivity has created a promising market for products and services with high technology contents. Second, in their quests for high quality and low cost labor force, multinational corporations (MNC) brought their technologies, manufacturing processes, and managerial practices into China. Local entrepreneurs quickly realize the demand and profit potentials in higher value-added goods and services, and start to pursue advanced technologies. Third, the importance of developing science and technology capabilities has been well recognized before China opened its door to the West. Even in Chairman Mao's time, modernizing science and technology was listed as one the country's four fundamental development goals. Only after the release of the nation's open and reform policies, has China added commercialization of science and technology innovations into its long-term development strategy. By examining the formation and operation of China's venture capital industry, this study attempts to discover the role of different types of venture capital in China's technology entrepreneurship development.

China-related entrepreneurship research primarily has been focused on the entrepreneurial firms and their internal resources. However, the effects of venture capital on technology entrepreneurship development in China, an environment that is entirely foreign to venture capital, have not yet been studied widely.

I attempt to categorize China's venture capital operations by their sources of funding. The categories are government funds, government leveraged funds, State Owned Enterprise (SOE) funds, and foreign funds. Government funds are established solely by central or local governments, and chartered with specific national or regional development tasks. Government leveraged funds receive initial funding from central or local government agencies and raise additional funds from private sources. Government leveraged funds have the flexibility to selecting their investment targets. SOE funds are established by large local enterprises as vehicles to diversify business lines or to explore new opportunities. Foreign funds are special funds earmarked to be invested in China. These funds are often managed run with Western VC style. This study presents four cases of venture capital operations, NewMargin, Business Incubator of Zhongguancun Haidian Science Park, Legend Capital, and IDG Technology Venture. These cases are chosen because they are the leading firms in their respective categories.

One finding through the case studies is that the Chinese government is not only the regulator but also an active participant in China's venture capital industry. The active involvement of the government has both positive and negative impacts on the industry, venture capital funds, and entrepreneurial firms. On the positive side, the initial investment from government agencies has given birth to many technology startups which otherwise have no access to capital. The seed investments also attract foreign private equity funds to enter the Chinese market. On the negative side, the government agencies have no expertise in venture capital investment and they provide minimal value to entrepreneurs other than financial capital. Moreover, the majority of VC funds in China have been set up by central or local governments. Chartered to stimulate the economic growth of a certain region, these funds have limited interests in generating financial returns. As a result, venture capital as an industry has not generated enough influence over the regulators of China's financial markets.

Through my analysis of the technology bases of the investment portfolios, I found that the bigger the government stakes in a venture capital fund, the greater the correlation between its portfolio and the country's long term technological development goals. The Chinese government may have intended to guide the entrepreneurship development

indirectly, but given the number of government-backed VCs, this approach may lead the venture capital industry into narrow focuses on certain technologies and cause inefficient capital allocation.

I also found that, distinct from their US counterparts, Chinese VCs are usually structured and organized as regular corporations with a pyramid shaped structure. In contrast, American VCs are formed as inverted pyramids, where the majority of the employees are actually partners in the firm, supported only by a handful or so of analysts and associates.

The thesis is organized as follows: the introduction chapter also describes the research interests and findings. The second chapter reviews related lines of literature. Chapter three describes the current status of China's venture capital industry. In chapters four through seven, I present four case studies, and in chapter eight, I deliver conclusions, address major implications of my study, and propose future research directions.

2. Related Literature

Venture capital is often included as an important aspect of contemporary studies of entrepreneurship. Here I intend to analyze the entrepreneurial phenomenon in China and verify some theories on the relationship between venture capital and entrepreneurship development.

2.1 Venture Capital

In their book *Venture Capital at the Crossroads*, Bygrave and Timmons define venture capital as the “type of capital involves a degree of risk and even something of a gamble.” Specifically, “the venture capital industry supplies capital and other resources to entrepreneurs in business with high growth potential in hopes of achieving a high rate of return in invested funds.”¹ Bygrave and Timmons also pointed out that “venture capital has played a catalytic role in the entrepreneurial process: fundamental value creation that triggers and sustains economic growth and renewal.” This profound impact of venture capital has been documented in a study conducted by Global Insight Inc., which revealed that U.S companies originally backed by venture capital created 4.3 million jobs in the country and generated \$736 billion in revenues in the year 2000. In addition, the study showed that venture investments fostered innovation across multiple industries in the US economy, especially in the technology industry, which received \$192 billion in venture capital between 1995 and 2000.

Table 2.1 Jobs Created & Revenue Generated by Venture Backed U.S Companies; By Industry for 2000

¹ “Note on the Venture Capital Industry (1981)” HBS Case 285-096, Harvard Business School, 1982, p.1.

Jobs Created & Revenues Generated by Venture Backed U.S. Companies By Industry for 2000		
Industry	Jobs Created	Revenues Generated (Billions of Dollars)
Consumer	1,126,462	131.89
Computer Related	850,187	204.24
Medical/Health	646,429	80.29
Communications	293,722	60.94
Industrial/Energy	265,238	55
Electronics	237,308	54.42
Biotechnology	61,090	14.55
Other	802,696	134.6
TOTAL	4,283,132	735.93

Source: National Venture Capital Association Data

Bygrave and Timmons further identify two schools of venture capital firms. *Classic venture capital* adds value in forming, building, and harvesting venture investments. *Merchant capital* is a hybrid that combines the seed, startup, and early-stage investing of classic venture capitalists with expansion, growth, and development financing reminiscent of merchant banks and with the investment-banking transaction mentality of many Leveraged Buy-Out (LBO) and Management Buy-Out (MBO) specialists. They argue that classic venture capital investing is the maternity ward and incubation center for the entire economy. They imply that classic venture capital investing is more efficient in fostering entrepreneurial ventures.

2.2 Technology Entrepreneurship and Venture Capital

Entrepreneurship is seen as an important source of economic growth for nations (Schumpeter, 1934; McDougall, 1994). It has been defined in many ways: the entrepreneurial firm (Carland, Hoy, Boulton, and Carland, 1984); a process of pursuing opportunities (Stevenson & Jarillo, 1990) or wealth (Ronstadt 1984); entrepreneurial activities (Bird, 1989); the entrepreneurial phenomenon (Brockhaus, 1987); and entrepreneurial behavior (Bird, 1989). Recently, technology entrepreneurship and its role in promoting industrial developments (Oviatt & McDougall, 1994) received more attention since it is expected to play a greater role in economies (Peng, 2000).

Among all the entrepreneurial initiatives, technology startups receive the attention of venture capital firms for the several reasons. Technology startups need more financial capital than other entrepreneurial activities. With the high risk profile and expected return, venture capital firms often seek investment targets with significant market potential. High-tech startups, often based on a proprietary product with very high valued-added properties, match nicely with venture capitalists' expectation. Entrepreneurs and venture capitalists fall madly in love with products with rapidly growing markets and high gross margins of 50%, 60%, or even 70% or more (Bygrave & Timmons, 1992).

To reach their financial goals, venture capital firms provide value-added services through involvement with the portfolio companies. An alignment between the needs of the portfolio company for specific resources and abilities of the venture capitalist to add to the total resource pool drawn on by entrepreneurs is seen as a necessary precursor to venture capital involvement in portfolio companies (Cornelius & Naqi, 2002). Technology oriented firms are considered particularly receptive to value addition by equity investors because of their capability to absorb inputs (Forest, 1990).

2.3 Venture Capital in China

The term venture capital appeared in China in the mid-1980s, and it was put in spotlight during the Internet boon in late 1990s. By 2001, the venture capital pool has reached 7 billion dollars². Yet China's legal framework for foreign investment has traditionally restricted the ability of offshore venture capital funds to operate and directly invest in China, and also did not facilitate the kinds of exit mechanisms that venture capital funds depend on to realize their investment. Foreign venture fund backed companies have little chance to be listed on China's two stock exchanges.

The less favorable investment environment prompts foreign venture capital firms to act more cautiously in China. Most investments are made to introduce technologies or services that might be advanced by international standards, but that have already been developed and demonstrated to be effective in economically advanced countries. This investment trend leads Chinese entrepreneurs to focus on process innovations (Utterback

² *Asian Venture Capital Journal*, 2002

1994,), which make things a little faster and more efficient. Folta (1999) argues that foreign venture capital investment in China is best considered a component of foreign direct investment (FDI), given the usual size, degree of control and duration of VC investment.

The Chinese government has played an active role in the venture capital industry, not only by forming policies encouraging its development, but also by contributing money from public sources (Zhou, 2002). China has founded more than 130 high-tech business incubators (early stage venture capital) since opening its first in 1987, according to statistics from the Torch High-Tech Industry Development Center, under the Ministry of Science and Technology (MOST). These government-backed incubators offer subsidized office space and telecommunication infrastructure to technology startups. They also provide companies with advice on management practices and loan applications and give low-cost or free legal and accounting aid. As of 2000, about 37 percent of China's 21,000 high-tech companies in development areas were housed in incubators. Similar initiatives can be observed in other developing and transition economies. A World Bank research indicates that the Republic of Korea has more than 300 incubators. Malaysia and India also invested considerably in incubators, especially in technology-oriented incubators. In Brazil, 150 incubators were surveyed in 2001.³

2.4 Entrepreneurship in China

The stellar growth of China's economy has started attracting much attention from overseas scholars. Roberts (1997) investigates the political impact of the emergence of private entrepreneurs in China in the 1980s and 1990s, arguing that the Chinese private startups were more competitive than existing state-owned firms in the newly emerged market economy by liberalizing their businesses from political control. Ahlstrom & Bruton (2002) use institutional theory to analyze the role of culture in shaping strategic actions by technology-focused entrepreneurial firms. Ahlstrom & Bruton conclude that *Guanxi*, relationships based family and social ties, dominates entrepreneurial strategies. Xu (2002) observes two generations of technology firms in China and analyzes the

³ Incubators in developing countries: Status and Development Perspectives. Elena Scaramuzzi, *infoDev* program.

relationships between resources and capabilities of these firms. Xu argues that the theory on the causal relationship between resources and capability (Barney 1991) does not always apply in the cases of Chinese technology startups. Tsang (2002) focuses on the unique aspects of Chinese family businesses.

From an outsider's view, much of the current wave of Chinese entrepreneurialism is attributable to a reverse brain drain flowing out of the US and back into China (Judd, 2001). Judd argues that the returning sons and daughters bring back entrepreneurial dreams, business ideas, technologies, seed money, and demands for venture capital support. However, a large number of existing Chinese entrepreneurial enterprises in fact were formed by local-grown entrepreneurs, including business people and technical experts formerly under a collective enterprise structure and supported by local government bureaus; State Owned Enterprises' (SOE) trusted managers and bureaucrats (or sometimes relatives) empowered to spin off independent companies; researchers from university or government research units that obtained private-enterprise status. These entrepreneurial enterprises all face the same obstacles: marketing and distributing products, competing and protecting their brands and technology, obtaining new technology, working with foreign partners, finding funds, obtaining suitable labor, and managing local- and sometimes central-government interests. Nevertheless, many of them turn out well in the marketplace. Their success is best reflected in the growth of the private sector, which now is estimated for 2002 at 70 percent of GDP for all sectors, including services and agriculture, and 62 percent of industrial production.

The most efficient source of funding for the later generations of Chinese entrepreneurs comes from their predecessors, the "has-been" Chinese entrepreneurs. The established entrepreneurs and entrepreneurial enterprises have invested increasingly significant sums of local and foreign currency in private transactions in China. They often act more as mergers and acquisition players than passive venture capitalists, usually investing through structures that give themselves and their partners or affiliates effective control of the target companies. In other cases, however, they invest passively both for profit and to obtain access to other business opportunities.

2.5 Issues

In the past two decades, the China's market has been embracing advanced technologies. However, there has been few homegrown technologies sustained their success in the market. Take the information technology (IT) sector as an example, China is already the largest market for mobile phones and cable subscriptions, and it will have the largest Internet user base in the near future. In contrast to its rapid advance of becoming the largest consumer of information technology, China has commercialized only a limited number of homegrown IT technologies. In the past decade, China's technology entrepreneurs have given the country's economists and policy makers some pleasant surprises. But other than products developed specifically for the Chinese market, very few technology innovations came out local IT startups.

In the recently released Global Competitiveness Report⁴, China ranked 33 in the growth competitiveness category. This position does not match well with a country that has the world's largest manufacturing base, advanced space technology, and excellent research bases in universities and other research institutes. A similar gap also appears between the wide spread of entrepreneurial activities and sluggish technological innovations.

Bygrave and Timmons consider venture capital the fuel for entrepreneurship. In China, there are signs that bottleneck issues are blocking the flow of the fuel. Many research studies have focused on national policies and entrepreneurial firms, but there are only few studies on China's venture capital industry. This study will attempt to analyze the disproportional development between technology and entrepreneurship through the lens of China's venture capital industry, another pillar of entrepreneurial activities.

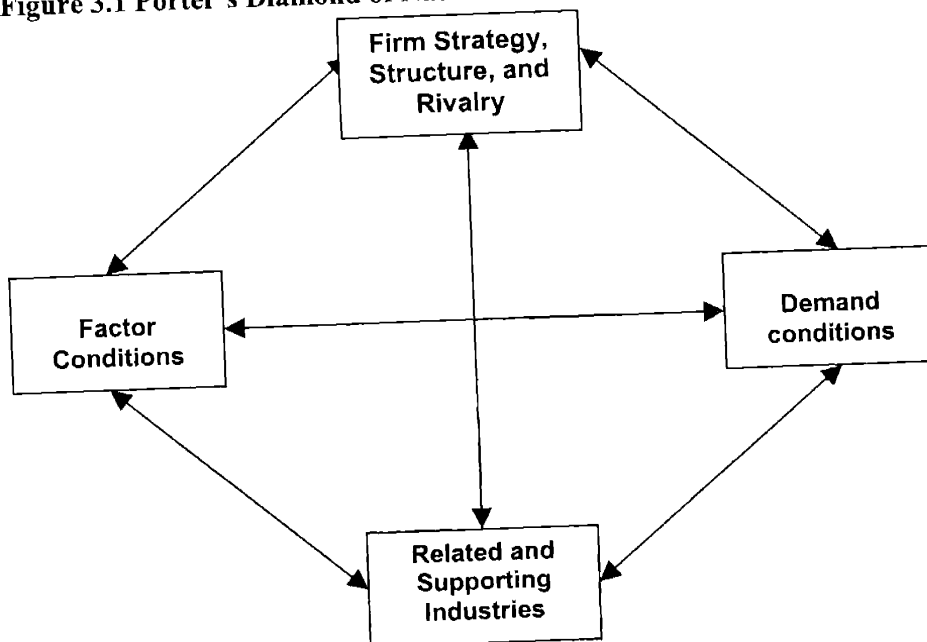
⁴ <http://www.weforum.org>

3. State of China's Venture Capital Industry

Venture Capital appeared in China in the mid-1980s. The first domestic venture investment firm, China Venture Investment Corporation (CVIC), was established in 1985. IDG Technology Venture Investment, Inc. (IDGVC) entered the Chinese market in 1992 as the first American venture capital company. The largest wave of venture capital firms arrived in late 1990's, the boom time of telecommunication and Internet. Soon, China's central government began to recognize the existence and the significance of the venture capital sector. In 1999, the State Council of People's Republic of China issued the *Opinions on Establishing a Venture Capital Regime*.

In his framework of analyzing the determinants of national advantage, illustrated in Figure 3.1 below, Porter argues that a nation can create new advantage factor endowments such as skilled labor, a strong technology and knowledge base, government support and culture (Porter, 1985). Throughout this chapter, Porter's Diamond of National Advantage serves as the conceptual tool to examine the venture capital industry's underlying dynamics and competitive characteristics, and how China's various institutional features shape these market dynamics.

Figure 3.1 Porter's Diamond of National Advantage



3.1 Demand Conditions in China's Venture Capital Industry

The demand conditions of China's Venture Capital industry can be analyzed from both the demand and supply side of capital.

3.1.1 Demand for Venture Capital

Through the past decade, China's GDP has increased on average 7-8% per year. According to official statistics, in the first quarter of 2003, China's GDP growth is as high as 9%⁵. In particular, the private sectors have been growing at an even faster pace. By 2002, China's private businesses are producing more than 70% of the country's GDP. To sustain the growth and maintain the share of public sectors in the over all economy, the Chinese government has been investing heavily in utilities and infrastructures. These investments are mainly sustained by domestic savings, which is more than 40% of GDP. As China is attempting to shift from a manufacturing-based economy to a knowledge-based economy, commercializing new technologies becomes a critical task. However, entrepreneurs have difficulties accessing capital because China's State-owned-banks, which provide more than 90% of the country's project financing, do not have the flexibility or risk profiles to supply funds for private businesses. Venture capital thus is expected to make up for a defect in traditional financing channels, which do not provide sufficient funds for high-risk and long-term investments in new technologies.

3.1.2 Supply of Funds

Not only are liquidity and availability of funds key determinants in developing a dynamic venture capital industry, without an investor's capital, no venture capital fund can even start its operation. This section explores how the Chinese business and social environment influences the various sources of venture capital funding and their subsequent impacts on the viability of the venture capital industry.

⁵ News release April 2003, National Bureau of Statistic

Capital from Local Entities

Local sources of funding come from both local private investors as well as government agencies. Today, the Chinese government plays a leading role in China's venture capital development. Roughly 80% of the total funding in venture capital in China is from government sources⁶. (In contrast, government funding accounts for approximately only 8.3% in Western countries.⁷) The narrow range of private capital sources becomes a major problem for the development of the local venture capital industry. Most venture capital funds in China are set up by local governments, after receiving significant encouragement from the central government. Due to the nature of these types of funding, local venture capital firms were limited with a localized focus and have difficulties investing in other regions. They also suffer from potential conflicts of interest, as the same local governments that provide these funds are also responsible for developing the policies governing investments.

Aside from the government, local companies have also been seeing the value in venture capital operations. Companies such as the Stone Group Corporation, Legend Group, Founder Group, Tsinghua Tongfang Corporation, and Hongta Group, have set up their own independent venture capital entities or have started joint venture capital firms to invest strategically. For example, Legend Capital Company, the venture capital company of China's largest computer maker Legend, was set up in April 2001 with a fund size of about US \$100 million. The most attractive areas for venture investment in China have traditionally been in telecommunications infrastructure, Internet-based enabling technologies, top brand B2B e-business providers, and outlets of traditional industries. Due to the recent burst of the dot-com bubble, venture capitalists have been shifting their focus from Internet portals and other purely Internet-based businesses to infrastructure and technologies, which are integrated with traditional industries. Local firms see start-ups in these areas as viable alternatives to an in-house research and development arm.

⁶ "Hidden Risks in China's Venture Capital Investment", www.ultrachina.com

⁷ "Venture Capital in China", *People's Daily*, August 1, 2000.

Capital from Overseas Entities⁸

As of 2000, foreign funded venture capital organizations accounted only for 8% of China's venture capital organizations. The number can be assumed to have increased over the past few years, although a definite number is not available. Yet, overseas venture capital firms have shown a bullish attitude towards China due to its large population and relatively inexpensive resources. China has recognized the importance of overseas venture capital (and accompanying overseas expertise and talent), and the recent regulatory changes related to venture capital investments in the country are a reassuring step in the right direction. While there are still uncertainties regarding feasible exit mechanisms in China and the lack of convertibility of the Chinese currency, RMB, these are somewhat allayed due to the medium term horizon of most venture capital firms (three to five years) and the positive signals emerging from China, such as the country's accession to the World Trade Organization. The Economist Intelligence Unit report of 2002 indicates that the format of foreign investment in China has been shifting towards venture capital, particularly due to regulatory changes.⁹

The influence of overseas venture capital firms in China cannot be overlooked. Foreign funded firms invest according to international venture capital standards, and apply mechanisms for prudent investment. Foreign firms develop a clear exit strategy, and apply rigorous processes for the valuation of business plans and start-ups. Although small in proportion to the entire venture capital industry in China, the proportion of foreign funded firms is growing steadily. The biggest impact of these foreign firms is perhaps the legitimization of the Chinese venture capital industry.

Another channel for venture funding through foreign investments is through the establishment of venture capital funds by multinationals with a local presence in China. Some of these firms include Intel Capital, Acer Technology Ventures, and IBM Technology Ventures. Earlier Chinese venture investment regulations heavily emphasized a long-term outlook on investing in China. It is thus no surprise that

⁸Includes funds from Hong Kong, Taiwan and other countries...

⁹ Economist Intelligence Unit, China Commerce, p. 4

multinationals with significant investments and presence in China would be among the first to establish venture funds in the country.

Summary on Supply of Funds

There seems to be no shortage in the supply of capital for investing in Chinese high-growth ventures. Chinese venture capital firms have not experienced significant difficulties in raising funds to start their investments. In fact, the statistics show a continual rise in private investments in technological innovation as shown in Table 3.1 below. Although on a percentage basis the emphasis on innovation is relatively flat, the Chinese economy is growing at a rate that constitutes a significant growth in asset investment volumes. Despite favorable fund raising to invest in Chinese VCs, the fact that an overwhelming amount of the capital is sourced from government agencies does raise an overall concern.

Table 3.1: Asset Investments in China by Source and Purpose

	1997	1998	1999	2000	2001
By unit					
State-owned & other	1,766.1	2,047.0	2,132.0	2,340.7	2,640.1
Collective	385.1	419.2	433.9	480.1	519.0
Private	342.9	374.4	419.6	470.9	530.8
	13.75%	13.18%	14.05%	14.31%	14.39%
By use					
Capital construction	991.7	1,191.6	1,245.5	1,342.7	1,456.7
Investment in innovation	392.2	451.7	448.5	510.8	588.9
	15.73%	15.90%	15.02%	15.52%	15.96%
Real estate development	317.8	361.4	410.3	498.4	624.5
Total investment include others	2,494.10	2,840.60	2,985.50	3,291.80	3,689.80

Sources: National Bureau of Statistics, China; Statistical Yearbook; China Statistical Abstract.

3.2 Factor Conditions in China's Venture Capital Industry

Venture capital involves the direct equity investment in high growth enterprises, which are typically start-up companies in the high-tech industry. Thus, the overall health of the

high-tech start-ups in China is a factor condition on the attractiveness of the venture capital industry in China. The number of high-quality investment opportunities dictates a venture capital fund's deal flow and ability to succeed. Factor conditions are also extended in further details through exit environment and human capital.

3.2.1 China's Market for Start-ups

While some may argue that China "still lacks a strong technology sector that can generate new enterprises" (Landry 2002), the empirical evidence leads us to believe that the start-up environment is quite strong. The factor conditions for the early stage technology sector are favorable according to the following criteria:

- **Large domestic market opportunity** – The rapid urbanization of large numbers of the Chinese working class is creating a large opportunity for value creation in everything from simple consumer products to energy and environmental services. Start-up opportunities in this type of environment are not limited to high-technology concepts, although these will thrive as well. Many domestic venture firms are earmarking funds for simple products and services that are poised for rapid growth.
- **Strong basis of science and technology innovations** – The Chinese government has funded a large number of science and technology research institutes. The results out of these research facilities have been widely adopted in China's space and military projects. Because of the country's long history of planned economy, however, very few technologies from state-owned research institutes are commercialized. Many high-tech startups could be built around these military oriented technologies.
- **Entrepreneurial culture** – The Chinese people, particularly the people from southern China, have strong entrepreneurial roots. Wherever the socio-economic climate is favorable, they will start to thrive in that area. The traditional entrepreneurial activities usually start from basic services, such as restaurants and personal care, and extend to real estate and trading industries. A new breed of

entrepreneurs has established themselves in manufacturing hi-tech products. Many examples can be seen from the southern and eastern seaboard of Mainland China to Taiwan and South-East Asia.

- **Chinese labor is cheap and relatively well-trained** – Chinese start-ups, especially in the manufacturing sector, benefit greatly from a virtually unlimited supply of inexpensive labor. While the human capital market in China has its weaknesses, especially in management talent (see section 4 below), the start-up sector benefits from this resource. And, although technological innovation is weak, the workers are abundant, intelligent, and eager to be trained. As a result of this combination of weaknesses and strengths, the Chinese start-up environment has strong potential given an infusion of management discipline and technical expertise.

3.2.2 Legal Framework

The current legal framework in China poses an obstacle for the efficient operation of venture capital in China. A number of these regulations are unique to China and are inconsistent with international practice in venture capital¹⁰. Several examples are presented here as illustrations:

- The Company Law of China dictates that all Chinese companies must have a minimum number of shareholders and that each shareholder must hold a minimal amount (of RMB 100,000). This requirement still imposes a hurdle against many would-be founders without financial wherewithal. Internationally, however, venture capital-invested companies are mostly run by a few partners and can be registered with little capital requirement.
- The Company Law of China also requires that the accumulated amount of investment must not exceed 50% of the company's total net assets. This is not consistent with

¹⁰ The Sino-Foreign Equity Joint Venture Law, the Sino-Foreign Cooperate Joint Venture Law and the Wholly Foreign-Owned Enterprise Law constitute the three pillars of the existing legal framework for foreign investment in China.

common international practices. Venture capital firms should not be confined to such arbitrary limits, especially when the exceptional growth prospects of a company may require the venture capital to exceed such a limit.

- The patent laws are insufficient in providing protection for intellectual property. As intellectual property forms the core of many technology start-ups, the very existence and continued viability of such companies depend on an effective intellectual property protection regime. China has managed to build the foundation of a basic intellectual property protection regime in the last two decades, but enforcement is weak, and legislative and judicial developments lag behind the whirlwind speed of changes in the e-sector. This state of affairs affects many start-ups, especially those with intellectual property vulnerable to infringement. As a significant amount of a VC's investment nests in the knowledge-based industries, the lack of IP protection in China makes VC investing in technology less attractive.

3.2.3 Exit Opportunities

Unlike investing in the public equity market where gains can be sought through dividend payments or capital gains, a venture capital fund's return is dependent upon an initial public offering (IPO) or a strategic trade sale of its portfolio companies. The development level of the two Chinese stock markets – Shanghai and Shenzhen – is far from being sufficiently mature to promote such liquidity events. Moreover, there is no preferential exit channel for high-tech companies in China like the NASDAQ in US or the Second Board in Hong Kong (Although regional technology exchanges have been established to mediate this problem, these exchanges are not open to the general public, and generates less liquidity as a result). The less developed capital markets in China are an impediment to the growth of the venture capital industry. To compound the problem, the government highly regulates foreign and domestic public offerings through the China Securities Regulatory Commission's (CSRC). Likewise, limited opportunity for and regulatory restrictions on strategic acquisitions impede venture capital exits.

The Chinese central government has been pushing ahead to make positive changes. As recent as 12 years ago, there were no stock markets at all in China. Between Shanghai

and Shenzhen, the Chinese market capitalization now is US \$590 billion, the second largest in Asia.¹¹ Listed below are several key factors that shape the public market conditions in China, and therefore affect the attractiveness of the venture capital industry.

- Government has control over which company may list, the value of the new offering, and the overall growth and direction of exchanges (Franklin, 2002).
- A quota system exists that favors privatization of state owned enterprises. Although this is currently being phased out, CSRC still controls the number of IPOs per annum.
- The Renminbi (RMB) is not convertible and the markets are segmented by shares that are traded in RMB and those that are traded in foreign currency (primarily US dollars).

3.2.4 Human Capital

Another key factor in determining whether China can support a robust venture capital industry depends on people factors, i.e., the nature of local human capital. This section discusses the nature of China's human capital in regards to the viability of its venture capital industry. In particular, it discusses the quality of Chinese entrepreneurs, professional managers, and the investment managers.

Although China has a number of high-caliber entrepreneurs in the high-tech industry, a large number of the approximately 72,000 high-tech companies in China are operated by inexperienced business people. As a result, the operations of these companies do not follow international management practices, but instead, rely on a traditional political-economy system. This may include nepotism, dependence upon personal relationships, and lack of transparency.

The relative immaturity of the Chinese venture capital industry has implications towards the availability of venture capital investment talent. Cultural biases have created functional silos; those who are specialized in technology know little about finance, while

¹¹ *Asia Wall Street Journal*, June 15, 2001.

those who are experts in finance know little about technology. This makes it difficult to find suitable talent to meet current needs, although firms have been traversing the learning curve, especially through interactions with foreign firms and counterparts.

One of the most challenging aspects in managing investments in China is the significant asymmetry of information between the investor and the management of the portfolio company. It is common to see the management of the portfolio company concealing information and financial data from investors. Worse yet, it is not an unusual practice that the management falsifies financial information to mislead the investors. A culture of transparency and cooperation between the VC and the portfolio company has yet to flourish in China, as well as the institutions and practices necessary to implement and sustain this transparency.

The Chinese VC industry is in its growing stages, and the supply of human resources for venture capital firms does not meet the currently high demand. Existing business practices and mindsets also do not support the models of venture capitalism as defined in the West. However, there has been a gradual shift in the availability of human resources and in the adaptation of practices that will continue as the industry matures.

3.2.5 Summary of Factor Conditions

The attractiveness of the Chinese start-up environment is high despite the relative unattractiveness of many supporting factors. Overall, it is this fundamental strength in the entrepreneurial environment that is driving growth in both the start-up and venture capital segments. The greatest areas for improvement are in the legal framework and general management skills.

3.3 Firm Strategy, Structure, and Rivalry

Although the Chinese economy is at a developing stage, the competitive landscape in the private equity industry is comparable to the rivalry intensity in the private equity industry in the US. That is, although not overly crowded, there are abundant entities competing to seek out and invest in high-growth ventures in China.

It has been estimated that in 2000, there were 120 venture capital firms and 156 incubators in China.¹² In addition to pure-play VCs and incubators, a number of institutions in China competed against one another for access to quality high-tech investments in China since the start of the high-tech fever in 1998 in China. These institutions included the government, state owned enterprises, private firms, public companies, and non-banking financial institutions. In addition to local investors, multinational corporations and foreign VC funds were also keen to invest in high-tech companies in China.

The source of funds of a VC firm almost certainly determines its structure and investment strategies. A VC fund established by a local government agency is usually managed by an ex-government official and heavily influenced by regional development policies. In many cases, this type of fund is actually the government grant that assumes the name of venture capital funds. Without clear financial objectives, these government funds are usually not competitive on the market. Government backed hi-tech incubators fall into the same category with aforementioned government funds, but the function differently. These incubators, often named software or high-tech start-up parks, provide office space and telecommunication facilities to qualified start-ups but rarely take equity positions in their hosted companies. Incubators are attractive to early stage start-ups, but they lack the resources that the fledgling companies really need, including legal and financial advice. Corporate venture arms belong to certain local or multi-national corporations. Their investment objectives are usually aligned with the long-term strategies of their parents. Intel Capital is the largest venture capital firm in China, with more than US \$100 million invested in China. Fund managers of corporate VCs are under less pressure than their counterparts in pure play VCs. As a result, corporate VCs can set longer investment horizons and be less aggressive on the market. A limited number of VC firms are funded by private investors from on- and offshore and run by Western-trained fund managers. These firms have structures familiar to US VC firms and are the true venture capital in the eyes of foreign investors.

¹² Source: www.oycf.org

Because of the fair size and unfavorable factor conditions in China's market, VC firms choose to cooperate rather than compete. Recently, the China Venture Capital Association was founded by 50 VC firms that represent over US \$40 billion under management. Approximately a third of these firms are Chinese domestic firms, while the remaining two-thirds are foreign venture funds and corporate venture arms. The association is actively lobbying the government to loosen current regulations.

The rivalry among VC firms appears when a certain resource becomes scarce. For example, the China Securities Regulatory Commission (CSRC) mandates that every IPO application must go through its review process and each licensed investment bank or stock brokerage firm may only send in a limited number of applications concurrently. These so-called IPO channels become highly priced commodity with thousands of companies looking for public funding.

3.4 Related and Supporting Industries

For the venture capital industry to flourish in China there must also be established intermediary agencies, such as law firms, accountancy, consultancy, and investment banks, to assist a VC's endeavors. For example, law firms are required to draft legal agreements for the investment; and for exits, financial consultants can advise in IPOs and M&As; accountancies are needed to audit the financials; and for IPOs, investment bankers are required to act as underwriters. For China, a number of these professional services providers are also in the mist of developing. Although the lack of professional services providers is not a glaring deficit in China in relations to its level of development, it is not uncommon that a VC has to play the role, not only as the investor, but also as the lawyer, financial consultant, and valuation expert all at once. As the VC may not be an expert in these other fields, the quality of the work may be compromised. Moreover, the demand on the VC to engage in other professional competencies may detract its ability to fulfill its core duty as a fund manager.

As China's VC industry matures, the difficulties to establish the reliability and credibility become an important issue. Indeed, many foreign and non-governmental investors have declined to invest with the early venture capital organizations for this reason. The

solution was the emergence of the “investment consulting and management corporations”, which cannot invest directly, but rather provide consulting services and manage the funds of the parties that agree to invest.

In summary, supporting industries for VCs, such as other professional services provider, are also in the developing stages in China. They are not significantly advanced or lagging behind the VC industry itself.

3.5 Government’s Role

The Chinese government, while fighting its dilemma of publicly promoting capitalism, deliberately moved slowly to adopt Western practice of regulating a capital market. It took the approach of experiment-first-regulate-later. The laws governing investment issues are defined broad and vague, which left plenty of room for maneuvering or making exceptions. In the past 15 years, the Chinese government implemented policies and initiated projects to encourage the development of technology entrepreneurship and venture capital industry. Following are some examples of the government initiations.

- **Favorable political environment** – The central government in China is proactively reforming its economic policies and, indeed, its actual socio-economic composition. In November 2002, the 16th National Congress of the Ruling Chinese Communist Party officially confirmed that the party should include the representatives of the leading productive forces. Well-known entrepreneurs and businessmen were elected to participate in the Party Congress.
- **Economic incentives are provided through Special Economic Zones** – While clearly the economic zones are geared towards new large-scale manufacturing operations (for example, Suzhou, just north of Shanghai, boasts over 80 Fortune 500 companies), the leading regions are actively subsidizing start-ups using a start-up incubator model which is hybrid between Chinese and Western styles.
- **Torch High-Tech Development Project** – China has founded more than 156 high-tech business incubators (early stage venture capital) since opening its first

in 1987, according to statistics from the Torch High-Tech Industry Development Center, under the Ministry of Science and Technology (MOST). These government-backed incubators offer telecommunication infrastructure and subsidized office space to technology startups.

3.6 Interactions among Key Conditions

There are a number of determinants that do not currently favor a robust venture capital industry in China. First, the exit environment is difficult. The development level of the Chinese stock markets, coupled with government regulations, impedes liquidity towards IPOs. Moreover, regulatory restrictions impede venture capital exits through strategic sale. Second, through the current educational, professional, and social environment, the supply of human capital in China for venture capital firms does not meet its growing demand. Finally, the level of development in related and supporting industries to the VC industry, which includes local law firms, accountancy, consultancy, and investment banks, is relatively low and does not function well in supporting a robust VC industry in China.

In contrast, the demand conditions, including the demand for venture capital and the ample supply of development funds, suggest that the venture capital industry is on track to become a major force of China's future development. More importantly, the attractiveness of the Chinese start-up environment is substantially high. The strength in these two determinants balances out the shortfalls of the other factor conditions.

Under the unfavorable conditions, VC firms in China favor cooperation and focus on building their internal strength. The formation a VC industry has given Chinese venture capitalists some power to push the central government for changes. These efforts have helped China's gradual transformation towards the landscape in which Western venture capitalism could thrive.

In the next four chapters, I will present four cases of venture capital operations, NewMargin, Business Incubator of Zhongguancun Haidian Science Park, Legend Capital, and IDG Technology Venture. The cases are chosen because they are the leading firms in their respective categories. I will illustrate how the conditions affect each operation and the unique challenges they face.

4. NewMargin Ventures¹³

NewMargin is among the largest wave of venture capital management companies that emerged in China in the late 1990s. It is headquartered in Shanghai with offices in Beijing and Shenzhen. NewMargin supports China's emerging entrepreneurs in building their companies. Feng Tao, CEO of NewMargin believes that:

...the majority of companies that will dominate China's economy in the 21st century have yet to be created. It is our goal to help build these companies.¹⁴

4.1 The Funds

NewMargin was founded in July 1999 when two Chinese government entities committed approximately RMB 170 million (US \$ 22 million) to start the Company's first fund. The two initial government investors were:

- Shanghai Alliance Investment Co. – an investment vehicle of Shanghai Municipal Government; and
- The China Foundation of Science & Technology for Development – a foundation set-up by the State Development Planning Commission, the State Economic & Trade Commission, and the Chinese Academy of Science (CSA).

Behind these two organizations stands a man named Jiang Mianheng, who happens to be the US-educated son of soon-to-retire-on-paper Chinese president Jiang Zemin. While working in CSA, the younger Mr. Jiang is also the supervisor of the Shanghai municipal government's Information Technology Office. With a Ph.D. in physics from Drexel University, Jiang is widely respected in China for his support, both political and financial, of developing and transferring advanced technologies. The major objectives for the government entities are:

- To encourage technology entrepreneurship in China
- To use VC as a platform for selecting investment projects

¹³ Source: Company's internal documents, website, and personal interviews.

¹⁴ Personal interview with Feng Tao, December 19, 2002.

- To amplify the effect of government's initial investment by attracting overseas venture funds

Since its founding, NewMargin has been one of the most active venture capital firms in China. The Company is currently managing committed capital of over US \$100 million in one local and two offshore funds:

- Shanghai NewMargin Venture Capital Co., Ltd.;
- C-Tech Fund; and
- T-Tech Fund.

NewMargin is the first fund in China that manages and advises both local and offshore funds. For the C-Tech Fund, NewMargin's foreign investors, which primarily comprised of Hong Kong based real-estate conglomerates, had committed a total of approximately US\$ 88 million. These foreign investors in NewMargin include:

- Government of Singapore Investment Corporation (GIC);
- Kerry Group;
- K.Wah Group;
- SUNeVision; and
- JAFCO.

The T-Tech Fund, a US \$ 18 million telecom technology dedicated fund, was jointly formed in April 2002 by France telecom giant Alcatel and NewMargin. T-Tech fund is the first of its kind specializing purely in telecom infrastructure in China. The fund is to provide seed money to Chinese telecommunications start-ups engaged in innovative research and development. Alcatel agreed to provide due diligence on project investment and access to its labs for prototype testing in certain cases.

4.2 Management Team

Feng Tao is the managing partner and CEO of NewMargin. At age 36, Feng Tao has been referred to as a "princelings," a term describing the brightest Chinese who were permitted under former leader Deng Xiaoping's rule to study or work abroad, with the expectation that they return China to better the country. Feng Tao's father was a high-ranking official

of the China Democratic League, the second largest political faction (of eight) in China. Thus, to claim that NewMargin has reasonable *Guanxi*, meaning relationships or connections, is an understatement. Recall that NewMargin's first fund was fully financed by Chinese government entities.

It would be wrong, however, to assume NewMargin's success was due to preferential government treatment. Prior to starting NewMargin, Feng Tao gained relevant venture investment experience at Ivanhoe Capital, a Canadian venture firm. Feng Tao worked directly for Robert Friedland, a famous global investor particularly well known for his mining deals. It was under Robert Friedland where Feng Tao's interest in venture capital sparked. In addition to relevant professional experience, Feng Tao is also highly educated with a Ph.D. in mathematical statistics from the University of Toronto.

Under Feng Tao's leadership, NewMargin has assembled a team of 20 professionals with diverse foreign and local investment expertise as well as Chinese management experience.

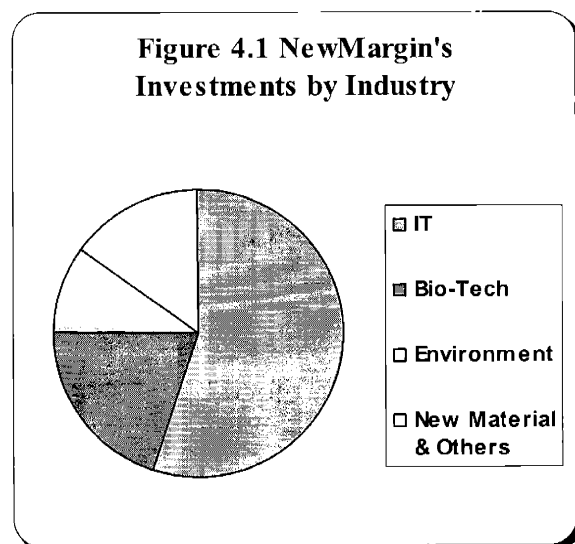
4.3 Investment Focus

NewMargin has been an active lead investor. Its investment approach is to get involved with the entrepreneurs early, share its collective expertise, and provide assistance in executing their business plans. Below is a discussion on NewMargin's investment focus.

Industry: NewMargin's investment strategy is to seek industry sectors in China that "will both be revolutionized by new entrants and offer phenomenal growth opportunities in the coming decades..."¹⁵

The principle industry sectors in which NewMargin invested include:

- Information Technology;
- Healthcare / Life Sciences;
- New Material; and
- Environmental Protection.



¹⁵ Source: Company internal documents

The percentage in each sector in which NewMargin had invested is shown in Figure 4.1

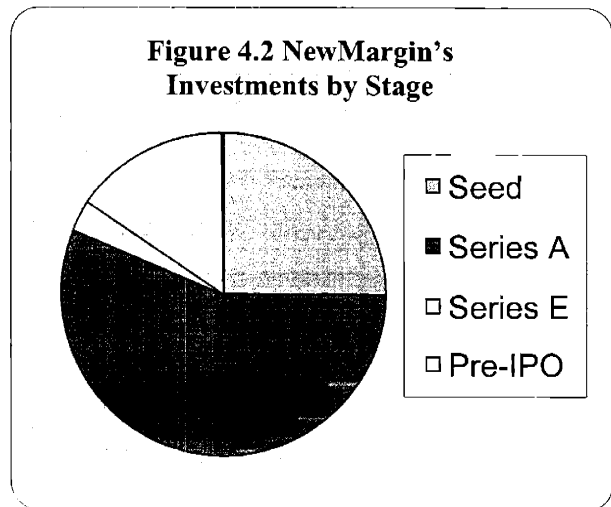
Geography: NewMargin’s investments are located throughout China, but the focus is primarily on principal coastal cities.

Target: It is NewMargin’s strategy to target investing in market leaders or potential market leaders.

Stage: NewMargin aims to invest in growth or expanding stage companies. The graph to the right breaks out NewMargin’s investments by stage. The table and chart below show the stage of initial investment:

Table 4.1 NewMargin’s Investment by Stage

Pre-IPO	5% - 16%
Series E	1% - 3%
Series A	18% - 56%
Seed	8% - 25%



Size of Investment: NewMargin has invested in 32 companies, 5 of which received follow-on round funding. Its investment focus ranged from US \$200,000 to US\$ 3 million. The two graphs below show investment sizes and distributions.

4.4 Early Successes

Benefiting from the foresight of its initial investors, NewMargin has been able to avoid two key pitfalls of a typical government investment project, bureaucracy and localism. Even though the Shanghai government contributed to the initial capital pool, NewMargin is given the flexibility of sourcing deals from any provinces or cities in China. NewMargin also actively utilizes its investors’ resources. It has strong ties with 19 well-

recognized academics at the Chinese Academy of Science, which gives NewMargin distinctive advantages in conducting technical due diligence.

Since its founding in July 1999, NewMargin and a number of the fund's portfolio companies have gained substantial market recognition and success. By the end of 2002, the firm is highly regarded as one of the pre-eminent local venture capital in China.¹⁶ Below is an excerpt illustrating NewMargin's good fortunes to date.

- Xi'an HuaHai, a portfolio company, won the bid of GE Marquette by TangDu Hospital in June 2001. HuaHai began penetrating GE Marquette into top hospitals in China's northwest.
- Feng Tao was named one of 25 "Next-Generation Global Leaders" in the April 2001 issue of Fortune Magazine.
- Despite the dot-com winter, Stockstar.com, a portfolio company, has grown quickly. It took Stockstar.com three and a half years to acquire the first million users, 8 months for the second million, and less than 6 months for the third. By July 2001 the total registered users of Stockstar.com hit 3 million.
- The Ministry of Science & Technology and the Ministry of Finance jointly approved JianErKang, a portfolio company, as the 2001 project of Innofund – the Innovation Fund for small Technology-based firm. The fund will award appropriation of RMB 800,000 to the company.
- Feng Tao was featured on the cover of Red Herring¹⁷, a leading US business technology magazine. The month's issue focused on "How to Win Friends and Influence People in Asia."
- "2001 Asian Venture Forum" was held in Hong Kong in November 2001. John Wasworth, the former Asian-Pacific Director of Morgan Stanley, announced NewMargin as one of the nine most successful Asian VC firms in 2001. Among the top nine, NewMargin is the youngest firm and the only Chinese one, as opposed to being an international VC firm operating in Asia.

¹⁶ The other notable local venture capital firms are Beijing Venture Capital and Shenzhen Venture Capital.

¹⁷ Red Herring ceased publishing in March, 2003

- During the “2001 China Venture Capital Investment Forum” held in Beijing in December 2001, NewMargin was selected by the forum as one of the top 50 players in the China’s investment market in 2001. Also, Feng Tao was named as one of the ten most active investors in China in 2001.
- One of NewMargin’s portfolio companies, Jiangsu Kanion Pharmaceutical Co. Ltd. has listed at Main Board in China on September 5, 2002.

4.5 Challenges

While New Margin Ventures enjoys a distinction as a forerunner in the budding VC industry in China, the company faces many challenges brought about by the uniqueness of the Chinese investment environment.

First is the political nature of Venture Capital in China – most local venture capital funds were set up by the local governments with a mandate to promote the development of targeted industries in the area, and not necessarily with an eye for making profit. Government funding and support comes with its share of influence and control by the government (who serves as Limited Partners and sits on the Investment Committee of the fund). New Margin’s first fund of US \$22 million was set up by the Shanghai government for investment in the high-tech industries in Shanghai. With increasing pressure to generate profits and returns on the fund, Feng Tao is considering the privatization of the fund, at the risk of souring his valuable political connections with the Shanghai government.

The second challenge is the infantile nature of private equity investing in China. While investment categories, behaviors, and activities are neatly categorized in the United States according to transaction size, maturity of the target company, and method of transaction, there is little distinction between Venture Capital activities, Private Equity investments, Leveraged Buy-Outs, and others in China. According to Feng Tao, “... those distinctions do not exist in China today. We will help define the Venture Capital industry in China.” This is further complicated by the relatively small size of Chinese firms in terms of capital – a “small” fund like New Margin’s (with about US \$120 million

in assets) can actually conduct buy-outs of mature, state-owned firms, and is not limited to providing seed funding for start-ups. While this provides enormous flexibility to the company, it also challenges the company to develop strong competencies related to a particular area of investing (e.g., portfolio monitoring and incubation skills for VCs, due diligence and financial engineering skills for larger Private Equity firms). Given the small size of the company, especially in relation to foreign counterparts that are looking to someday enter China, developing a niche competency will be strategically important for New Margin.

The third challenge is the difficult “exit” environment in China. IPO and M&A are the two common exit strategies for US VCs. In contrast to the US, which has a very liquid stock market and a relatively easy IPO process, liquidating the VC’s investment in China and obtaining the return is a very difficult process. As mentioned above, China has strict regulations regarding the sale of company stock. After an IPO, only newly issued shares may be traded on the stock market. That means that the existing “pre-owned” shares of VC firms cannot be traded on the market, where return multiples are higher. Instead, VC firms need to resort to private placements of their pre-owned stock, resulting in lower multiples of return (due to the negotiation process), and additional effort required to generate an exit. On top of this, Chinese regulations disallow the sales of any shares within 3 years of capitalization. This means that if New Margin invested in a company in 1999, they can legally sell those shares only in 2002 or beyond, extending the investment horizon and risk of the investment. In China, acquisition is not a favorable exit strategy for following reasons. First, there are only a handful of established technology companies that acquire high-tech startups as part of their growth strategies. Second, for most high-tech startups, intellectual properties are regarded as major assets. In China, however, intangible assets, such as patents and copyrights have low evaluations.

The fourth challenge is organizational. In the US, mature VC companies have an inverted pyramid structure, where majority of the employees are actually partners in the firm, supported only by a handful or so of analysts and associates. These seasoned business veterans lend investment savvy and credibility to transactions, and allows the firm to source deals, conduct due diligence, and make investment decisions in multiple areas of

business. New Margin, in contrast, has a pyramid organization, run by a handful of partners (5 of them), and supported by 18 associates and analysts. This may be partly owing to the lack of seasoned VC professionals in China, but may also be partly owing to the traditional Chinese organizational structures of command and control. Since every deal needs to go through at least one partner before any significant action can be made, this structure creates a bottleneck in their operations. Furthermore, the partners, especially Feng Tao, often come across privileged information regarding deals that are not necessarily shared with the rest of the firm. In this sense, the company is not maximizing the efficiency of their organization.

5. Business Incubator of Zhongguancun Haidian Science Park¹⁸

As China pushing through transition from central planning systems to market economies, many of its businesses are still trapped in the old model which lacks sufficient business infrastructure. These businesses generally have weak management and marketing skills, poor productivity of research, and limited financial resources. From mid-80s, Chinese planners started to look to foreign models to mitigate the managerial and financial problems. Ministry of Science and Technology (MOST) established Torch High-Technology Industry Development Center to accelerate the diffusion of technology innovations. There are estimated 156 business incubators under the Torch umbrella sprinkling among office buildings, universities, and established state-owned enterprises (SOEs). In contrast to the American model, in which some 25 percent of incubators are for-profit, most Chinese incubators, organized under MOST's umbrella Torch Program, are nonprofit. Only a handful of Chinese incubators are privately owned, though most incubated companies are in private hands.

Table 5.1 summarizes some of the key national statistics for incubators. As of 2000, about 37 percent of China's 21,000 high-tech companies in development areas were housed in incubators. The average size of an incubated company--about 17 employees working in about 350 square meters (m²) of office space--has remained fairly stable over the past seven years. Total income for tenant companies has risen more than tenfold, and the average revenue per company has gone from about RMB 1 million (US \$120,000) to RMB 2.3 million (nearly US \$280,000).

Table 5.1: Growth of High-Technology Incubators, 1994-2000

	1994	1995	1996	1997	1998	1999	2000
Number of Incubators in China	73	73	80	100	100	110	131
Number of Tenant Companies	1,390	1,854	2,476	2,670	4,138	5,293	7,693
Average Number of Tenant	19	25	31	27	41	48	59

¹⁸ Source: Documents of Business Incubator of Zhongguancun Haidian Science Park, E-government Service Center (Haidian), Dalian High-Tech Industrial Zone, websites and interviews.

Companies per Incubator							
Total Employees in Tenant Companies	NA	NA	NA	45,600	68,975	91,600	128,776
Average Number of Employees per Tenant Company	NA	NA	NA	17.1	16.7	17.3	16.7
Total Income of Tenant Companies (billion RMB)	1.48	2.42	3.63	4.08	6.07	9.58	17.88
Average Income per Tenant Company (million RMB)	1.06	1.31	1.47	1.53	1.47	1.81	2.32
Number of Companies Graduating	NA	174	284	177	491	618	836

Source: China Business Review, Volume 29, Number 4, July-August 2002

In the past seven years, the total number of incubators in China has doubled, and the average number of tenant companies per incubator has risen from 19 to about 59. Standing out from the one hundred some incubators in China, the Haidian Entrepreneur Center of Haidian Science Park (HSP), regarded as the home of China's burgeoning high-tech industry, has gained attention globally.

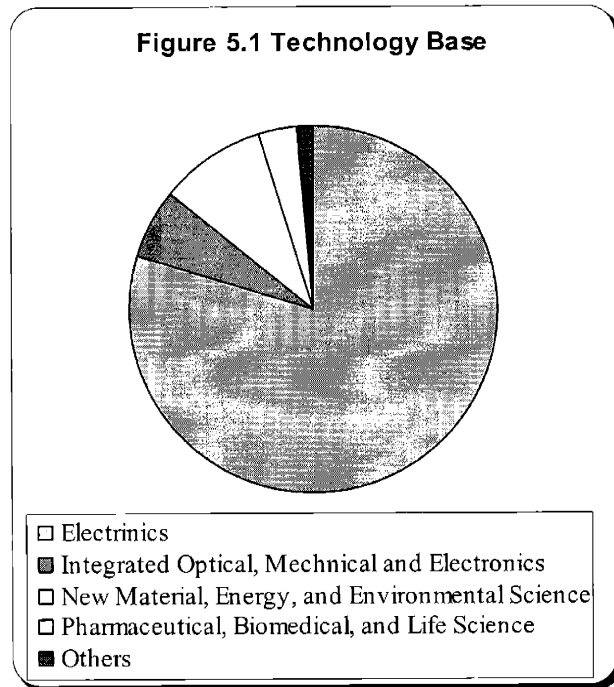
5.1 Haidian Science Park (HSP)

With its high concentration of China's intellectual and technical resources, the HSP has been described as China's Silicon Valley. Set up in 1988, the HSP was China's first large-scale high-tech park.

Our mission is to promote the development of the capital's knowledge based economy by improving the environment for innovation. Our efforts are meant to be a model for the rest of the nation in this new century.¹⁹

¹⁹ Haidian Science Park Website

Since 1988, the HSP has been growing at an annual rate of 30% from the outset. HSP now contributes 8.37% to the GDP of Beijing including 22.5% in industrial sales and 60% towards industrial growth. It boasts more than 6000 new high-tech enterprises with a combined staff of over 100,000. This includes 70 enterprises whose sales exceed 100 million RMB and eight whose sales exceed 1 billion RMB. The number of R&D projects undertaken between 1992 and 1996



totalled 11,152, a large percentage of which were among the world's most advanced in their respective fields. HSP has formed a high tech infrastructure generating synergy between the electronics and IT sectors as well as biological and pharmaceutical engineering. The Legend Group, the Stone Group, the Founder Group, Tsinghua Unisplendor and Tsinghua Tongfang are typical examples of the fast growing Chinese high-tech enterprises in the field. Many of them have won not only a considerable share of the domestic market but are also enjoying increased overseas market share. Figure 5.1 illustrates the technologies that companies reside in HSP focus on. Multinational corporations such as IBM, Hewlett-Packard, Hitachi and many others have either set up their own R&D centers or invested in joint ventures in the HSP. The economic index of the HSP ranks top in all 53 high tech zones tracked in China.

In June 1999, the Chinese government approved the proposal to establish the Zhongguancun High-tech Zone on the basis of HSP's success. The State Council issued a directive to the effect that China's development strategy calls for the accelerated growth of Zhongguancun. Thus HSP has turned out to be a significant experimental base for technological innovation, the paradigm for an incubator which transforms research findings into a productive industrial park in the 21st Century just as Shenzhen was in the

1980s and Shanghai in the 1990s. China's entrance to the WTO is also helping government and industry work together to boost science and education, to upgrade industrial infrastructure and to increase China's national competitiveness. The concentration of intellectual resources and technical personnel makes Beijing the natural choice for the establishment of the High-tech Zone. The goal of HSP is not only to be a development zone simply engaged in high-tech manufacturing and sales, but also a high-tech urban center set to lead the socio-economic development of China.

5.2 Incubating Facilities

Business Incubator of Zhongguancun Haidian Science Park (Haidian Entrepreneur Center) is a non-profit public science and technology service organization. It aims to help entrepreneurs and small high-tech companies to operate under favorable government policies, with sound business practices, and in a good living environment. The Incubator includes four parks:

- Overseas students pioneer park
- Haidian overseas student development park
- Biological and medical incubating park
- Tsinghua pioneer park

The Overseas students pioneer park is a high-tech incubation center jointly established by Beijing Overseas Personnel Service Center and the incubator of Haidian Park. The park aims to attract overseas Chinese students to come back and establish very early high-tech startups.

Haidian overseas students development park is to offer a larger development space for people with overseas educations to start their businesses. The development park also hosts startups that have outgrown the pioneer park.

Biological and medical incubating park is designed to be able to incubate up to 56 biomedical startups. It provides four service platforms, including a basic service platform, R&D platform, analyzing and testing platform, and resource sharing platform. The

biomedical park is equipped with bio-engineering labs, testing centers, and standard GMP pilot-scale experiment labs.

Tsinghua Pioneer Park is a joint project between the incubator of Haidian Park and Tsinghua University. The aim is to foster high-tech ventures from the faculties and students of China's top engineering school.

Since its ground breaking, the Haidian Park has seen stellar growth from its resident startups and itself. The charts below illustrate the growth of the incubator.

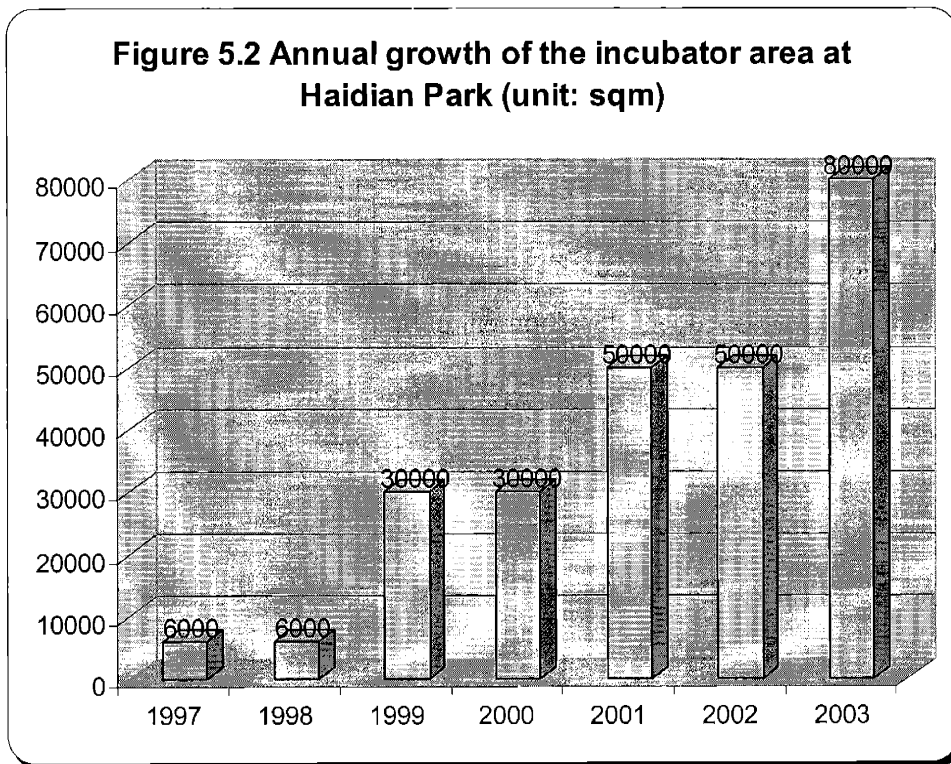


Figure 5.3 Entrepreneurs with overseas education background residing in the Park

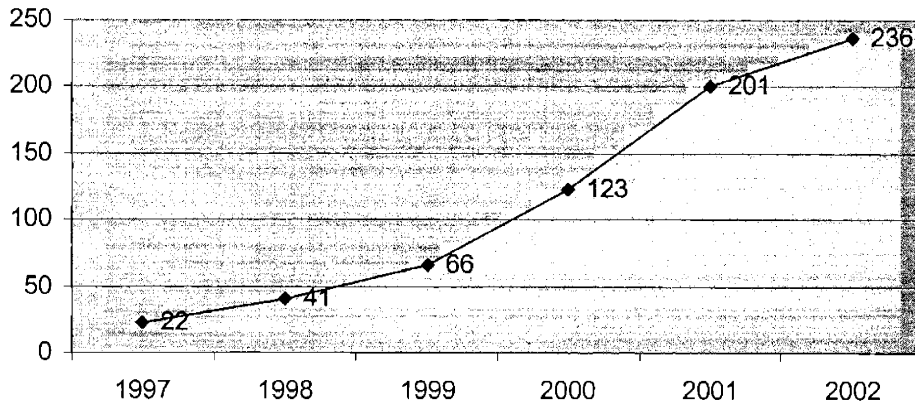


Figure 5.4 Number of resident startups in the Park

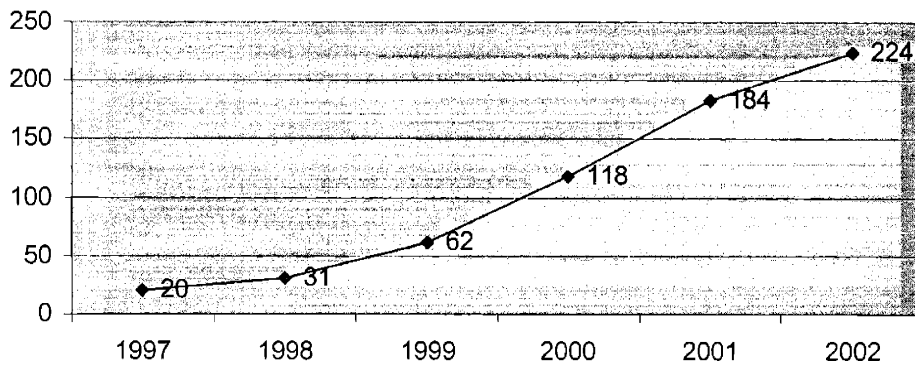
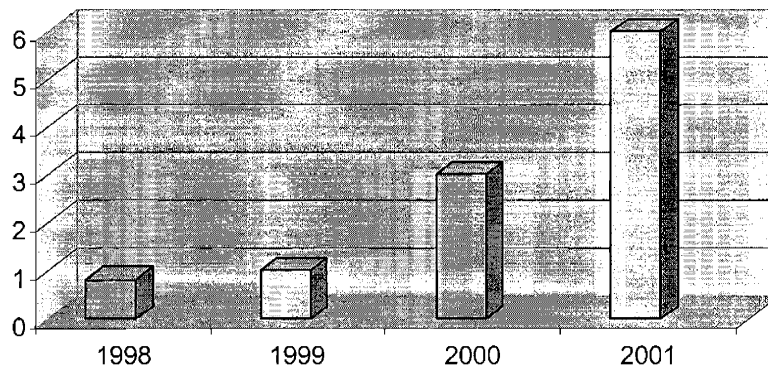


Figure 5.5 Annual total revenue of the residents in the Park (in RMB 100 million)



5.3 Incubating Services

The Haidian Entrepreneur Center categorizes its incubating services in three platforms: Business Services, Management Consulting, and Financing.

The business services platform includes administrative functions, which provide its resident startups business registration and high-tech business qualification, and consultancies including accounting, legal, intellectual property, and commercial advertising.

The management consulting platform uses an evaluation system designed for Small and Medium-sized Enterprises (SMEs) to conduct across-the-board observations and assessments of its resident startups. By analyzing the growth stage of a resident, the evaluation outlines a roadmap from entrance, through development, to graduation. The system also offers managerial guidance and support based on a resident's actual condition.

The financing platform contains three channels:

- The Haidian Entrepreneur Park gives its resident businesses potential accesses to the *State Entrepreneur Funds for Small Businesses*, the *Haidian Park Entrepreneur Funds*, and *Financial Aid for Preferred Technological Activities of*

People with Overseas Education Background, and the *Special Entrepreneur Funds for People with Overseas Education Background* established by Zhongguancun Science and Technology Zone.

- The Haidian Entrepreneur Park has entered cooperative relationships with thirty venture capital companies. Utilizing its reputation of hosting high quality high-tech startups, the park periodically invites venture capital firms to visit its residents. The resident companies gain opportunities to demonstrate their technologies' commercial potentials to venture capitalists.
- The Haidian Entrepreneur Park has established cooperative relationships with Beijing Zhongguancun High-tech Financial Guarantee Company, Beijing City Commercial Bank, and Minsheng Banking Co, Ltd to set up a security fund for small credits. The park recommends candidate firms from its residents, the Zhongguancun High-tech Financial Guarantee Company provides financial guarantees, and the banks supply small lines of credit for the capital-constrained startups.

5.4 Challenges

Through 2000, China's incubation system had hosted more than 5000 enterprises, of which one-third graduated after the flexible and often non-contractually binding limit of three or four years. However, few of these companies actually earn profits during the incubation phase. Two-thirds of the tenant startups either terminate their business or linger on in the incubator. Published failure rates range from as low as 10 percent for electronics equipment manufacturers to as high as 90 percent for Internet or biotechnology-related startups.

The Haidian Park enjoys a distinctive advantage through its location. The Haidian district has a cluster of more than 100 universities and national research institutions, which can supply a constant flow of technological and human resources. This area has developed an entrepreneurial culture through its early success in fostering some of China's leading technology-driven enterprises. As a pioneer of high-tech business incubation, the Haidian

Park also faces some unique challenges resulting from China's transformation from a planned economy to market driven economy.

First is the lack of a coherent national policy framework for incubator development. The policy treatment of the Haidian Park is largely unique to the Zhongguancun high-tech zone. Once a tenant startup outgrew the incubator, it would be exposed to a different economic climate. The program has not been immune from the dynamics of politics. Local "empire building" is an important driver of the program. This skews the effectiveness of investment in the program.

The second challenge is management. The management of incubators is generally composed of civil servants who have little or no entrepreneurial experience. This limits the quality of the "soft" business support services they can provide to their tenants. The administrators are heavily focused on the "hardware" aspects of the Park. Physical space and facilities have had priority, to the detriment of the "software," i.e., quality business supports.

The third challenge is the identity issue. The park's management is struggling to identify its function as governmental or commercial. Currently, the Haidian Park takes no interests in its tenants but it is mandated to be self-sustained. There is a strong voice advocating of better alignment of the interests of the Park and its residents through taking minority interests. However, the management does not have the capability to evaluate startups and taking financial risks. It also has difficulties accepting the Western idea that only 10 or 20 percent of VC-funded companies succeed.

6. Legend Capital²⁰

Legend Capital Co. is the venture capital operation of Legend Holding Ltd. The parent company was founded in 1984 and became a leading personal computer provider in China and across the Asia-Pacific region. Legend has held onto its top spot in computer vendor rankings in the Asia-Pacific region, according to a report from the International Data Corp. Liu Chuanzhi, the Chairman of both Legend Holdings and Legend Capital predicts that:

The new company (Legend Capital) will become Legend's third business pillar alongside Legend Group and Digital China.... The average profit return for the new firm will surpass 30 percent in the coming five years, which is higher than the 20-25 percent return of most international venture capital companies.²¹

Founded in March 2001, Legend Capital had an initial allocation of the fund of US \$30 million with a second phase option of bringing the total sum to US\$100 million. This venture capital firm is expected to be among China's largest in terms of size. In a typical fashion of exploring business opportunities for Chinese companies, the venture capital operation of Legend began trial operations in 2000, almost one year before the official announcement.

6.1 Legend Model

Legend Capital believes that Western style passive VCs are unlikely to succeed in China due to the inexperienced management of the Chinese start-ups. Legend Capital positions itself as a very active VC and adopts a value-added services approach. Legend Capital believes that its firsthand startup know-how can contribute to the development of both the young companies and their management teams beyond financial capital. As Liu Chuanzhi pointed out:

²⁰ Source: Documents of Legend Capital, websites and interviews.

²¹ Personal interview with Liu Chuanzhi, January 6, 2003.

...a favorable environment has given birth to many High-Tech companies and more are emerging now in China, but on the flip side, they are facing challenges and constraints such as lack of capital and management expertise, which hinders their growth. Venture capital can help these start-ups out of such difficulties, which is what Legend has been doing with 17 years of experience and know-how.²²

Legend Capital states its investment approach as:

As we are committed to helping the start-ups to grow by providing value-added services, the fundamentals of the start-ups are very important to us when we make investment decisions. The short-term preferences for certain sectors/industries indicated by capital markets will not have impact on our investment strategy. Furthermore, we respect the independent and sound management/development of our portfolio companies and emphasize the portfolio companies' recognition of LC's values and philosophies. We promise not to seek short-term exit just for profits.²³

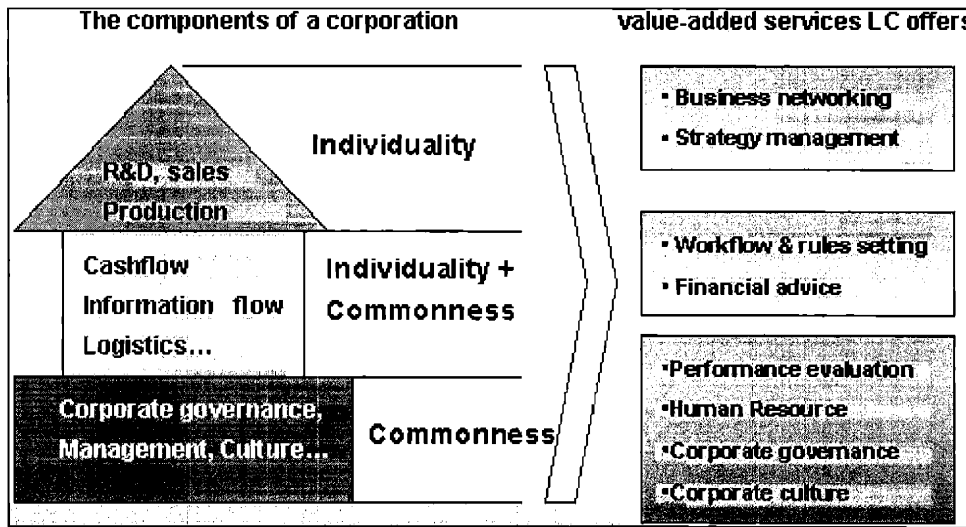
To implement the value-added services, Legend Capital built an in-house professional consulting team. Legend consultants help the portfolio companies with corporate management, business expansion, and so on so that these start-ups can be more adaptable to the changing market and grow in a sound and fast way. Besides a deep understanding of Legend's management theory and first-hand experience in management, Legend consultants can leverage a broad network of contacts and relations in the IT field through its parent company. With these resources, they can offer tailor-made help to the portfolio companies in strategy management, team building, improvement of the CEO's management competence, and HR management.

Legend summarizes its management theory acquired from 17 years of practice in the following graph:

²² Liu Chuanzhi's comments on the fund's mission at the press conference for launching Legend Capital.

²³ Source: Legend Capital Website.

Figure 6.1 Legend Management Theories



Source: Legend Capital website

The components of management are explained in three levels: roof, wall, and foundation.

At the roof and the wall levels, Legend Family has been very successful in

- keeping fine quality with low cost, which is achieved by better procurement ability, tighter inventory and account receivable control, etc. rather than simply cutting the labor and production costs
- making the most of the product technology, which requires a very quick response to the market trend and demands
- developing a strong ability to expand markets and manage the sales channels

At the foundation level lie the key components of Legend's management theory -- the Three Elements – build a core effective management, formulate visionary strategies and lead an invincible team. That explains why Legend has secured its leading position for nearly two decades in one cutthroat competition after another.

Legend Capital also seeks to leverage its well-known brand in IT products and services. The partners, suppliers, distributors, and networks of both Legend Group and Digital China can be Legend Capital's unmatched resources provided to the portfolio companies.

Legend's close connections with the government, corporations of both domestic and foreign, and the good will in the capital markets are all invaluable to deal sourcing, the business development of the portfolio companies and exit.

6.2 Management Team

The foundation of Legend Capital's management is molded based on its parent company. Every key position in the venture capital firm is filled by a seasoned Legend manager.

Liu Chuanzhi Chairman

As co-founder, Liu Chuanzhi serves as the President of Legend Holdings and Chairman of Legend Group. He is the vice chairman of the All-China Federation of Industry and Commerce, a deputy to the Ninth National People's Congress and a delegate to the 16th National Congress of the Communist Party of China.

Liu Chuanzhi himself is a legend among Chinese entrepreneurs. After graduating from the Xi'an Military Institute of Telecommunications and Engineering in 1966, the peak of China's Cultural Revolution, he entered a technology track as a senior engineer at the Chinese Academy of Science. Liu Chuanzhi sensed the opportunities in the early days of China's economic reform and co-founded Legend Corp. Under his leadership, Legend has grown from a startup with a US \$40,000 seed fund to a giant in China's IT industry with US \$3 billion market capitalization. Liu Chuanzhi is also famous for his adoption of Western style managerial practices within Legend and his experiments of privatizing of a state owned technology company.

Liu Chuanzhi was honored as "Best Asian Businessman" by *Fortune* in January 2000, "Asia Star" by *Business Week* in June 2000 and one of "The Global 25 Most Influential" by *Times* in 2001.

Zhu Linan CEO

Joining Legend in 1989, Zhu Linan was senior Vice President, a member of the Executive Committee of Legend Group, and General Manager of Legend's first manufacturing base -- Legend Computer System Ltd. (Shenzhen). He played a pioneering

role in establishing and expanding Legend's operation in Shenzhen which marked the beginning of Legend PC.

In 1993, Zhu Linan left Legend to start his own business, focusing on system integration. During this period, he was involved in several major projects such as networking systems architecture and implementation, and application software design for power services.

Zhu Linan rejoined Legend in 1997 and took on the responsibility of strategic planning and implementation. He initiated the reorganization of Legend headquarters, subsidiaries, and regional platforms. The reorganization optimized many aspects of Legend's management structure including financial, technology, business development, IT, and HR. Zhu Linan was also deeply involved in the deployment of the Group's ERP system. His knowledge and experience in architecting corporate structures earned him the latest assignment of constructing Legend Holdings in 2000.

Chen Guodong Director

Chen Guodong joined Legend in 1994 and serves as Vice President of Legend Holdings. He has 4 years of corporate management research & consultancy experience, and over 8 years of corporate management practices. He also led the planning, building and management of Legend Industry Park, Legend (Shenzhen) Mansion, Legend (Beijing) Mansion and Raycom Info. Park.

Chen Hao Managing Director and Head of Investment

Chen Hao joined Legend in 1992 and served as the General Manager of Legend Advanced System Ltd. and Legend's Networking Center. He was also the director of the General Office of Corporate Planning. He has successfully led several large-scale system integration and software development projects including "The Three Golden Cards" and the railway billing system. Chen Hao has over 11 years of experience in sales, marketing, technology and operational management in the IT industry.

Wang Nengguang Managing Director, CFO and Head of Consultancy

Wang Nengguang has been with Legend since 1992. As the Head of the Finance Dept. of the Group, he was in charge of corporate financing and accounting. He played a very important role in the company IPO in 1997. Wang Nengguang has close relationship with local banks, taxation institutes, and commercial and industrial administrations.

6.3 Investment Focus

Sectors: Legend Capital seeks opportunities in information technologies with particular interests in the following sectors:

- Telecommunications and networks
- Enterprise application software
- IT service
- IC design

Region: Legend Capital focuses on companies with their major operation in China or those with close business relations to China. By 2002, the fund has invested in 10 Chinese companies and two US-based startups.

Stages: Legend Capital prefers to invest in companies in start-up and expansion stages, and makes limited investment in seed stage and pre-IPO companies.

6.4 Objectives

In the startup days of Legend Group, Liu Chuanzhi envisioned growing the business on three pillars, technology, manufacturing, and trading, with technology on top of the list. Due to the unfavorable environment for entrepreneurial firms in China in the early 1980s, the company pursued the development strategy in reverse order. With capital accumulated from reselling foreign brand PCs and peripherals, Legend developed its first PC add-on component for Chinese language operating system. Built on the success from both PC reselling and small scale production, Legend extended its reach to PC manufacturing. Within 5 years, the Legend brand became the top selling PC in China. Legend PC has held onto the top spot since 1997.

Legend's success in the PC sector has given the company the bellwether position in China's IT industry and its comparison to Dell Computers has been drawn by many publications. Liu Chuanzhi was invited as the first entrepreneur from Asia to give a speech at the Academy of Management. However, Liu believes that Legend is still weak in the most important pillar, technology. Structured as a manufacturing and marketing operation, Legend Group's R&D spending is geared as a follower for product and application development. Legend Capital allows the company to be involved early in leading IT technologies. Even though the fund has clear objectives for financial returns, the establishment of Legend Capital should be considered a strategic movement for better technology management.

6.5 Challenges

As China's leading technology company, Legend has a better understanding of the home market than outside firms. Through a series of maneuvers, from IPO to spin-off, on the Chinese Mainland and overseas capital markets, Legend's management team has accumulated the expertise in capital operation. Even though Legend Capital can easily tap into the resources of its parent company, other than some of the common challenges other VC funds face in Chinese market, it has to overcome a set of hurdles that are unique to the fund.

First is the source of funding – Legend Capital expects to raise additional US \$70 million from outside sources. Legend Group has been successful in manufacturing and marketing technology products, but it has no proven track record in venture capital investment. Furthermore, as long as the company carries the flag of Legend, outside investors will be skeptical about the true objectives of the fund. The investors would question whether they can get maximum value out of their investments when Legend decides to merge a portfolio company under the umbrella of Legend Group. Moreover, Legend Capital promises higher returns and emphasizes long term growth, which is acceptable for corporate VCs. But regular private equity investors look for a shorter investment horizon. The differences in expectation of return would make the Legend Model a difficult investment choice.

The second challenge is human capital. Legend has taken the tactic of building superstars within the company. Liu Chuanzhi and his two lieutenants, Yang Yuanqing, CEO of Legend Group, and Guo Wei, CEO of Digital China, are painted as China's top managers. Legend managers are frequent recipients of management awards in many circles, which give Legend much free publicity and help the sales of its consumer PCs. Legend Capital inherits the same tactics and drums up its managing director, Zhu Linan as the raising star. The key positions of Legend Capital are filled with battle-tested veterans from Legend Group, but they collectively have no experience in venture capital investment. A major challenge for the fund management is to transfer their knowledge and experience from operations to venture investment.

The third challenge is implementing the Legend Model in its portfolio companies. It is true that Legend Group has a large reservoir of entrepreneurial know-how and can apply them to its portfolio companies through consulting teams. However, only a limited line of Legend's new businesses are actually development from a core technology. How widely Legend's manufacturing and trading-based know-how can be applied to a startup stemming from a single technology is the key issue for the entire Legend Capital value proposition.

7. IDG Technology Venture Investment (IDGVC)

IDG Technology Venture Investment, Inc. (IDGVC) has the distinction of being the first American venture capital company to enter the Chinese market. Founded in 1992 by International Data Group (IDG), a leading worldwide provider of information technology services, IDGVC was originally named Pacific Technology Venture Fund-China, Inc. (PTV-China). IDGVC's venture capital operation is headquartered in Beijing, with branch offices in Shanghai, Guangzhou, Tianjin and Shenzhen in China and in Boston and San Jose, California, in the United States.

7.1 The First Mover

IDG entered China's market in early 1980s. It jointly established China Computerworld Publishing, the first joint venture publication between a foreign publisher and China's Ministry of Information Industry (MII). *China Computerworld* is considered China's most authoritative information technology trade publication and enjoys the highest circulation of any such newspaper in the country. The success of China Computerworld not only brought a great reputation but also significant financial returns to IDG. However, with China's tight foreign exchange policy, IDG could not take all of its profits out of China. This part of the profit became the initial funding of IDCVC.

From 1993 to 1997, IDGVC approached the market cautiously and made investments in businesses related to IDG's core operations, media and publishing. Very limited amount of capital were invested in high-tech startups. In 1998, IDGVC participated in a syndicated B round financing to sohu.com (NASDAQ: SOHU), an Internet portal founded by Charles Zhang, an MIT graduate who went back to China. It made its first major investment in a Chinese high-tech company, Shenzhen Kingdee Software Technology (HK GEM: 8133). The investment of RMB 20 million to Kingdee, an enterprise software producer, was the IDGVC's largest investment in a Chinese technology company to date. In October 1998, IDG signed a memorandum of cooperation with the State Science and Technology Commission of China (SSTC), the government agency that sets national policy for science and technology research and development. This document grants approval for IDGVC to invest up to US \$1 billion in

venture capital in China's high-tech corporations over the next seven years. As of April, 2003, IDGVC has invested US \$200 million in 92 Chinese technology companies.

As the first mover among foreign venture capital funds to invest in Chinese technology firms, IDGVC had the advantage of reviewing the most promising opportunities in investing in growth stage technology companies. While other funds are still nurturing their startups, IDGVC had started harvesting its early investments. Since the establishment of the fund, IDGVC has exited 28 investments with an Internal Rate of Return (IRR) of more than 50%.

7.2 Management Team

Before IDGVC focused its major resources on the Chinese market, the fund had experienced investing in Japanese startups. From this experience, IDGVC realized the importance of having a localized team. IDGVC built its management team at the operational level with people who were born and grew up in China. Instead of parachuting in Western managers, Patrick McGovern, founder and director of IDGVC, had the foresight and courage to entrust a team of passionate young Chinese entrepreneurs with limited experience in VC investment to run the first \$50 million dollar fund. IDGVC's first Chinese manager, Hugo Shong, now the Vice Chairman of the board, was a reporter for the Xinhua News Agency in China before coming to the US for graduate study. He received a master's degree in communication from Boston University and finished his business education at the Fletcher School of Law & Diplomacy in 1987 and the Harvard Business School in 1996. Chinese employee No. 2, Zhou Quan, now the Managing Director and General Partner, got his bachelors degree in science from the China Science and Technology University in 1981, a master's degree from the Chinese Academy of Science in 1984, and a Ph.D. in fiber optics from America's Rutgers University in 1989. Even though the team was less experienced in venture investment initially, its members' close ties with the country eventually offset the learning required for foreign experts to learn China. Experienced foreign fund managers often directly compare China's environment with the funds they operate. "*China will be ready for our*

type of venture capital investment in 10 years”²⁴ – Hugo Shong recalled his first trip back to China with a British investment expert in 1990.

In September 2000, DIGVC completed its formation of a Limited Liability Partnership. All general partners have significant Chinese experiences.

7.3 Investment Strategies

Patrick McGovern made following points on IDGVC’s strategy:

There is a relationship of mutual motivation between our venture investment and information services. Benefiting from IDG’s worldwide resources and specialists, IDGVC’s team members are able to analyze and identify trends in the IT industry, assuring high sensitivity to global developments. Our strategy is to provide not only capital, but also management experience and critical information to entrepreneurs.²⁵

IDGVC’s investment activities focus on China’s high-tech industries, especially the Internet, information services, software, telecommunications, networking technology and biotechnology. The size of investments in individual companies usually falls within the range of US \$500,000 to US \$5 million.

Zhou Quan explains the strategy in details:

In the software industry, we invest only in companies with the following characteristics: their technology must be adapted to China’s local conditions, they must have technical advantages in the Chinese marketplace, and they must have great market potential. The point is that all companies today face worldwide competition. We would not consider a Chinese company developing operating system software to have high potential. In the networking industry, we concentrate our investments on telecommunications technology and services. Another important area of investment for us is the Internet. We also occasionally invest in biotechnology companies. We focus on these sectors because we believe

²⁴ Shong’s speech at the Harvard Business Review China Conference, April 14, 2003.

²⁵ Source: IDGVC website

they offer an outstanding opportunity and our team is particularly knowledgeable and proficient in these fields.²⁶

Compared to domestic investment companies, which measure an investment target more often by the value of the company's proprietary technology, IDGVC uses more market-oriented measurements. It devotes more energy on investigating the entrepreneur and the team of an investment target. In addition, domestic investment companies often times base their negotiations on a company's net asset, whereas IDGVC gives more attention to a company's potential growth. In general, IDGVC considers more about the entrepreneur, the company's asset structure and its external market relations. IDGVC aims to provide entrepreneurs these important value-added services:

- Provide strategic guidance in business development planning, financial management, organization structure and legal affairs.
- Assist in building distribution networks and exploring markets.
- Aid in training senior management personnel.
- Provide technology information, expertise and market research.
- Help establish strategic partnerships to achieve more competitive market positions.
- Introduce international and domestic investors who can provide additional sources of funding.
- Assist in mergers, acquisitions, corporate restructuring and IPOs.

IDGVC also makes building a trust relationship with entrepreneurs a key part of its strategy. Patrick McGovern emphasizes the strategic importance of this trust relationship as follows:

Many Chinese entrepreneurs have not realized their true personal value. If, as an investor, you take advantage of this and devalue entrepreneurs, these entrepreneurs will feel cheated when they eventually come to realize the truth. This situation foments dissension and discord between the investor and entrepreneur. So it is important to fully acknowledge a company's

²⁶ Source: IDGVC website

intellectual capital and let the founders and key personnel be major shareholders.²⁷

7.4 Challenges

With its first mover's advantage, IDGVC has established itself as the leader among foreign venture capital funds operating in China. Going forward, as more and more overseas capital entering Chinese market, IDGVC may have challenges in several areas.

First, exiting from Chinese stock exchanges is still not an option for foreign invested companies. Startups accepting off-shore capital are classified as joint venture between the companies and foreign VCs. To date, there is no single case of a majority foreign owned company going public in the Shenzhen or Shanghai stock exchange. The only IPO hope for the portfolio of IDGVC is the HK GEM board. However, the evaluations on HK GEM are usually very low for Chinese Mainland high-tech startups. IDGVC along with other VCs have been lobbying for a venture board in Shenzhen. But the sweeping change of investors' moods towards corporate governance issues makes the Chinese government more cautious than ever with regarding to a venture board, on which reporting standards are even harder to maintain.

Second, as the funds grow bigger, IDGVC will inevitably raise its bar for minimum capital investment. China's entrepreneurial environment has shown some signs of problems as it increases in scale. Although many Chinese companies start with great momentum, some seem to lose their initiative after making tens of millions of RMB -- the equivalent of a few million US dollars. They don't know how to take the next step to grow their companies from small to big. IDGVC will have to help their entrepreneurial partners to set bigger goals.

Third, many entrepreneurs often don't understand what concepts are lying under the idea of company. They often stress how advantageous their technologies are, but don't understand that technology only plays one role in operating a company. Many other factors are also very important or even more important than technology in making a

²⁷ Source: IDGVC website

company successful. Their sense of the market has not yet been strong. Entrepreneurs often regard VC money as loans or appropriations. They lack of a mature understanding of how to coordinate the relations between shareholders and managers, and on the functions of the board. Some Chinese companies are close-minded and are unwilling to communicate. IDGVC is willing to help the growth of new industries in China, but the local companies must also be good at learning. It might take a generation to solidly build up these basic market economics concepts.

IDG has been strategically cultivating its relationship with the Chinese government. The successful joint ventures between IDG and the Ministry of Information Industry (MII) laid the groundwork for IDGVC. In October 1998, when IDG signed the US \$1billion investment memorandum with SSTC, then Chinese president Jiang Zemin attended the signing ceremony. IDGVC has been regarded as the trailblazer for foreign venture capital funds in China by those media which are heavily influenced by the government. The relationship has been fruitful to IDGVC. The number of IDGVC's portfolio companies permitted to issue initial public offerings in HK is clearly above other foreign VCs. As a result, the followers, foreign VCs who entered China during the internet boom, quickly copied the best practices of IDGVC in cultivating government relationships. As the playing field becomes leveled, IDGVC will rely more on the business and economic instincts of its management team.

8. Discussion and Conclusions

Since the 1980s, many business concepts have been imported to China and almost all of them are modified to adapt the country's unique environment, a state planned market economy. The most visible example is the stock exchange which is designed to aid the reform of SOEs instead of to allocate financial capital efficiently. As the latest addition, venture capital is also given some Chinese twists. Following are the findings of this study.

8.1 Findings

Supply and Demand

In the US, the demands for venture capital investment come from technology startups that require large amount of capital to support their long R&D and product development cycles. The supplies for venture capital are from investors who are willing to take risks beyond financial markets for exceptional returns. In China, the demands for capital from technology companies are equally big. But, there were few private investors to supply the capital. With limited sources of funding, most Chinese entrepreneurs rely solely on retained earnings to finance growth. Under tight cash constraints, the first generation of local technology-based companies had to explore low technology opportunities, such as PC agent selling, to support their R&D spending. Most of these R&D budgets were spent on developing copy-cat products of foreign products. The Chinese government initiated many programs to stimulate the diffusion of technologies development in state research center but saw mediocre results. The government looked to the Western economies for answers and discovered that commercialization was the key. It took over the role of venture capital and set up funds to support the emerging technology sector.

As a way to stimulate technology commercialization, China's venture capital industry is regulated in such a way to achieve this specific goal. Because the majority of VC funds in China are set up by central or local governments and these funds have long-term interests in generating returns from macro-economic development, the regulations for venture investments are set up to reflect the government's interest. Venture investors are classified as legal personal shareholders and have to hold the majority of their securities

in a company long after the company has been listed on Chinese stock exchanges. The lack of short-term liquidity has deterred many foreign venture investors who are eager to participate in the economic growth in China.

In the west, venture capital is considered “smart money” because venture capitalists bring more than capital to a startup company. To protect their investments, VCs often provide legal, organizational, strategic advice to entrepreneurs in their portfolio companies. In China, however, very few government-backed VCs can add value to their startups. VC funds set up by local governments are often managed by bureaucrats from government agencies with no expertise in managing private enterprises.

On the positive side, the initial investments from government agencies have given birth to many technology startups which otherwise would have no access to capital. As these technology firms enter the growth stage, they become less risky than in their early stage and look more attractive to foreign equity investors.

Portfolio

In 1999, the Chinese State Council issued the *Opinions on Establishing a Venture Capital Regime* (Opinions) statement, which declared that:

- “Emerging industries and high-tech industries are the key drivers behind the growth of an information-based economy;”
- “Information technology, biotechnology, technologies on new materials, and advanced manufacturing technologies are the priorities of future government investment;” and
- “It is necessary to establish and develop a venture capital industry to support technological innovations of small and medium enterprises (SMEs).”

The portfolio companies of the four VC operations included in this study basically essentially reflect the priority guidelines drawn by the government.

The Haidian Incubator Park, wholly owned by the Zhongguancun High-Tech Zone, selects its tenants strictly following the guidelines. Among its 187 resident startups, 99 are IT related firms, 25 are in biotech, 29 develop new material and environmental products, and 34 focus on manufacturing technologies.

NewMargin with 20% of its funds from government sources categorizes its portfolio companies in three out of the four areas, except manufacturing technologies, designated by the government.

Even though Legend Holdings, the parent company of Legend Capital, is a state owned enterprise on paper, it is listed on Hong Kong Stock Exchange and considered a privatized business. Legend Capital's portfolio shows less influence from the government. It focuses on four sub-categories of information technology: telecom and network, enterprise software, IT services, and IC design. The fund even invested in two US-based startups.

With 100% of its funds from foreign investors, IDG Capital exhibits the most flexibility in selecting investment targets. It has broad interests in most aspects of information technology including Internet infrastructure, Internet content, e-commerce, software, telecom, and semiconductors. The fund also has investments in some sensitive areas such as media and information service.

Through observing the technology bases of the investment portfolios, we can see that the more ownership Chinese government has in a venture capital fund, the closer its portfolio tracks the country's long term technological development goals. More importantly, I found that the funds with almost no government interests follow the same guidelines. One interpretation is that in order to avoid the risks of seed stage investments, non-government funds are willingly to choose startup companies in growth stages. Because, in many cases, only the startups with technologies aligning with government guidelines get funded in early stage, non-government funds have narrower choices of companies with diverse technology bases.

From the government point of view, this result is as expected because the government may have intended to guide the entrepreneurship development indirectly. However, this approach may lead the venture capital industry into narrow focuses on certain technologies and cause inefficient capital allocation.

Organization

I also found that the venture capital firm are structured and organized quite differently from US VC funds. American VCs are formed as inverted pyramids, where a majority of the employees are actually partners in the firm, supported only by a handful or so of analysts and associates. Venture capital is considered a boutique business by many insiders. The seasoned business veterans lend investment savvy and credibility to transactions, and allow the firm to source deals, conduct due diligence, and make investment decisions in multiple areas of business. In contrast, Chinese VCs are usually organized as regular corporations with pyramid shaped structure. Several reasons can be used to explain the structure. First, experienced venture capitalists are rare in China. VC funds must rely on less experienced associates to source deals and to do initial evaluations. Second, the average size of VC investment is small, US \$1 to \$3 million. For a fund of US \$100 million, its portfolio may contain more than 30 startups. To compound the size problem, most technology startups are run by first time entrepreneurs who need a lot of help from VCs. It's almost impossible for general partners to keep track of the strategies and operations of these companies. VC funds have to employ many junior associates to monitor their investments. Third, the cost of educated labor is still low and Chinese funds usually have reserves for operation like their counterparts in the US, 1-3% of the fund pool. With these additional rooms for maneuvering, fund managers tend to build a bigger organization than necessary.

8.2 Implications and Future Research

This study identifies the benchmarks for venture capital investment in China. The benchmarks include the size of the investments, the payback period, the expected IRR, and the investment stage. These benchmarks can be used as basic guidelines for newly founded VCs to operate in China. The study also segments VCs by their source of

funding: government funds, government leveraged funds, SOE funds, and foreign funds. The segmentations of VCs can help local startups to find VCs that match their growth patterns.

As the biggest stakeholders, central and local governments have been the most important players in China's venture capital industry. More than 27,000 Chinese startups have received funding from government-backed VCs. However, most of the funds are distributed as passive investments or "dumb money" instead of active investments or "smart money." To commercialize technologies out of state run research institutes, Chinese entrepreneurs need more help than just seed money. Some government agencies have experimented hiring oversea fund managers to run the fund and to raise additional capital. The objectives of government and venture capitalists are still hard to align. Early initiatives of privatizing the government leveraged funds have been taken. If private and for-profit funds can take the majority, the dynamics of the industry may change and more growth can be expected from within the VC industry.

The exit channel has been the largest road block for VCs operating in China. Following the motto of "crossing a river by touching the stones on the bottom," the government has been taking baby steps to improve the overall environment. For the latest wave of venture capital investments started from 1998, an investment horizon of 5-7 years means expected exits in 2003 to 2005. Currently, there is no clear indication that the exit environment will improve. If the VCs cannot realize the returns on their investments, later funds will dry up quickly. As with their international counterparts, Chinese stock exchanges are plagued with scandals. Restoring investor confidence and opening a venture board at the same time will be a daunting task for the China Securities Regulatory Commission (CSRC).

Speed to market has been the most efficient tool for startups to compete with established companies. This study finds that Chinese VC firms are not generally operated in an efficient fashion. Other than the organizational structure issue, the knowledge of and resources for networking are often kept within senior partners. There is immediate need

for the general partners of Chinese VC firms to transfer their knowledge within their operations.

The case study approach faces a major challenge in generalizing research findings. The internal and external challenges faced by the four operations may only reflect the tip of an iceberg in the industry. Further study on a larger scale may yield more concrete findings.

The business environment in China has been changing rapidly in the last two decades and it is expected to change more dramatically in the next 3-5 years as the grace period for China's WTO commitments comes to its end. As each additional industry opens up to international competition, it brings new investment opportunities for venture capital investment. A follow-up study on the same operations may paint a different picture within three years.

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