



**THE 'NEW ARGONAUTS' IN
CHINA:
THE VENTURE CAPITAL
DIMENSION**

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ABSTRACT

New Argonauts are defined as American-educated scientists and engineers who have set up technology companies since returning to their home countries such as China, India, Israel and Taiwan (Saxenian, 2006). This thesis has developed Saxenian's New Argonauts to those who have become venture capitalists (VCs) in China. The aims of the thesis are three-fold: (1) to identify the role of New Argonaut VCs in China's venture capital industry; (2) to examine how New Argonauts use their transnational networks in their portfolio investments; and (3) to assess the impact of their investments on China's economic development.

Semi-structured interviews with 33 returnee VCs and 3 returnee business angels were collected to address the above first and second research question. Furthermore, four case studies (two cases were sourced from the semi-structured interviews and two from the secondary data) were employed to address the second and third research question. The use of four cases allows for answering them in much more depth and in greater detail. And as a result, to obtain an insight into the venture capital process used by these New Argonaut VCs and their significant contributions to the effective venture capital industry in China. The findings of case studies further corroborate the proposed relationships tested by 36 in-depth interviews.

Transnational networks between New Argonaut investors and the American VC industry and business communities play a vital role, enabling New Argonaut investors to raise funds from the American market successfully, to evaluate the state-of-the-art knowledge of technology, to have co-investment opportunities with foreign VC firms who are unfamiliar with the Chinese market, to create relationships between their portfolio firms and overseas customers, suppliers and strategic partners, and to help their portfolio firms to exit successfully especially in the U.S. equity market. New Argonaut VCs therefore facilitate the rapid economic development in China.

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TABLE OF CONTENTS

ACKNOWLEDGEMENT	iii
TABLE OF CONTENTS	iv
TABLE OF FIGURES	vii
TABLE OF TABLES	vii
CHAPTER 1 BRAIN DRAIN, BRAIN CIRCULATION AND NEW ARGONAUTS	1
1.1 INTRODUCTION	1
1.2 BRAIN DRAIN TO BRAIN CIRCULATION: RETURN MIGRATION PHENOMENON	5
1.2.1 What Is Brain Drain?	5
1.2.2 Impact of The Brain Drain	6
1.2.3 What Is Brain Circulation?.....	8
1.2.4 The Driving Forces Behind The Brain Circulation.....	9
1.3 BRAIN DRAIN AND BRAIN CIRCULATION IN CHINA	11
1.3.1 Chinese Talent Abroad.....	11
1.3.2 Silicon Valley’s Immigrant Entrepreneurs.....	15
1.3.3 Incentives for Attracting Talent Returning to China.....	17
1.4 NEW ARGONAUTS.....	21
1.4.1 The New Argonauts Phenomenon: A Critique	23
1.5 RESEARCH RATIONALE.....	24
1.6 ORGANISATION OF THE THESIS	25
CHAPTER 2 VENTURE CAPITAL	28
2.1 INTRODUCTION	28
2.2 VENTURE CAPITAL.....	29
2.2.1 What Is Venture Capital?	29
2.2.2 Different Types of Venture Capital Funding	31
2.2.3 Source of Venture Capital Funding.....	32
2.3 THE ECONOMIC CONTRIBUTION OF VENTURE CAPITAL	40
2.4 THE GLOBALISATION TRENDS IN VENTURE CAPITAL ...	43
2.4.1 The Origins of The Venture Capital Industry in The US.....	43
2.4.2 American Venture Capital Industry During the 1970s -2010s.....	44
2.4.3 The Internationalisation of Venture Capital.....	47
2.5 THE VC MODEL IN EUROPE AND IN EMERGING MARKETS DEVIATING FROM THE US VC MODEL.....	49
2.5.1 Fund Organisation and Source of Funding	49
2.5.2 Investment Focus	51
2.5.3 Deal Structure.....	51
2.6 The Venture Capital Industry in China.....	52
2.6.1 History and Development of Venture Capital in China	52
2.6.2 Current Structure of Venture Capital in China	55
2.6.3 Issues of Venture Capital in China	57
2.7 CONCLUSION.....	63
CHAPTER 3 THE VENTURE CAPITAL INVESTMENT PROCESS	65
3.1 INTRODUCTION	65

3.2	THE VENTURE CAPITAL INVESTMENT PROCESS	67
3.2.1	Deal Origination.....	68
3.2.2	Deal Evaluation.....	69
3.2.3	Deal Structure.....	71
3.2.4	Post-investment Involvement.....	73
3.2.5	Syndication/Co-investment.....	75
3.2.6	Harvesting/Exit	77
3.3	TRANSNATIONALISM	78
3.3.1	What is Transnationalism?.....	79
3.3.2	Transnational Communities	81
3.3.3	Transnational Networks	82
3.3.4	The Distinctiveness of Transnational Entrepreneurs	87
3.4	THE CRITICISM OF TRANSNATIONALISM IN CHINA	90
3.5	PROPOSITIONS OF TRANSNATIONALISM ON INVESTMENT	93
3.6	CONCLUSION.....	95
CHAPTER 4 RESEARCH METHODOLOGY		97
4.1	INTRODUCTION	97
4.2	QUALITATIVE RESEARCH METHODS	98
4.3	DATA COLLECTION METHODS.....	99
4.3.1	Phase I—In-Depth Interviews.....	102
4.3.2	Phase II—Case Studies	111
4.4	THE METHODOLOGICAL LIMITATIONS	116
4.5	DATA ANALYSIS	117
4.6	CONCLUSION.....	121
CHAPTER 5		
THE PROFILES OF NEW ARGONAUT VENTURE CAPITALISTS.....		122
5.1	INTRODUCTION	122
5.2	WHO ARE THE NEW ARGONAUT VENTURE CAPITALISTS? 123	
5.2.1	Nationalities	123
5.2.2	Demographic Characteristics	124
5.2.3	Reasons for Leaving China	125
5.2.4	Educational Level of New Argonaut venture capitalists.....	127
5.2.5	Career Mobility	128
5.2.6	Reasons for Returning to China	132
5.2.7	Reasons for Becoming Venture Capitalists.....	134
5.3	TYOLOGY OF NEW ARGONAUT VENTURE CAPITALISTS 137	
5.4	CONCLUSION.....	144
CHAPTER 6 NEW ARGONAUTS AS VENTURE CAPITALISTS.....		146
6.1	INTRODUCTION	146
6.2	HOW DO NEW ARGONAUT VCs USE TRANSNATIONAL NETWORKS IN INVESTING?	148
6.2.1	Fund Raising and The Impact on Transnationalism	150
6.2.2	Investment Focus and The Impact on Transnationalism	155
6.2.3	Deal Flow and The Impact on Transnationalism	160
6.2.4	Key Investment Criteria and Its Impact on Transnationalism	164

6.2.5 Deal Evaluation and The Impact on Transnationalism.....	168
6.2.6 Deal Structure and Its Impact on Transnationalism.....	171
6.2.7 Co-Investment /Syndication and The Impact of Transnationalism.....	174
6.2.8 Value-Added and Its Impact on Transnationalism.....	178
6.2.9 Exit and The Impact on Transnationalism	181
6.3 CONCLUSION.....	184
CHAPTER 7 NEW ARGONAUT INVESTORS IN THE DEVELOPMENT OF VC INDUSTRY IN CHINA.....	186
7.1 INTRODUCTION	186
7.2 CASE STUDIES.....	187
7.2.1 Case 1. Feng Deng: Northern Light Venture Capital.....	187
7.2.2 Case 2. Min Zhu and Cybernaut Capital Management.....	194
7.2.3 Case 3. Dr Hong Chen and the Hina Group.....	198
7.2.4 Case 4. Neil Shen and Sequoia Capital China	202
7.3 THE ATTRIBUTES OF NEW ARGONAUT VCs	208
7.3.1 Technology Experts	208
7.3.2 Reputations as very Successful Entrepreneurs.....	209
7.3.3 Experience of the Entire Entrepreneurial Process from Start-up to Harvest, and Specifically the IPO Process	210
7.3.4 Strong Networks both in China and the US.....	212
7.3.5 Bridging the Gap	213
7.4 CONCLUSION.....	215
CHAPTER 8 CONCLUSION	216
8.1 INTRODUCTION	216
8.2 DATA COLLECTION METHODS	221
8.3 SUMMARY OF KEY FINDINGS.....	223
8.3.1 Profiles of the New Argonaut Venture Capitalists.....	223
8.3.2 Typology of the New Argonaut Venture Capitalists.....	226
8.3.3 The New Argonaut Venture Capital Firms	228
8.3.4 How Do the New Argonauts Use Their Transnational Status in Investing?	229
8.3.5 The Role of New Argonaut VCs in the Development of Venture Capital in China	236
8.4 THE NEW ARGONAUT VENTURE CAPITALISTS' MODEL 237	
8.5 RESEARCH CONTRIBUTIONS	239
8.6 LIMITATIONS OF THE STUDY	240
8.7 IMPLICATIONS FOR THEORY	242
8.8 IMPLICATIONS FOR POLICY MAKERS	243
8.9 FUTURE RESEARCH.....	248
BIBLIOGRAPHIES.....	251
BIBLIOGRAPHIES.....	251
APPENDIX A INVITATION LETTERS FOR IN-DEPTH INTERVIEW	302
APPENDIX B IN-DEPTH INTERVIEW QUESITONS.....	303
APPENDIX C RELATIONSHIPS BETWEEN CODE AND INTERVIEW RAW DATA IN NVIVO 8	306

TABLE OF FIGURES

Figure 1 Professor Returns Home	20
Figure 2 Overview of the Limited Partner Venture Capital Funding	35
Figure 3 Venture Capital Investment in The US 1970-2009	46
Figure 4 Venture Capital Investment Trends in China	53
Figure 5 the Venture Capital Investment Process	68
Figure 6 Steps of Data Analysis	117
Figure 7 the Relationship between Saxenian's NA and NA VCs	144
Figure 8 Relationships between New Argonaut VCs and Other Global VCs	149

TABLE OF TABLES

Table 1 the World View Top 6 Countries (based on investment) (US\$billion)	49
Table 2 the Percentage of Domestic and Foreign VC Investment in China	56
Table 3 Comparison of Transnational Technology Networks between Taiwanese and Chinese Returnee Entrepreneurs	92
Table 4 Fundamental Differences between Quantitative and Qualitative	98
Table 5 Profiles of Respondents (according to chronicle order of the interviews)..	107
Table 6 Choice of Number of Cases	112
Table 7 Key Characteristics of Case Studies	115
Table 8 the Six Categories under Tree Nodes.....	120
Table 9 Nationalities of Respondents	124
Table 10 Age Group.....	124
Table 11 Educational Levels of New Argonaut Venture Capitalists	128
Table 12 Typical Career Paths	131
Table 13 the Typology of New Argonaut Venture Capitalists	143
Table 14 A Summary of Chinese New Venture-backed IPOS From 2005 to 2011	183
Table 15 The Propositions Supported by Case Studies	215

CHAPTER 1

BRAIN DRAIN, BRAIN CIRCULATION AND NEW ARGONAUTS

1.1 INTRODUCTION

The international mobility of highly skilled workers, including scientists, engineers, physicians, Information Technology (IT) experts and entrepreneurs, is currently an important issue not only in many Organisation for Economic Co-operation and Development (OECD) countries, but also some developing countries such as Israel, India, and China. According to the United Nations, the number of international migrants increased from 75 million in 1960 to 190 million in 2005. In addition, migration to the OECD area is increasingly skilled, with these skilled immigrants increasingly originating from developing countries. Unsurprisingly, the largest stocks of skilled emigration come from two types of countries: (i) the largest countries of the world and (ii) large countries with a majority of educated people. Nine countries have more than 0.5 million skilled natives living abroad, United Kingdom (1,478,477), Philippines (1,111,075), India (1,034,373), Mexico (949,334), Germany (936,523), China (783,369), Korea (612,939), Canada (523,463), Vietnam (505,503) (Docquier and Rapoport, 2009).

Salt (1997, p. 5) defines a highly skilled migrant as someone possessing “a tertiary educational qualification or its equivalent, although the skills can also be acquired through experience”. Mahroum (1999, 2000) identifies five main types of highly

skilled migrants¹: managers and executives; engineers and technicians; academics and scientists; entrepreneurs; and students. The mobility of managers and executives is largely determined by corporate strategies, especially regarding internationalization and expansion of activities overseas. The mobility of engineers and technicians is largely affected by economic factors such as where their skills are required and who will pay the best rates of pay for those skills. Academics and scientists are increasingly internationally mobile, and their flows are shaped by the distribution of centres of excellence and the related availability of research funding, scholarships and exchange schemes. Entrepreneur migration is stimulated by the structure of economic opportunities and by governmental policies such as tax regimes, visa requirements, and access to venture capital. Finally, students constitute a major potential source of labour, especially in the knowledge economy. Their flows are facilitated by access to scholarships and reciprocal student exchange schemes (King, 2002), but also by market mechanisms (level of fees and the cost of living) (Williams & Balaz, 2005).

Solimano (2006) categorizes three broad types or groups of talent mobility in terms of their development impact. (1) Entrepreneurs, technical talent, technology innovators, and business creators: this group of talent has a more directly productive impact through business creation and application of new technologies on host and source countries, particularly in this era of information technology. (2) Scientific and academic talent and international students: this group is related to the production of science and knowledge in general, although their productive application for industry,

¹ The six main reasons such as better wages causing the mobility of these types of migrants will be described below.

the service sector, and government are more indirect. (3) Health professionals and cultural workers: this group is related to the provision of a critical social service, such as health services, with some complex impacts on the source countries; the mobility of cultural talent, reflects both an aesthetic value as well as manifestation of creativity that can be highly valued by individuals and markets.

There are six main reasons triggering the international mobility of highly skilled migrants: firstly, wage differentials emerge as perhaps the most important cause of brain drain, especially important for students and those working in professions like health care and information technology (IT), where the wage differential between countries is wide and where skills are easily transferable. In the health sector, for instance, some developed countries, particularly the U.K., have actively recruited doctors and nurses from developing countries to address skill shortages. Such practices exacerbate this trend: about one in three of the 71,000 hospital medical staff working in the UK National Health Service in 2002 obtained their primary medical qualification in another country (Chappell and Glennie, 2010). Secondly, in recent years, Canada, Australia, the UK and other OECD nations have devised selective immigration programs designed to attract highly skilled professionals (Shachar, 2006), especially those working in IT. These programs allow those endowed with specialized human capital to immerse themselves quickly in the receiving country's workforce. Among them, the U.S. is the main attractive destination for emigrants benefiting from its H1-B visas, which provides visas for up to 6 years for individuals to work in occupations requiring at least a bachelor's degree (or to work as fashion models). The aim of the H1B visa programme is that not only does it attract IT

workers, but also it absorbs a wide variety of skilled workers in the U.S. Thirdly, for researchers and academics, the conditions in the host country regarding support for research and demand for R&D staff and academics can be another important determinant in the migration decision and destination (OECD, 2002). Fourthly, social and professional networks are also important facilitators in shaping the desire to leave, as well as to return home. For some potential migrants, networks make the person realize he could migrate. For some, networks, particularly close family abroad (OECD, 2006), become a reason to move. And for others, networks make the possibility of migrating a reality (Chappell & Glennie, 2010). Fifthly, for those in the workforce, opportunities for better pay, career advancement, higher quality research facilities, work with “star scientists” or in prestigious institutions, increased autonomy, more transparent systems of recruitment and reward, and freedom to debate are also strong drivers of highly skilled workers mobility (OECD, 2008). Lastly, the socioeconomic and political climate in home countries appears to influence an individual’s intention to migrate (with some skilled migrants forced to depart from their country of origin as asylum seekers or refugees). Political instability, violence and crime are also motivations to leave (Chappell & Glennie, 2010). The Beijing Tiananmen Square crackdown in 1989, for instance, has caused many talented Chinese students to go to America permanently for asylum reasons. Economic opportunities abroad, professional development opportunities including better training and more varied experiences, better education systems, opportunities for their children, lower taxes, quality of life and health care are other factors which could be considered by migrants as reasons for moving.

1.2 BRAIN DRAIN TO BRAIN CIRCULATION: RETURN MIGRATION PHENOMENON

1.2.1 What Is Brain Drain?

The concept of a “brain drain” refers to the permanent or long-term emigration of skilled people who have been educated in their home countries and are now seeking employment where the skills and knowledge that they have gained can be used for their and their families benefit. Although it might now be seen as basically people moving from the poorer and to some extent under-developed countries to the more developed western countries, brain drains have been happening for many years. For many years Scots, English and Irish left Britain to seek a better way of life in the United States, Australia, New Zealand and South Africa. Wickramasekara (2002) distinguishes two phases of the more recent brain drain. First, during the 1960s and the 1970s movements of highly skilled workers from the developing countries to the developed world received considerable emphasis. There has been extensive discussion among academics, researchers, and UN agencies on the consequences of the brain drain for developing countries and means of compensating them. For example, Jadhav came up with his controversial proposal for “taxing the brain drain” in 1976 where he suggested that developing countries receive compensation in the form of revenue taken from the taxes paid by these emigrants working and living in the developed world. The second phase of interest in skilled labour migration starts from the early 1990s with rapid advances in globalisation and phenomenal growth in information and communications technologies.

There are some differences in the debate concerning these two periods. The current mobility of skilled labour occurs in a context of globalisation and proliferation of information technology. This later period also coincides with the transition to market-oriented economies in most parts of the world, especially in the case of the former Soviet bloc. It could also be stated that these recent movements are more of temporary or contract nature or are circular migration whereas in earlier periods the brain drain related to permanent or settler migration. There is now a shift in the current phase in the composition of skill mobility with emphasis on IT workers and knowledge workers (Wickramasekara, 2002).

It is worth noting that the brain drain is not confined to developing countries only. It can occur at different levels within the developed world as well. There is extensive literature on the brain drain from Canada to the US, which has been a cause of serious concern to the Canadian authorities. Movements from third countries to Canada, particularly from developing countries, are making up this loss. Similarly Europe, particularly the UK, has long been losing skills to the US. Moreover, New Zealand has consistently been losing skills to Australia, which in turn is losing professionals to the USA and Europe (Wickramasekara, 2002).

1.2.2 Impact of The Brain Drain

The brain drain has both positive and negative effects for sending and receiving countries. For the sending countries, the positive effects of the brain drain may induce remittances flows, which are increasingly important sources of income in developing countries, mobilization of fresh capital accumulated by the immigrants

when they return home, and exposure to new technologies and managerial techniques (Rapoport, 2002; Solimano, 2006). The receiving countries can benefit from increased knowledge gained from the immigration of talent, creating a virtuous circle in which foreign talent combines with domestic talent strengthening the overall human capital base in the host country (Solimano, 2006). Furthermore, in the 1990s, entrepreneurial immigrants from India, Taiwan, and China into Silicon Valley in the U.S. have provided a valuable human resource in the creation of high technology industries, both in hardware and software. They have engaged in business creation and output growth in the high-tech sector contributing to economy-wide growth (Solimano, 2006).

However, policy makers in developing countries are concerned about the outflow of talent such as doctors, nurses, and engineers which can impede or jeopardise the development of the national economies in the long-term. In other words, the important implication of the brain drain is that investment in education in developing countries such as China and India may not lead to economic growth if a large number of its highly educated people leave the country (Carrington & Detragiache, 1998). According to Columbia University economist Jagdish Bhagwati (2003), graduates of India's prestigious Indian Institute of Technology accounted for 78 percent of U.S. engineering PhDs granted to Indians. Moreover, the loss of the medical professions from poor countries can increase patient mortality especially in African countries (Nevin, 2003). For instance, approximately 65,000 African-born physicians and 70,000 African-born professional nurses were working overseas in a developed country in the year 2000. This represents about one-fifth of African-born physicians

in the world, and about one tenth of African-born professional nurses. The fraction of health professionals abroad varies enormously across African countries, from 1% to over 70% according to the occupation and country (Clements & Pettersson, 2008). Todaro and Smith (2006, p. 76) argue that the brain drain was detrimental to the migrants' sending countries: *“many of the people who migrate legally from poor to richer lands are the very ones that Third World countries can least afford to lose—the highly educated and skilled. Since the great majority of these migrants move on a permanent basis, this perverse brain drain not only represents a loss of valuable human resources but could prove to be a serious constraint on the future economic progress of Third World nations”*.

1.2.3 What Is Brain Circulation?

However, since the 1990s, return migration has become significant, leading commentators to talk of brain drain being replaced by brain circulation. Brain circulation refers to the return of skilled migrants to their home country after a period abroad, or a pattern of temporary and circular migration between home and abroad (OECD, 2009). Brain circulation is also termed as “brain exchange” or “brain gain” or “return migration”, or “flight capital” (Heenan, 2005). Brain circulation is considered as a two-way flow of highly skilled migrants which means a “win-win” situation for both sending and receiving countries. The sending countries can reap benefits from knowledge transfer and remittances through continuous circulation, and do not suffer a one-way loss, while the receiving countries also benefit because the talents basically are retained by the host country (Wickramasekara, 2002).

Many observers believe that if highly skilled workers return they can increase source country average productivity, especially if they return after gaining experience and skills in a more advanced economy (Lowell & Findlay, 2001). In addition to this, the return migration of “technology entrepreneurs”, in which successful expatriate entrepreneurs born in developing countries but who studied and established companies in developed countries expand their business reach to their home countries, brings capital, technology, contacts and market knowledge (Saxenian, 2006; Solimano, 2006). Moreover, return migrants retain connections and networks between their home country and the one where they gained their education and practical experience. When these networks are fostered they can yield a flow of knowledge and new technologies that can boost source country growth. Whether they return permanently or temporarily, backward linkages to their source country can increase the available knowledge and technology that boost productivity (Lowell & Findlay, 2001).

1.2.4 The Driving Forces Behind The Brain Circulation

There are five main reasons which have contributed to immigrants returning to their countries of origins: Firstly, the high increase of return migration in the early part of the 21st century is partly due to the return of persons who held H-1B visas (Singh, 2003; Heenan, 2005). After the September 11 terrorist attacks in the United States, and the subsequent economic down-turn in the U.S., the influx of H-1B employees into the U.S. has shrunk. Many of these employees have been forced to return back to their home countries because of the lack of job opportunities or they have been unable to renew their H-1B visa. Secondly, there is a perception among foreign

workers that promotion and progression to the top layer of management is denied to them because of their cultural and ethnic background and this can be seen as discouraging to these workers to settle permanently in foreign countries. For example, although most of the immigrants to the United States held Master or doctoral degrees from America, some of them feel outsiders to the mainstream, primarily White population (Saxenian, 2000). In American companies, native born Americans mostly hold the position of Chief Executive Officer (CEO) or Chief Finance Officer (CFO). Florida (2005) indicates that only fifty CEOs of America's leading five hundred companies were immigrants. Foreign-born immigrants usually fill the position of engineers or technicians, instead of being in senior management roles (Saxenian, 2006). Thirdly, with the downturn in the US economy and the lack of opportunities many skilled migrants may have seen an improvement in the economic and political development of their home countries and this has caused them to return home. For example, if new graduates were leaving a country in part because employment opportunities there were poor—this is why many left Poland in recent years, for the U.K, Ireland and the other countries of the European Union — then a substantial increase in employment opportunities in their country of origin might encourage them to return (Chappell & Glennie, 2010). Fourthly, a feeling of belonging to the culture and place of origin also seemed to play an important aspect in enticing immigrants to go home. The Southern African Migration Projection study found that the majority of Namibian students were keen not to migrate permanently, expressing a desire to want to help build their country (Chappell & Glennie, 2010). Fifthly, some migrants have the intention of returning home after achieving a specific

objective, such as saving a certain amount of money, or obtaining a postgraduate degree in the U.S. (Chappell & Glennie, 2010).

1.3 BRAIN DRAIN AND BRAIN CIRCULATION IN CHINA

1.3.1 Chinese Talent Abroad

In 1978 China introduced an open doors policy that was accompanied by economic reform. The new Chinese leadership, especially Deng Xiaoping, encouraged China's science, technology, and education institutions to send Chinese students abroad. Since then, China has sent groups of scholars to study in the U.S and other countries. In the past, the U.S. attracted a large portion of the total number of Chinese students studying abroad. This is because America's universities, particularly at the graduate level, are regarded as being the best in the world (Heenan, 2005). The United States has won around 60 percent of all Nobel Prizes awarded since World War II, and seven hundred of the world's most highly cited researchers work in the U.S. (Heenan, 2005). China has heavily invested in expanding university enrolments in recent years. This accelerated expansion, along with the lasting effects of university closure during the Cultural Revolution, means that the quality of education is quite uneven among all but its top institutions. The graduates of lower-tier universities are often considered unemployable by multinational firms and may have difficulty in gaining admission to U.S. colleges. This helps explain why many Chinese students choose to come to the United States for undergraduate as well as graduate education (Wadhwa et al., 2007). But statistics show that Chinese students have increased dramatically in other countries like Britain, Australia, Canada, New Zealand, the Netherlands, Singapore, Germany and France in recent years, due to the high

rejection rate for student visas in the United States—the number of student visas issued by the U.S. dropped to 35 percent in 2003 (Florida, 2007).

According to the Chinese Ministry of Education, between 1978 and 2010, the total numbers of Chinese students who went abroad to pursue a higher educational level reached 1.9 million. The vast majority of the students go abroad for undergraduate and postgraduate courses and study at their own expense. The rest are either state-funded or employer-funded. During the same period, some 33% of these students returned home. As for the 1.27 million who had not returned, 0.94 million are studying for undergraduate, Masters, PhD or post-doctoral qualifications and some are visiting as scholars in foreign higher education institutions, 0.33 million went on to find jobs or were granted citizenship in their host countries (Chinese Academy of Social Sciences, 2010).

According to Docquier and Rapoport (2009), the highest numbers of foreign PhD graduates in the US are from China (63,153), followed by the UK (24,482) and Canada (19,122). Most of them tend to stay in the U.S. after their graduations. Recent research done by Finn (2010) shows five-year-stay rates for foreign students who received doctorates in science or engineering (S/E) in 2002 from U.S. universities. Of these, students from China have the highest stay rate after receiving their PhD degrees, with 92% of 2,139 Chinese doctorate students who graduated in 2002 still residing in the U.S. in 2007.

The main reasons why PhDs, Master students remain in their host countries are job opportunities and wage differences between the host and home countries. Those who obtained science or engineering doctorates from American universities were among the least likely to return (The New York Times, 2010). Cyranoski et al. (2011) show their latest study in *Nature* that it is much easier for Chinese PhD graduates to find a position in academia in China compared with the United States. This is because China's booming economy and capacity building has absorbed many PhDs into other sectors of the workforce. However, the average salary for a PhD graduate in China working in universities is 6,000 yuan (\$944 or £593) per month, which just covers the average monthly living fees. In contrast, a graduate assistant at Yale might earn \$20,000 a year (\$1,666 per month) for nine months of teaching, and the average pay of full-time professors in America was \$109,000 in 2009—higher than the average for judges and magistrates (The Economist, 2010). Because of these salary differences many Chinese doctorates who graduated in the U.S. or U.K. therefore chose to stay rather than return home. Furthermore, if Chinese PhD graduates want to get a coveted post at a top university or research institution, this will require further training and experience, such as a postdoctoral or research fellow position in another country (Craynoski et al., 2011). As a result, many researchers do not return to China immediately after completing their doctoral degrees, but may subsequently return to China after obtaining further research and teaching experience and building their academic credentials.

This is reinforced by the experience of some students who have gained Masters' degrees abroad and return home only to experience unemployment. Master's students

may also come home with few economic advantages. Some may be the victims of diploma mills and third-rate universities—especially in Great Britain. They will make \$200 a month more than those who did not go aboard. But their families take on \$20,000 or more in debt for one year of overseas study (Zweig, 2010). That is why many Masters students try to take advantage of post-study work schemes to find jobs or to continue their advanced studies after their graduations. Some have applied for permanent residence (indefinite leave) to remain after living in Britain for ten years and became naturalized another year afterwards².

Enticing those who have found jobs or have been granted overseas citizenship back to China is difficult. Once they put down roots in their new countries and especially once they have children, going home often seems a big adjustment (Financial Times, 2009). Most are unable to afford an apartment on account of the high property prices. In recent years, China's house prices have been rising rapidly. In 1999, the average housing price was \$308 per square meter. In 2009, the price hiked up to \$705 per square meter. In major cities such as Beijing and Shanghai, prices are even higher. Taking Beijing for example, the square meter price for apartments in the urban area exceeded \$5,100 in January 2011, more than 10 times the monthly income of an average Beijing resident (CNC, 2011).

Furthermore, re-adjustment can be painful, particularly for those who have spent long periods abroad (Financial Times, 2009). Most students went to foreign countries during their 20s and 30s, which were formative years and in that time, they forged

² www.workpermit.com

large scientific and social relationships. Moreover, air pollution, reverse culture shock, inferior education for children, frustration with excessive bureaucracy and health-care quality are other factors which impede brain circulation (The New York Times, 2010).

1.3.2 Silicon Valley's Immigrant Entrepreneurs

Facilitated by reforms to the visa system for skilled workers, most Chinese students in the USA were able to stay on after graduation and easily found employment in US technology companies, often rising to become technicians and engineers in multinational companies or starting their own successful businesses (Saxenian, 2005). During the 1980s and 1990s, Silicon Valley's immigrant engineers increasingly followed the career paths of native engineers by starting up their own technology businesses. In contrast to traditional immigrant entrepreneurs who are concentrated in the catering trade, these new immigrant entrepreneurs are a growing presence in the most technically competitive sectors of the Silicon Valley (Saxenian, 2000). Indeed, by 1998 Chinese and Indian entrepreneurs were running 24% of Silicon Valley technology companies (Saxenian, 1999). A more recent study reported that 25% of engineering and technology companies founded in the USA between 1995 and 2005 had at least one founder who was foreign born and over half of all Silicon Valley start-ups have at least one immigrant as a key founder. The proportion with Indian or Chinese founders was 28% (Wadhwa et al., 2007).

There is a common belief that most Indian and Chinese entrepreneurs in the United States are graduates of a small cadre of elite institutions in their native countries such

as the Indian Institutes of Technology in India, and Peking and Tsinghua Universities in China. In reality, 91.3% of Indian founders completed their undergraduate degrees in their home countries, as did 35.1% of Chinese. Chinese founders who were educated in China were somewhat more likely to hold degrees from Peking University (20%) or Shanghai Jiao Tong University (15%) than other Chinese universities (Wadhwa et al., 2007).

1.3.2.1 Immigrant Entrepreneurs' Professional Networks in Silicon Valley

There is a wide range of social mores and associations in Silicon Valley for these immigrant entrepreneurs to rely on in order to further their own entrepreneurial opportunities. Seeing themselves as outsiders to the mainstream technology community, Silicon Valley's immigrant engineers have created local social and professional networks to mobilize the information, knowhow and capital required to create their own technology firms. This is reflected in a proliferation of ethnic professional associations organized by Silicon Valley's Chinese and Indian immigrant engineers, including Silicon Valley Indian Professionals Association (SIPA), the Indus Entrepreneur (TiE), Chinese Institute of Engineers (CIE/USA), Asian American Manufacturers Association (AAMA), and Hua Yuan Science and Technology Association (HYSTA) (Saxenian, 2000). These ethnic organisations fuse together traditional immigrant culture with modern high-technology practices: they create both ethnicity and facilitate the professional networking and information exchange that aid success in the highly mobile Silicon Valley economy (Saxenian, 2000). For instance, Saxenian (2000, p. 11) states, "*each company, provides new immigrants with a source of business contacts and networking opportunities in their*

field: they serve as important sources of recruitment. They also provide role models of successful immigrant entrepreneurs and managers. These associations organize talks and conferences that provide forums for sharing specialized networking as well as basic sessions for budding entrepreneurs. In addition to providing sessions on business management, how to write a business plan or manage a business, some of these Chinese associations give seminars on English communication, negotiation skills and stress management". Many of these associations have become important forums for cross-generational investment and mentoring as well. An older generation of successful immigrant engineers and entrepreneurs in both the Chinese and the Indian communities now plays an active role in financing and mentoring younger generations of co-ethnic entrepreneurs. Individuals within these networks often invest individually or jointly in promising new ventures, acting as "angel" investors who are more available to immigrants than the mainstream venture capitalists. These angels are also willing to invest smaller amounts of money (Saxenian, 2000). Saxenian (2000) concludes that the most successful immigrant entrepreneurs in Silicon Valley today are those who have both utilized ethnic resources while at the same time integrating into American technology and business networks.

1.3.3 Incentives for Attracting Talent Returning to China

In recent years, China's technology policy has been characterised by a clear aim to strengthen its domestic innovation capacity (independent innovation) to reduce current dependence on foreign companies in the national innovation system (Schwaag-Serger & Widman, 2005). The Chinese government realises the important role that overseas academics and entrepreneurs play in R&D and innovation. In order

to attract this talent back to China, local governments have instituted a series of preferential policies including tax breaks for new firms, subsidized housing, tax-free imports of cars and computers, schooling for children of returnees, employment for spouses, and long-term residence permits (Zweig, 2006). Provincial governments in China also try to lure returnees who are engaged in the high technology area through the construction of “returning student venture parks”. There are 56 science parks in China designed to offer the benefits of state-of-the-art infrastructure and the synergies that come with mixing companies of varying size and also R&D with manufacturing (Ernst & Young, 2010). Beijing Zhongguancun (ZGC) Science Park is one of the country’s largest science parks. It has more than 10% of all Chinese patents filed, and has been involved in developing and patenting cleantech products (Ernst & Young, 2010). ZGC Park is adopting “reverse brain-drain” policy by attracting Chinese returnees to establish their start-ups businesses in one of the 23 “Overseas Student Venture Parks” in ZGC. By 2005, there were around 6,000 Chinese returnees working in these parks (Wright et al., 2007). The Chinese government has launched the “Thousand Person Plan”, aimed at recruit two thousands of Chinese scholars under 55 with doctorates from foreign universities in science, engineering and enterprises. These scholars can receive compensation equal to their salaries abroad, and significant amounts of research funding that often exceed what they may receive abroad (The New York Times, 2010). Furthermore, the “National 863 Programme”, the “National Climbing Projects” or the “Spring Light Programme” (*Chun hui ji hua*) offers considerable amounts of finance for returning scientists to support research and infrastructure development. Part of the target group is Chinese graduates from US universities (Naiker & Arcangelis, 2008). Under the

“Spring Light Programme”, for example, between 1996 and May 2003, the Chinese Government helped over 7,000 individuals and over 50 groups of overseas mainlanders come back to boost the economy (*Wei guo fu wu*). (See Figure 1 for a case study). In 2002 alone, the Ministry of Education awarded 14 projects under this program to seven universities for a total of 670,000RMB (Zweig & Fung, 2005).

However, Innovative entrepreneurs are disappointed at the lack of start-up capital in China, and their homeland’s weak protections for intellectual property (Harvard Gazette, 2010). The banks in China prefer to provide loans to state-owned enterprises, because these young high-tech companies lack tangible assets as collateral. Even though they are more favoured by venture capital and business angel investors, researchers suggest that the protection of intellectual property rights is important for venture capital process (Silverman, 1989; Acemoglu & Johnson, 2005). For example, technology companies continue to notice Chinese government agencies downloading software updates for programmes they have never bought, at least not legally. No wonder China has become the world’s second-largest market for computer hardware sales—but is only the eighth-largest for software sales (The New York Times, 2011). For years, Chinese officials have promised to improve their protection of intellectual property. But the infringement of copyrights, patents and trade secrets has, in many instances, got worse (The New York Times, 2010). Therefore, intellectual property theft might not encourage venture capitalists from investing in R&D intensive companies especially in software industry.

Figure 1 Professor Returns Home

When Ding Hong quit his post as a physics professor at Boston College last summer to return to work in China, it caused quite a stir among his peers. And after 18 years living in the United States, he said even he was surprised by his decision. "Most of the faculty was shocked," Ding said. "People thought that staying in the US was good for my career. But I wanted to contribute to basic science research going on in China." The 40-year-old academic is among the first batch of top-class minds lured back to China as part of its 1,000-Talents Scheme, launched to help with the nation's transition from a manufacturing hub to a world leader in innovation. Ding is now the principal investigator on two major projects at the Institute of Physics for the Chinese Academy of Sciences (CAS) in Beijing. He said: "The beam line projects I am working on now will be top quality and are ahead of the US by at least two years. China can now compete for the world's top talents, and the government has offered tremendous support" (Wang, 2009).

The package to entice workers includes a 1-million-yuan (\$147,000) relocation allowance, while the implementation of unprecedented policies means foreign experts receive the same treatment as natural citizens. Projects are also given sufficient funding and "talents" are able to spend as little as six months in China, explained Ding. "The package must be very attractive if they want to convince an established scientist or researcher to give up their tenure," he added. "But the policies to provide international schools for their children have been very practical".

Source: Wang, (2009) China Fishing in Pool of Global Talent, China Daily, April 16.

1.4 NEW ARGONAUTS

In the late 1990s and early 2000s, a new migration flow has emerged as many of these US-educated immigrants with expertise in engineering and science and business have returned to their countries of origin, perhaps 20 to 30 years after leaving home, turning what was a “brain drain” into a “brain circulation” (Saxenian, 2002). Saxenian (2006), an American economic geographer, terms the New Argonauts³ as return migrants⁴. *Argonauts* originate in ancient Greek mythology—the Greeks who sailed with Jason on the Argos in search of the Golden Fleece. The *New Argonauts* are those foreign born, technically skilled entrepreneurs who travel back and forth between Silicon Valley and their home countries—seeking their fortune in distant lands by launching companies far from established centers of skill and technology (Saxenian, 2006).

Actually, the return migration trend started in the 1980s with Taiwanese and Korean immigrants and has been replicated more recently by Indian and Chinese. For example, over 1.9 million Chinese went abroad to study between 1978 and 2010, of which some 33% have returned home (Tung, 2008; China Academy of Social Science, 2010), largely since the mid-1990s, with the main flow since 2001 (Saxenian, 2006). This reflects several factors. First, it has been a response to the pull of increasing economic and professional opportunities at home as a result of rapid

³ In Chinese, returnees from overseas are often called “*Hai Gui*”, which means “returnees from overseas”; or a homonym that sounds exactly like “*Sea Turtles*”. Others refer to such circulatory migrants individuals as “astronauts”.

⁴ In this thesis, I use the terms New Argonauts, return migrants, returnee entrepreneurs interchangeably.

economic growth which has created a growing demand for their skills. Added to this is a sense that they could “make more of a difference” at home. Wadhwa et al. (2007) report evidence of professional advancement amongst returnees into more senior roles compared with their position in the USA. Second, is the feeling amongst many ethnic minority professionals of always being an outsider in the USA, with glass ceilings that limit their promotional opportunities. For example, foreign-born engineers in US companies are more likely to work in research and development rather than occupying the top management positions. Third, it reflects aggressive efforts by China to attract back talented members of their ethnic Diaspora (Wu, 2007a), for example through the construction of “returning student venture parks” as discussed already in section 1.3.3.

These highly educated return migrants make a significant contribution to the development of entrepreneurial and innovation capabilities in their home countries through the acquisition, transfer, adaptation and creation of knowledge (Altenburg et al., 2008). This has been achieved in four ways. First, they have applied the skills and knowledge that they have acquired through their work and entrepreneurial experiences in the USA, along with their professional networks, to create significant technology businesses to identify promising business opportunities, raise capital, build management teams, develop production capabilities and establish partnerships with leading firms in global production networks (Altenburg et al., 2008; Yeung, 2009b). Second, and more generally, their access to international knowledge pools via the communication and information exchanges that occur through their professional and social ties to Silicon Valley (often achieved via ethnic professional

networks) has accelerated local learning about new sources of skills, technology, capital and potential collaborators. According to Saxenian (2006, p. 4) “*communities of US educated immigrant engineers now routinely transfer up-to-date information and know-how to help their home economies participate in the IT revolution.*” Third, by working in association with policy makers anxious to promote technology-led economic growth they have sought to transform the local entrepreneurial environment by advising on the need for legal, regulatory and capital market reforms to eliminate bureaucratic and other obstacles which, in turn, deepen local capabilities (Saxenian, 2006). Fourth, they have transferred first-hand knowledge of the entrepreneurial eco-system and the institutions needed to support indigenous economic development. The activities of the New Argonauts have, simultaneously, benefited the U.S. businesses, and, in turn, the U.S. economy, by opening up markets and identifying manufacturing options and technical skills in their home countries (Hsu & Saxenian, 2000; Coe et al., 2007; Saxenian & Sabel, 2008).

1.4.1 The New Argonauts Phenomenon: A Critique

Some researchers (Sorenson & Audia, 2000; Sorenson & Stuart, 2001; Chen, 2006; Obukhova, 2009) argue that highly skilled migrants’ contribution to international development is mitigated by their ability to transfer skills and social resources from firms in a mature industry cluster to firms in an emerging industry cluster. Because these two environments are sufficiently different, skills and resources appropriate in one environment may not be appropriate in another environment. In investigation of the semiconductor design industry cluster in Shanghai, Obukhova (2009) observes that some skills and social resources from a mature industry cluster are inappropriate

in an emerging industry cluster, and therefore it is suggested that Chinese return migrants need to create new locally appropriate skills and resources. Similarly, because foreign-born highly-skilled migrants lack locally appropriate skills and resources, firms with foreign-born migrants are at a distinct disadvantage in the new environment – China. To overcome this constraint, Obukhova (2009) asserts that firms with multiple native-born highly skilled migrants in top management enjoy a survival advantage compared to other types of firms. Storper (2007, p. 116) believes that the New Argonauts study has a sample bias as Saxenian only focuses on Chinese, Indian, Taiwanese and Israeli immigrant entrepreneurs working mainly in the Information Technology sector in Silicon Valley. No account was taken of the other nationalities or other sectors of the computer software industry who may also have been working in Silicon Valley or in other areas of the United States. It could be stated that this concentration on this one sector in this location has missed the opportunity to study other examples of New Argonauts working in the United States. Moreover, Saxenian's study was carried out before 2006 and many of the cases are not up to date and therefore maybe no longer relevant, for example, Ying Wu, founder of UTStarcom and James Ding, founder of AsiaInfo had moved on from being returnee entrepreneurs to being venture capitalists. In June 2007, Ying Wu had left UTStarcom and co-founded CTC Capital since October 2007. James Ding has been general partner of GSR Ventures since June 2005.

1.5 RESEARCH RATIONALE

There is a wealth of empirical evidence documenting the role of New Argonauts as entrepreneurs (Saxenian, 2006; Wright et al., 2008; Wang & Zweig, 2009). However,

New Argonauts who have become venture capitalists after returning to China have been ignored. Although the role played by New Argonauts in developing venture capital in their home countries is recognised (Saxenian, 2005; Saxenian and Sabel, 2008; Wang & Zweig, 2009), the empirical evidence is very sketchy and detached from the venture capital process itself, with the emphasis on the role of New Argonauts in advising government on capital market reform rather than as active investors themselves. It has also been ignored in the subsequent discussion of the New Argonauts concept.

The aims of this study are therefore to extend Saxenian's New Argonaut concept by examining the role New Argonauts play as venture capitalists in the context of China. Specifically, the aims of the thesis are as follows: first, to examine the role of New Argonaut venture capitalists in the development of China's venture capital industry; second, to examine how New Argonauts use their transnational networks in their role as venture capitalists, notably in fund raising, investment focus, deal sourcing, deal evaluation, co-investments, value-added contributions to their portfolio companies and exit strategies; and third, to assess the impact of their investments on China's economic development.

1.6 ORGANISATION OF THE THESIS

Highly skilled workers especially those engaged in IT, science and engineering are the core competence for China's burgeoning economic productivity. Many countries, especially developing countries are attracting native graduates back from the U.S. and other OECD countries. Brain drain is thus replaced by brain circulation. China, for instance, had attracted back at least one third of its immigrants to the OECD

countries, thanks to a combination of recent restrictive policy of student visas in the United States, China's booming economy, and the local government incentives. These returnee entrepreneurs—New Argonauts—have become venture capitalists by realizing the investment opportunities in the context of China. This study examines the role of New Argonauts in the development of China's venture capital industry and how New Argonauts use their transnational networks in their role as venture capitalists. This chapter discusses the phenomenon of brain drain, brain circulation and New Argonauts, using China as a case study.

The remainder of this thesis is organised as follows. Chapter 2 and Chapter 3 review the venture capital literature. The first part of Chapter 2 reviews the definition of venture capital, the different types and sources of venture capital funding, the economic significance of venture capital and globalisation trends in venture capital. The second part of Chapter 2 focuses on venture capital activity in China, with the explanations of the history and recent development, current structure, and problems of venture capital in the context of Chinese market. Chapter 3 focuses on the agency theory, venture capital investment process, and the theory of transnationalism. Subsequently, the review develops seven testable propositions in order to address, to what extent, the transnational networks affect each step of the investment process, that is, fund raising, investment focus, sourcing deals, deal evaluation, co-investments, adding value and exit to their investments. Chapter 4 describes the research methodology and elaborates the data collection methods. Semi-structured in-depth interviews and case studies of the qualitative research method are employed in this thesis. Chapters 5, 6 and 7 present the findings of the fieldwork. Chapter 5

portrays the profile of the New Argonaut venture capitalists including their personal characteristics, their career, their reasons for returning to China and reasons for becoming venture capitalists. It also identifies different types of New Argonaut venture capitalists based on their educational and career backgrounds. Chapter 6 elaborates how New Argonauts venture capitalists operate their firms by using their transnational networks, for example, how they raise funds, how they co-fund with other investors, and their investment focus, deal flow, and terms and conditions when investing etc. Five propositions are strongly supported and two are partially supported. Chapter 7 illustrates the role and the contributions of New Argonaut venture capitalists in the development of venture capital in China. Four case studies are presented. Chapter 8 concludes with a discussion of key findings, the contributions and the limitations of the study.

CHAPTER 2

VENTURE CAPITAL

2.1 INTRODUCTION

The focus of this study is on those returnee migrants who have become venture capitalists when returning to China, it is therefore essential to review the literature of venture capital theory. Start-up firms that are seeking to grow rapidly are likely to require substantial capital. A firm's founder may not have sufficient funds to finance these projects alone, and therefore must seek outside financing entrepreneurial firms that are characterized by significant intangible assets, that expect years of negative earnings, and that have uncertain prospects, are unlikely to receive bank loans or other debt financing (Gompers & Lerner, 2010). One potential source of finance for such entrepreneurial firms is venture capital which is provided by investors who are motivated to help the company to grow in order to maximize shareholder value and investment returns (Cumming et al., 2007). Venture capital firms are professional, institutional managers of risk capital who support the most innovative and promising companies (NVCA, 2010). They are small professional financial services organizations (usually employing less than 30 persons in total) which function primarily to: (1) assess business opportunities; (2) provide capital; and (3) actively engage, monitor, advice and assist the firms in its portfolio (Kenney et al., 2008). They protect the value of their equity stakes by undertaking careful due diligence before making the investments and retaining powerful oversight rights afterwards (Lerner et al., 2005). In the last four decades, venture capital has played a vital role

in supporting start-ups seeking growth but lack funding, and also fostering high technology. Venture capital has backed many of the world's most successful high-technology companies such as Apple Computer, Cisco Systems, Microsoft, EBay, Google, and Facebook.

This chapter introduces the concept of venture capital and its economic significance. Venture capital originated in the U.S. in the middle of the 1940s and then expanded globally to European and then to emerging markets. This internationalization of venture capital from the US to other countries is elaborated in the following section. The chapter concludes with a discussion of venture capital in China, covering its history, problems, recent trends and current structure.

2.2 VENTURE CAPITAL

2.2.1 What Is Venture Capital?

Mason (2006a, p. 357) defines venture capital as *“finance that is provided on a medium-to long-term basis in exchange for an equity stake. Investors will share in the upside, obtaining their returns in the form of a capital gain on the value of the shares at a ‘liquidity event’, which normally involves a stock marketing listing, the acquisition of the company by another company or the sale the shares to another investor, but will lose their investment if the business fails”*.

Two key aspects in the definition need to be emphasized. First, investors can expect low or negative returns in the early years of a fund's life, due to the small amount of capital actually invested at the outset combined with the customary establishment

costs, management fees and running expenses. As portfolio firms mature and exits occur, the fund will begin to distribute proceeds (EVCA, 2009). This will generally take three to seven years depending on the industries invested in (it could take ten years to receive returns from the biotechnology industry). Second, the objective of venture capital is to achieve a high return on the investment in the form of capital gains through an exit achieved by the sale of equity stake rather than through dividend income. Exit is typically achieved either through an initial public offering (IPO), Merger & Acquisition (M&A), share sale and clearance. IPO involves the flotation of the company on a stock market where its shares can be traded freely. It is considered to be the most favoured type of exit because it produces the highest returns for entrepreneurs and venture capitalists (Mason & Harrison, 1999; Guo, 2008). Although investors have hopes of high returns for every company that they fund, according to the latest NVCA report (2010), only one in every six goes public and one in three is acquired. The remainder generate negative returns.

The distinctive features of venture capital are: first, venture capital firms are selective, targeting companies with exceptional growth potential (BVCA, 2009). Second, venture capitalists invest mostly untested, innovative ideas that entail high risks, therefore, venture capitalists are driven by the expectation that the start-ups invested in could give them a higher rate of return than other firms (Bambha & Hetamsaria, 2007). Third, venture capitalists provide not only money but also a continuing relationship with their investees, involving an active value-adding and monitoring role (Jeng & Wells, 2000) that requires specialist skills (Black & Gilson, 1998).

2.2.2 Different Types of Venture Capital Funding

There are substantial differences across countries in the definition of venture capital. The terms “venture capital” and “private equity” are often interchangeable, which is a confusing and misleading practice. Venture capital needs to be distinguished from private equity. Private equity includes buyout (MBO), buy-in (MBI), merger, acquisition, late stage, turnaround, and many other types. The main characteristic of these types of deals is that they involve functioning companies that have left the initial growth phase and often represent financial engineering and changes of control as opposed to an investment designed to develop an initial product and take it to market. Additionally, private equity investments do not as often have IPOs as their main exit strategy (Aizenman & Kendall, 2008). Indeed, some PE investments are “public to private” which involves taking a publicly listed company private. Venture capital is, strictly speaking, a subset of private equity and refers to equity investment made for the launch, early development, or expansion of a business (EVCA, 2007). Apart from the US, which has a separate market for MBO/MBIs and which does not usually classify buyouts as venture capital, other statistics for venture capital do so, particularly in Europe (Baygan & Freudenberg, 2000). In the context of this study, venture capital refers to the funding specialising in making investment to seed, start-up, early and expansion stages:

- Seed. The initial concept of a business is being formed. Models of the company’s products are being researched, planned and developed.
- Start-up. Funds are needed for product development and initial marketing. The company has been in business for a short time, but has not yet sold its product commercially. Start-up can be the riskiest investment stage, since funding

requirements may be fairly large, yet the business has no track record. Depending on the industry, this stage may vary from six months up to four or five years.

- Expansion. Financing is needed for the growth and expansion of a company which has built up a short track-record. Capital may be used to finance increased production capacity, market or product development and/or to provide additional working capital.

Early stage financings—seed and start-up—have a higher failure rate than do investments at later stages, but as a compensation successful investments at the early stage yield higher returns (O’Shea, 1995; Megginson, 2004). For example, venture capitalists in the US typically demand compound annual investment returns (IRRs) in excess of 50% on start-up investments, but are often willing to accept returns of 20-30% per year on later-stage deals, since the risk of investment is far lower in more established portfolio companies (Megginson, 2004).

2.2.3 Source of Venture Capital Funding

Venture capital funding is supplied by several sources, notably, business angels, limited partner venture capital, captive venture capital, corporate venture capital, and government venture capital.

- ***Business Angels***

Business angels are less known by the public compared to venture capital because business angels tend to keep their privacy (Mason, 2006b). Mason (2006b, p. 363) defines business angels as *high-net-worth individuals who invest their own money*

directly in unquoted companies in which they have no family connection in the hope of financial gain and typically play a hands-on role in the businesses in which they invest.

This definition emphasizes several aspects. First, having wealth is a prerequisite for becoming a business angel. Business angels invest upwards of £10,000 (\$15,000) per deal (sometimes in excess of £100,000 or \$150,000) and typically have a portfolio of between two and five investments. However, because this is high risk most business angels will only allocate between 5% and 15% of their overall investment portfolio to such investments. Second, the majority of business angels are successful cashed-out entrepreneurs, while the remainder either have senior experience in large businesses or have specialist professional expertise (Mason, 2006b). Business angels are attracted to business proposals where they can apply their knowledge, skills and experience thus bringing value added benefits to the firms (Kelly, 2007). Third, business angels are active investors in unquoted companies, playing a hands-on role in supporting their growth. Fourth, business angels are investing for a financial return, although psychic income is also important for them (Wetzel, 1983; Mason, 2006b). Fourth, Business angels invest in close geographical proximity to their home—Harrison et al. (2010) report that 54% of investments in the same county and a further 17% were in an adjacent county.

Business angels tend to invest earlier in smaller amounts and in more businesses than venture capital funds (Van Osnabrugge & Robinson, 2000). Business Angels syndicates have emerged because of the equity gap—between £250,000 and £2m+

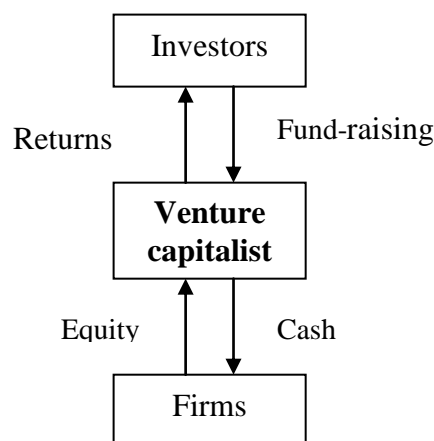
range in the UK and the \$500,000 and \$5 million range in the US, which covers amounts that are too large for typical ‘3F’ money (founder, family, friends) but too small for most venture capital funds. Indeed, business angel syndicates are increasingly the only source for this amount of venture capital in this range (Mason, 2006b). Moreover, individual angels have found advantages in working together, notably better deal flow, superior evaluation and due diligence of investment opportunities, and the ability to make more and bigger investments, as well as social attractions (Mason, 2006b).

- *Limited Partner Venture Capital*

The limited partnership is the classic US venture structure (Figure 2). Investors, known as limited partners—institutions such as pension funds, insurance companies, banks, university endowments, foundations, corporations and wealthy individuals—subscribe to a fixed-life fund run by a venture capital firm, the general partner (Campbell, 2003). The investors monitor the fund’s progress and attend annual meetings, but they cannot become involved in the fund’s day-to-day management if they are to retain limited liability (Gompers & Lerner, 2004). Despite restrictions on their managerial rights, limited partners are almost always permitted to vote on key issues such as amendment of the limited partnership agreement, dissolution of the partnership before the termination date, extension of the fund’s life, removal of any general partner, and valuation of the portfolio (Sahlman, 1990). Typically a two-thirds majority of limited-partnership votes is required to effect change.

As a general partner, the venture capital firm is responsible for: seeking out investment opportunities and negotiating the terms and conditions; monitoring the performance of the portfolio companies and providing additional funding and expertise as these private firms develop; finding an attractive exit opportunity, preferably through an IPO or a merger, that will allow the fund to liquidate its investment in the portfolio companies; and distributing the realised cash returns from exit to the limited partners and then terminating the fund's existence. For its services, the general partner usually receives a percentage claim called "carried interest" on the realised return (almost always 20%) as well as an annual management fee of about 2% of the fund's total committed capital (Megginson, 2004). However, this partnership presents the problem, namely that once the funds have been raised, the limited partners must have very limited recourse to these funds. One way to accomplish this for the limited partners is to insist on terms and conditions that limit the general partner's ability to behave opportunistically (Gompers & Lerner, 2004).

Figure 2 Overview of the Limited Partner Venture Capital Funding



Source: Gompers & Lerner, 2004

The venture capital limited partnership is different from many other organizational structures because it is designed to be self-liquidating. The lifespan of a fund is around 7-10 years. The limited life imposes a healthy discipline on general partners. They have to deliver results in a certain period of time. The limited term also forces general partners in limited partnerships to raise funds continuously (Fenn et al., 1995). General partners typically manage several funds and they are likely to be raising a new fund every 2 or 3 years. Failure to satisfy previous clients will lead to floundering in future fund-raising. The heavy burden of fund-raising can serve as a screening mechanism to deter incompetent venture capitalists from entering the market.

- *Captive Venture Capital*

Captive venture capital firms are owned by financial institutions—commercial banks, insurance companies, securities firms, or investment banks. Captive venture capital are considered attractive by commercial and investment banks not only for their potential investment return, but additionally for the future banking fees that may be earned by selling additional services (for example advisory services, capital raising and arranging fees) to the portfolio companies (O’Shea, 1995; Cumming et al., 2007). Captive venture capital has been particularly prevalent in continental Europe, although these teams are today increasingly seeking independence. Captive venture capital firms invest entirely using the balance sheet of their parent; semi-captives raise some third party funds from other institutional investors, to supplement balance sheet funds. This is often as a prelude to going fully independent (Campbell, 2003). Captive venture capitalists are structured in a more bureaucratic way with

specific corporate objectives given that they are located within a different ownership structure (for example publicly traded corporations). The captive venture capital division provides venture capitalists with little autonomy and the organizations are much less stable. Goals may be unclear, conflict, and include the potential negative effects of limiting entrepreneurial company growth to protect the competitive position of the corporation (Cumming et al., 2007).

- *Corporate venture capital*

Corporate venture capital (CVC) can be defined as a larger company taking a direct minority stake in a smaller, unquoted company for strategic, financial or social responsibility reasons. Intel, Microsoft, General Electric are good examples of CVC. The main motivation of these large companies to engage in CVC is the strategic synergies to be gained between portfolio investment and core activities. Strategic benefits are related to nurturing candidates for acquisitions, tracking disruptive or threatening technologies, fostering strategic alliances with suppliers or customers, influencing the early development of new technology standards and exploring diversification ideas (Aernoudt & Jose, 2003).

McNally (1997) notes that corporate venture capital investment can take two main forms: externally (indirect) managed investment and internally managed (direct) investment. Externally (indirect) managed investment involves a non-financial company investing as a limited partner in an independent venture capital fund which is usually closed and managed by experienced venture capitalists. Internally managed (direct) investment takes the form of investments in individual independent ventures

being selected and managed by the corporation itself. It can be divided into two forms: corporate managed venture capital fund and ad hoc/one-off investments (McNally, 1997).

Corporate venture capital investments may be made via a separate subsidiary or an in-house operating division. For the large firm, external strategies may provide not only financial gains associated with equity investment, but also numerous strategic benefits such as windows on new technology and markets.

For the smaller company, CVC can provide a much needed source of external equity capital, as well as tangible and intangible strategic advantages arising from the nurturing that is often provided by corporate investors. CVC has the potential to be particularly valuable for technology-based firms and the venture capital funds that specialise in investing in such companies, both of which experience difficulties raising finance from more conventional sources (McNally, 1997).

CVC focuses on corporate strategic objective while other venture capital vehicles typically have investment return or financial objectives as their primary goal (Kann, 2001). However, CVC can bring in some inherent risks. For the start-up company, integrating a corporate investor may make it more difficult for the investor's competitors to become customers or partners. There is also a risk that corporate investors might exploit the start-up's know-how without giving the promised input (Maula & Murray, 2001), although patent rights could help to reduce this danger (Kann, 2001).

- *Government venture capital*

In most countries, governments have created investment vehicles to fill what are perceived to be gaps in the supply of venture capital that results in funding difficulties for particular types of company. Government venture capital funds are often driven by policy objectives associated with welfare outcomes to enhance the market structure, improve financing options to younger firms, increasing employment, foster innovation and support economic growth (Kortum & Lerner, 2000). Murray (2007) suggests two ways government may intervene in nurturing technology start-ups. The first is direct intervention, that is, government as venture capitalists. Government-run venture capital firm undertakes all the selection, due diligence, governance and nurturing duties incumbent on an early-stage risk capital investor. The state simultaneously plays both the roles of general and limited partner. However, there is a question as to whether government has appropriate personnel capable of carrying out such commercially sophisticated activities as equity investment in early-stage firms (Murray, 2007). The second way is indirect intervention (or hybrid funds) (Murray, 2007). Private venture capital firms act as government agents. This is often based on the assumption that the state has neither the professional skills nor the experience to be a “direct” risk capital investor. Alternatively, government can delegate executive responsibility to a private venture capitalist fund manager, and the position of the state becomes analogous to that of a limited partner in a traditional limited liability partnership. For example, the USA, the UK, Australia, New Zealand, and Germany have each used private venture capital firms to invest on behalf of government in areas of new enterprise deemed important for policy reasons (Murray, 2007).

2.3 THE ECONOMIC CONTRIBUTION OF VENTURE CAPITAL

In the 21st century, the importance of venture capital for the funding of new high-growth potential firms is universally recognised (Kenney et al., 2004). Many of the multinational firms, including Apple, AMD, Cisco, Federal Express, Amazon, Intel, Oracle, Sun Microsystems, YouTube, Google, Twitter, PayPal, LinkedIn, and Facebook were first funded by venture capitalists.

In general, venture capital plays a vital role in economic development, wealth and job creation, and innovation (Gompers & Lerner, 2001). For example, over the period of the last three decades, American venture capitalists invested \$456 billion in 27,000 companies in all 50 states. Venture-backed companies, including superstars such as Microsoft, Apple, Google, and Starbucks, accounted for 12.1 million jobs and \$2.9 trillion in revenue between 1970 and 2008, venture-backed company revenue accounts for 21% of gross domestic product in the U.S. (NVCA, 2010).

However, how exactly has venture capital shaped the economic landscape? Gompers and Lerner (2001) look at how the venture financing progress influences economic activity in America in terms of four aspects: individual firms; the larger economy including job creation, revenues, and earning across numerous industries; innovation and geographic regions.

At the firm level, venture capital investment exerts a major importance on an individual company's performance. Venture capitalists play a critical role in the creation of public companies and dramatically influence their future growth and

development. Firms backed by venture capitalists grow more quickly and reach the public market sooner than similar non-venture firms (Gompers & Lerner, 2001; Peneder, 2010), because venture capital firms are highly selective in the types of firms that they will invest in. In particular, they seek to invest in companies where they can generate a large return on their investments in under 10 years time through an IPO or selling their portfolio companies to a corporate buyer. Venture capitalists thus invest in management teams that are able to set up high growth businesses which have a strong competitive advantage, where rapid expansion has significant payoffs, and which operate in markets that already have sizable sales (Bhid é 2007). Furthermore, venture-backed companies continue to outperform non-venture companies long after they go public (Gompers & Lerner, 2001). This, in turn is linked to the fact that venture-backed firms are more innovative than their non-venture-supported counterparts. Kortum and Lerner (2000) examined the influence of venture capital on patented inventions in the United States across twenty industries over three decades. They found that venture capital investments in an industry are associated with significantly higher patenting rates than regular R&D by almost a 7 to 1 ratio.

At the economy level, the venture capital revolution served as the driving force behind the transformation of the U.S. economy in the late twentieth century. Venture-funded firms that had gone public make up over 20% of the total number of public firms in existence in the U.S. And of the total market value of public firms (\$8.25 trillion), venture-backed companies came in at \$2.7 trillion—over 32%. Also, venture-funded firms made up over 11% and 12%, respectively, of total sales and

profits of all U.S. public firms at the time. Furthermore, those public firms supported by venture funding employed 5.6% of the total public-company workforce—most of these jobs are high-salary, skilled positions in the technology sector. Moreover, venture investing not only fuels a substantial fraction of the U.S. economy, it also strengthens particular industries such as biotechnology, computer-services, industrial-services, and semiconductor industries. Venture capital has helped precipitate changes in these industries, providing the resources for entrepreneurs to generate substantial return from their ideas (Gompers & Lerner, 2001).

However, the benefits of venture capital tend to be concentrated geographically. A large proportion of US venture capital firms are located in Silicon Valley/San Francisco, the region with a dense cluster of technology-based enterprises, venture capital groups began to emerge during the late 1950s and early 1960s. The first venture capital firm in California—Draper, Gaither and Andersen—was founded in 1958, and the late 1950s became a seminal period witnessing the establishment of more than a dozen venture capital firms in the Silicon Valley and San Francisco area (Florida & Kenney, 1988). In contrast to the venture capital firms in financial centres, venture capital firms in Silicon Valley/San Francisco have typically been started by successful technology entrepreneurs and raised a lot of their funding from local high net worth individuals (particularly wealthy cashed-out entrepreneurs) (Mason, 2007). In the USA, venture capital offices are also concentrated in Boston. This area was perhaps the first region to show some degree of organized venture capital. Boston was also the home of the first venture capital company—American Research and Development (ARD) in 1946 in the US (Landstrom, 2007). In general,

the effects of the geographical clustering of venture capital investments contribute to uneven regional economic development. In the case of Silicon Valley, proximity to abundant sources of venture capital enables firms to raise finance at a younger age, compete for more funding rounds and raise more money at each round. This translates into better performance: faster growth, profitability, greater employment and a high likelihood of achieving an IPO (Zhang, 2006).

2.4 THE GLOBALISATION TRENDS IN VENTURE CAPITAL

2.4.1 The Origins of The Venture Capital Industry in The US

The venture capital industry originated in 1946 with the formation of American Research and Development (ARD), the first public corporation to specialise in investing in the illiquid securities of early-stage companies. The idea was to create a closed-end investment fund which would use its investments to transform some of the technology research at the Massachusetts Institute of Technology (MIT) into viable commercial enterprise. ARD raised \$3.5 million for this purpose through an initial public offering (IPO) of its stock (O'Shea, 1995).

The second milestone in the creation of the US venture capital industry was the 1958 passage of the Small Business Investment Company Act, which led to the creation of Small Business Investment Companies (SBICs) to finance small businesses. SBICs are privately organised corporations or partnerships. The 1958 Act provided SBICs with tax advantages and a favourable-rate government loan. Within four years of passage of the SBIC Act, 585 SBICs were licensed, and they provided a major supply of venture capital funding. However, the industry soon had problems. These

stemmed from unrealistic expectations, excessive government regulations, inexperienced management, and insufficient private capital. By 1966-1967, 232 SBICs were classified as having problems. While many exited the industry, the better funded and better managed SBICs nonetheless survived their problems and were responsible for much of the expansion of the venture capital industry in the late 1960s (O'Shea, 1995).

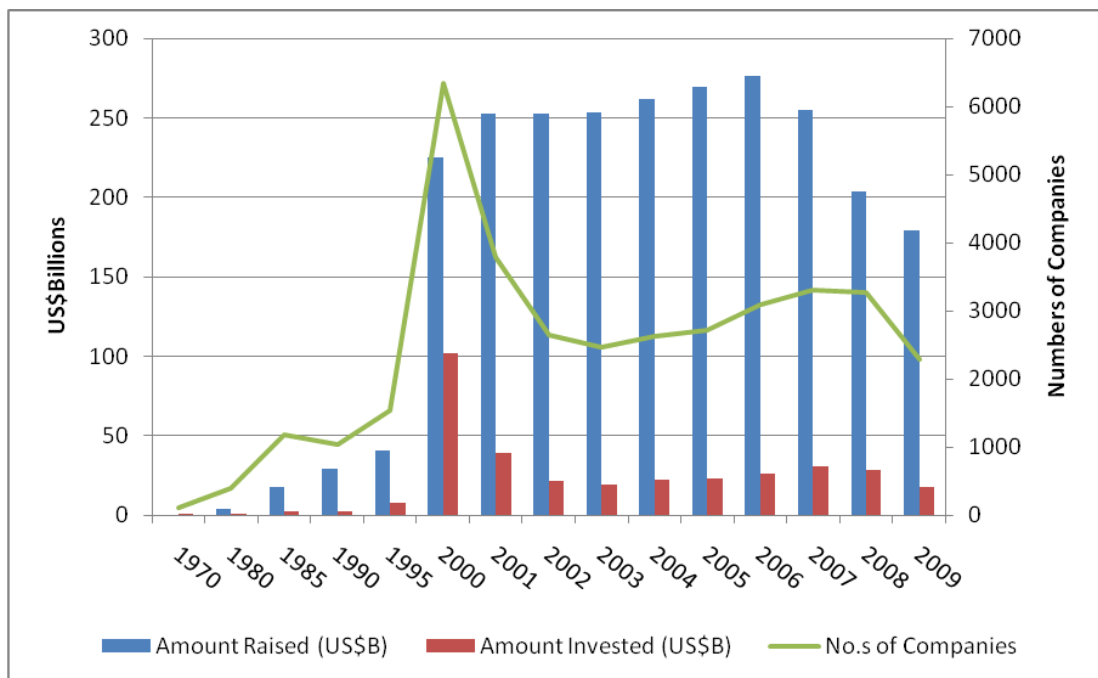
2.4.2 American Venture Capital Industry During the 1970s -2010s

Early venture capital successes led to an industry boom in the late 1960s and early 1970s, generally in the form of limited partnerships (O'Shea, 1995). Then, activity in the venture industry increased dramatically in late 1970s and early 1980s. In 1979, the U.S. Department of Labour allowed pension fund managers to invest in high-risk assets, including venture capital. Eight years later, when more than \$4 billion was invested, pension funds accounted for more than half of all contributions (Gompers & Lerner, 2001). The market increased from approximately 200 venture capital firms and a pool of venture capital of US\$2.9 billion in 1979 to almost 700 firms and a pool of more than US\$30 billion in 1989 (Timmons & Sapienza,1992). Technological improvements have also accelerated the development of the venture capital industry. The increasing use of personal computers in research and business and the development of biotechnology attracted much attention from investors. Venture capital backed high-technology companies such as Fed-Ex, Apple Computer and Genetech went on to IPO with great success (Guo, 2008).

After its period of growth in the US venture capital industry, the industry during the 1980s and 1990s became cyclical (Landstrom, 2007). In the mid-1980s, the returns on venture capital funds started to decrease, due to over-investment in various industries and the entry of inexperienced venture capitalists, investors became disappointed with these lower returns and their investment in venture capital. The end of the 1980s was therefore characterized by a decline in venture capital investing, and the number of venture capital firms fell (Landstrom, 2007). This pattern reversed dramatically in the 1990s, which saw rapid growth in venture fundraising. The explosion of activity in the market for initial public offerings and the exit of many inexperienced venture capitalists led to increasing venture capital returns which attracted investors back to the industry (Gompers and Lerner, 2001). However, venture capital industry was heavily concentrated in a few geographical areas in the US and could be regarded as fairly limited—the total investment made by venture capitalists never exceeded \$8 billion until 1996. In the year 2000, the total investment spending reached a \$101.8 billion (Figure 3), and the average investment was about \$18 million per company. The dot.com crash resulted in a major downturn in technology sectors such as telecommunications, software, computers and electronics (Ernst and Young, 2009). This led to a further sharp fall in venture capital industry and investment did not recover until 2007 to \$30.6 billion. However, the financial crisis in 2008 caused by the collapse of real estate markets, poor lending practices, a lack of adequate risk management in the use of derivative financial instruments, and debt being overleveraged by both business and consumers (Ernst and Young, 2009), has impacted significantly on venture capital investment in 2009. Based on the 2010 NVCA yearbook, venture capital under management in the United

States by the end of 2009 decreased 11.9% from the 2008 level, and more than 35% from its reported peak in 2006. Total venture investment decreased 37% in dollars in 2009 and 30% in number of deals from 2008. The total decrease in venture investment was from \$28.1 billion to \$17.7 billion. While the timing of this most recent drop in industry size followed global economic concerns in mid-2008, the downward resizing of the industry continues to be influenced by the technology bubble bursting in 2000 (NVCA, 2010).

Figure 3 Venture Capital Investment in The US 1970-2009



Source: The MoneyTree Report by PricewaterhouseCoopers and the National Venture Capital Association (2010), based on data from Thomson Reuters.

2.4.3 The Internationalisation of Venture Capital

Prior to the early 1990s, venture capital was primarily a US-only phenomenon. The globalization of IT activities induced the US venture capital industry to mature, and to start exporting its unique skills as venture capital fund managers. The dot.com bubble in the late 1990s and an oversupply of American domestic venture capital funds which went offshore in the search of deal flow, have also driven the internationalization of the venture capital activity (Aizenman & Kendall, 2008).

Venture capital may allocate finance beyond national boundaries into countries where entrepreneurship, innovation, growth prospects and expected returns are highest. Government policies designed to foster the demand side, notably creativity and entrepreneurship, may be conducive to attracting foreign venture capital (Baygan & Freudenberg, 2000). Countries with a supply of skilled labour, deeper financial markets (especially stock markets, which facilitate exit from venture investments via IPO), (Aizenman & Kendall, 2008), and technological know-how as well as a risk-taking entrepreneurial culture are better positioned to attract venture capital flows in the face of rising international competition. However, a dynamic economic infrastructure is necessary but not sufficient. The legal and institutional settings, as well as the fiscal environment, continue to be limiting factors in attracting international venture capital in some OECD countries (OECD, 2004).

International venture capital grew initially through the internationalization of US venture capital firms, crossing to the U.K. and Western Europe, and to Japan (Wright et al, 2005). As developed markets such as the U.S. are becoming saturated, many

developing countries have undertaken radical regulatory reforms, making them more conducive investment destinations as venture capital firms perceive increased demand for investment opportunities (Gompers and Lerner, 1998). Venture capital markets in Singapore, Taiwan and Hong Kong have become well established while significant growth has occurred in other Asian countries notably India, and China (Wright et al., 2005). Venture capital is also emerging as an important growth engine in the transition of the former centrally planned economies of central and Eastern Europe, especially in countries such as Hungary and Poland. Venture capital has been growing rapidly in China in recent years.

Since 2005, foreign venture capital funds, mainly from the U.S., have entered the fast-growing emerging markets of China and India. In 2000, cross-border deals in China represented a small amount of the top 20 countries for US cross-border investment, with Europe and Canada garnering the lion's share. In contrast in 2007, China attracted almost half (46%) of all early-stage venture investments by US venture capital firms (Dow Jones Venture Source, 2009). By 2010 China had moved into third place of total investment and investment deals after the U.S. and Europe. In Russia over the last few years well-known corporate investors and venture capital funds-such as Intel Capital, Index Ventures, Benchmark Capital, and Cisco Systems-have made important new investors (Ernst and Young, 2009). Vietnam, Brazil, South America and other emerging markets are seeing increasing venture capital investments as well, mainly from local investors, but early-stage investment is still largely absent (Ernst & Young, 2009). Table 1 indicates that the U.S. is the country which received the largest amount of investment - \$23.3 (72%) billion in 2009.

Europe made up 15% of the investment worldwide. Investment in mainland China rises to 6%, this is followed by Israel (3%) Canada (2%), and India (2%) (Dow Jones Venture Source, 2010). The top five countries in Europe in 2009 were: the United Kingdom (19.6%), France (13.1%), Germany (11.4%), Italy (6.6%) and Belgium (4.8%).

Table 1the World View Top 6 Countries (based on investment) (US\$billion)

Country Ranking	2007	2008	2009	1H2010
1. USA	30.3	28.1	23.3	12.41
2. Europe	6.6	7.41	4.937	2.56
3. China	2.5	4.265	1.895	1.335
4. Israel	1.5	2.075	0.851	0.694
5. Canada	0.823	0.710	0.501	0.31
6. India	0.862	1.069	0.630	0.510
Total	42.58	44	32.3	17.8

Sources: Ernst & Young, 2008; 2009; 2010; Dow Jones VentureSource, 2009;2010.

2.5 THE VC MODEL IN EUROPE AND IN EMERGING MARKETS DEVIATING FROM THE US VC MODEL

The growth of venture capital in other regions of the world does not necessarily follow the U.S. model. Deviations can be found in terms of fund organisation and source of funding, investment stages, and deal structure.

2.5.1 Fund Organisation and Source of Funding

In the U.S., venture capital firms primarily take the form of independent limited partnerships which now control over 75% of total industry resources in the U.S. These limited partnerships have risen to dominance largely because they can focus

totally on the financing and development of portfolio companies as stand-alone ventures (unlike corporate and financial venture capital funds that must balance the corporate parent) and because the limited partnership has the advantages of limited life and limited liability for investors, as well as tax advantages (Megginson, 2004). In the U.S. and the UK firms are usually limited partnerships, whereas in other European countries different organizational structures exist (Landstrom, 2007). In Germany about a quarter of the funds are listed companies. In Japan, all venture capital funds are joint stock companies, often affiliates of banks and securities companies (Mayer et al., 2005).

In the United States, the most important source of funding for venture capitalists has been pension funds, followed by financial institutions, and corporations. Government participation in the US market is very limited (AltAssets, 2009). In Europe, banks were the largest providers of capital in 2009, with 18% of total funds raised, followed by pension funds and fund of funds⁵ with around 14% each. The second largest providers were government agencies 12% and insurance companies 9% (The CityUK, 2010). In the UK, pension funds and fund of funds were the largest investors each with around 18% of the amount raised in 2009. These were followed by banks and insurance companies with 17% and government agencies 6% (The CityUK, 2010). In Israel, the principle source of funding is industrial corporations (typically from the United States). However, in Japan, the most important category of finance among Japanese funds is not the banking sector but instead is from the

⁵ Fund of funds – a fund created to invest in private equity funds. Typically, individual investors and relatively small institutional investors participate in a fund of funds to diversify their investments (NVCA, 2010).

financial institutions such as securities firms, credit card companies and mortgage institutions and thereafter, followed by banks and insurance companies (Mayer et al., 2005).

2.5.2 Investment Focus

Venture capital in America specialises in making investments in the start-up or early and expansion stages. This is also the case in Israel which provides finance primarily to companies in early stage of development (Mayer et al., 2005). On the other hand, European venture capital has been less focused on early stage investments (Landstrom, 2007). Europe is mainly focused on private equity deals. In 2009 management buyouts accounted for 53%. Of the amount invested, growth capital accounted for 30% and venture capital just 17% (EVCA, 2004). Similarly, in Japan, venture capital funds are predominantly directed at companies in late stages of development with very little support for seed and start-up companies (Mayer et al., 2005). In China, the investment stage focuses in expansion stage (55%), followed by late stage (24%) and early stage (21%) (Zero2IPO, 2010).

2.5.3 Deal Structure

The most distinctive feature of venture capital investment contracts in the USA is their extensive reliance on convertible securities (particularly convertible preferred stock) as the investment vehicle of choice. Venture capitalists can exercise effective voting control with common stock only if they purchase a majority of a firm's common shares, and at the same price as other investors. This would be extremely expensive and would place far more of the firm's business risk on the venture group than on the entrepreneur. In contrast, European venture capital investment contracts

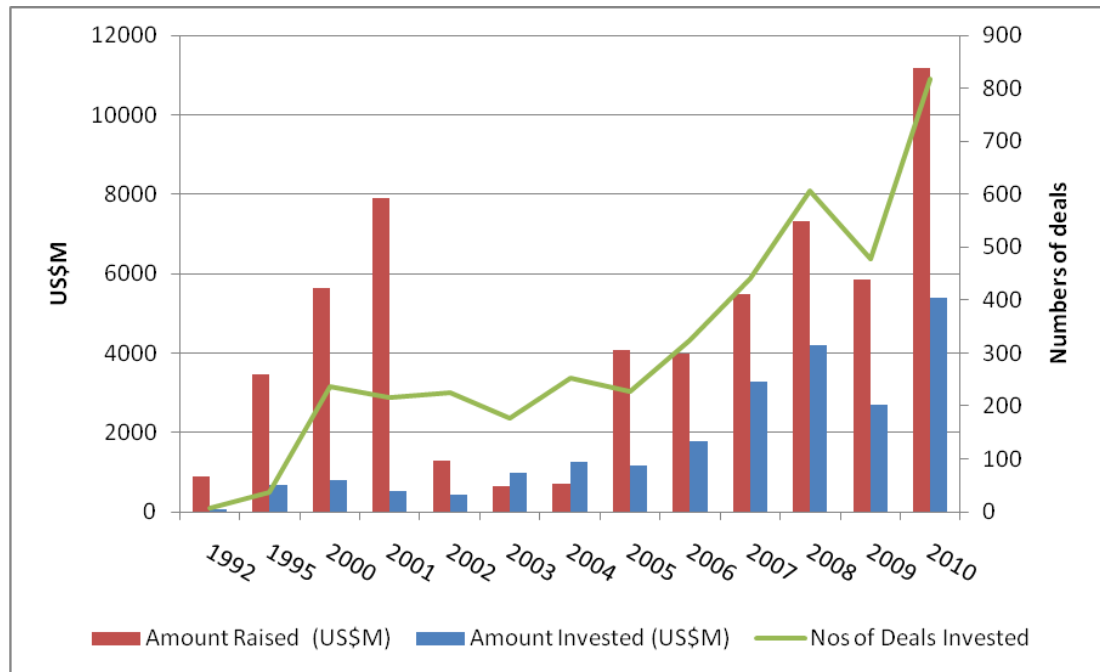
differ significantly from those in America with respect to the type of security used. Over 70% of all European venture capital investment contracts involve purchases only of common stock, with slightly over 20% using convertible equity and less than 5% using either straight or convertible debt (Megginson, 2004). In developing countries, Lerner and Schoar (2005) find that investments in high enforcement common law countries often use convertible preferred shares with covenants. In contrast, in low enforcement and civil law countries, venture capital firms tend to use ordinary shares and debt and rely on equity and board control as a substitute for the lack of contractual protection.

2.6 The Venture Capital Industry in China

2.6.1 History and Development of Venture Capital in China

Venture capital is a new and emerging concept in China. Venture capital is a key component in China's recent reforms to its national innovation system which are focused around the promotion of university-based research and technology transfer (Wu, 2007a). Based on data from Asian Venture Capital Journal (2002) and Zero2IPO Research Centre (2010; 2011), six significant stages of China's venture capital trends can be identified: (1) Incubation stage between 1984 and 2000. (2) Decline stage from 2001 to 2002 because of internet dotcom bubble. (3) Recovery from year 2003 and plateau between 2004 and 2006; (4) Boom from 2007 to 2008; (5) Declining again in 2009 because of the financial crisis worldwide; and (6) recovering again in 2010 (Figure 4).

Figure 4 Venture Capital Investment Trends in China



Source: Asian Venture Capital Journal, 2002; Zero2IPO Research Centre, 2010, 2011

Venture capital was originally established in China in the mid-1980s by the government as a means of developing high-tech industries. However, these efforts were largely unsuccessful. The first fund – China New Technology Venture Investment – was established by the government in 1985 and declared bankrupt in 1997. These failures were attributed to deficiencies in the regulatory framework and a lack of appropriate skills and understanding by the government officials running the funds (Liu et al., 2006; Saxenian, 2006). However, this did not stop local government from setting up their own venture capital firms during the 1990s. Moreover, from the mid-1990s, the public perception of venture capital has shifted from its being a type of government funding, to a commercial activity necessary to support the commercialization of new technology. Increasing reform and opening up the market has created an intrinsic demand for external capital, especially for

companies that are not able to secure bank loans (Lu & Tan, 2012). This has resulted in a significant increase in the number of deals and the amount of investment made. At the end of 2000, the amount of venture capital invested reached an historic peak of US\$806 million, which was invested in 236 deals (Asian Venture Capital Journal, 2002).

In 2001 and 2002 there was a decrease of 30% and 26.4% respectively from the previous year, caused by the internet bubble burst in the U.S. in 2000, and in turn the reduction of international venture capital investment, and the Chinese government's decision to postpone the opening of the second board market⁶. The total amount invested was US\$518 and US\$418 million respectively. Investment activity recovered in 2003 to reach a new peak of US\$ 992 million, a 137% increase from the previous year. The upward trend continued in year 2004, when the total venture capital investment reached US\$1.27 billion (Liu et al., 2006).

Venture capital investment continued to increase year-on-year in China until 2008, which was invested in 607 deals (Zero2IPO, 2010). The rapid growth of venture capital industry is attributed to the numbers of policy measures by the government. These have involved the establishment of further state-led venture capital funds by local governments, universities, and state-owned companies, with government as the

⁶ In November 2001, the China Securities Regulatory Commission (CSRC) officials publicly announced their plans to open the second board market, the potential candidate companies to be listed had already lined up with the investment bankers. Many venture capital firms, especially domestic venture capital firms who had very limited exit choices had high expectations on the opening of the second board. Among the potential candidates, many companies were very good technology companies with great potentials. Given this situation, when the government acknowledged their decision to indefinitely postpone the second board operation, the Chinese domestic venture capital experienced its worst downturn during late 2001 and early 2002 (Liu *et al.*, 2006).

direct or indirect source of capital, the emergence of private domestic venture capital firms, and the growth of foreign venture capital firms which have been attracted by recent improvements in the regulatory regime⁷, an expanding domestic market fuelled by the increasing disposable wealth of China's rapidly expanding middle class, and a wave of successful exits of Chinese venture capital-backed through IPOs on NASDAQ and trade sales (Liu et al., 2006; Ernst & Young, 2007; PwC, 2008). This has resulted in China becoming, in a fairly short period of time, a major market for venture capital, accounting for 5.8% of global venture capital investment activity in 2007 (Ernst & Young, 2008). However, the unexpected global financial crisis in 2008 led to a significant drop of amount investment to US\$2.7 billion in 2009 (Zero2IPO, 2010). A year later, investors regained their confidence, China's venture capital market regained momentum in fundraising, and the amount invested and numbers of deals invested nearly doubled compared with the amounts of the previous year (Zero2IPO, 2011).

2.6.2 Current Structure of Venture Capital in China

China's venture capital industry comprises three distinct types of firm: foreign venture capital firms, domestic venture capital firms, and joint venture capital firms (Liu, 2005). Domestic venture capital firms include government firms, university firms and corporate firms (White et al., 2005).

At the start of the development of venture capital in China, government was the main source of funding for venture capital. Since then, State-owned enterprises, high-net-

⁷ For example, the limited partnership model – which is the dominant way in which venture capital firms are organised in the West – has only recently been permitted.

wealth individuals, mainly from affluent entrepreneurs, have also become important fund providers. At the same time, the rapid economic development in China and the huge opportunities in the venture capital industry attracted many foreign financial institutions including American, European university endowments, pensions, and charity foundations, to invest in Chinese venture capital funds. Indeed, they are the second largest provider of funds. By 2008, among the US\$13.90 billion venture capital under management, 50.6% of the venture capital fund is from the Chinese domestic market (Table 2), and 49.38% is from overseas (Kou et al., 2008).

In the mid-2000s, it was estimated that there were about 250 foreign venture capital and private equity firms in China and a similar number of domestic venture capitalists (Liu et al., 2006). Local venture capitalists believe that foreign venture capital firms represented about eight of the top ten venture investors in China. The numbers of foreign venture capital firms continue their steady increase as venture capital firms continue to move into the China market (Liu et al., 2006).

Table 2 the Percentage of Domestic and Foreign VC Investment in China

Year	Domestic VC (%)	Foreign VCs (%)	Total (%)
2001	50.2%	49.8%	100%
2002	51.1%	49.9%	100%
2003	17.0%	83.0%	100%
2004	37.4%	62.6%	100%
2005	66.10%	33.90%	100%
2006	56.27%	43.73%	100%
2007	44.37%	55.63%	100%
2008	50.62%	49.38%	100%

Source: Zero2IPO, 2004⁸; China VC Research Institute, 2009.

⁸ www.zero2ipo.com.cn

2.6.3 Issues of Venture Capital in China

In spite of these developments there is a strong consensus of opinion that the venture capital system remains a weakness in China's innovation system (Zeng & Wang, 2007). This has been identified in studies of university technology transfer – a key element in China's innovation policies (e.g. Zhou, 2005; Wu, 2007a; 2007b). For example, on the evidence of a detailed study of university-industry links by two universities in Shanghai, Wu (2007a, p. 1089) comments that “the growth of university enterprise, and other local technology firms, is limited by the shortage of venture capital investment (particularly those with a pure focus on technology) in China.” Xiao and Ritchie (2009, p. 259) conclude on the basis of survey evidence that “financial markets and institutions have not developed their capability to support high-tech Small-Medium Enterprises.” Technology start-ups have therefore been forced to rely upon personal and informal sources of funding (Xiao & Ritchie, 2009).

Several factors are responsible for this situation. First, there is a lack of high quality venture capital investors with knowledge of technology, management, marketing, financing and financial management. The managers of domestic funds have little or no investment experience. Indeed, many are former government officials. One study reported that just 4% had prior fund experience (Batjargal & Liu, 2004). Thus, they lack procedures for objectively evaluating projects. They also lack the business experience to justify taking a leading role in the management of their investee companies or to make a value-added contribution (Tan et al., 2008). Meanwhile, they are hampered by the prominent role of the state which is the main source of finance for domestic venture capital funds. This has compromised the incentives for fund

managers to make high-risk investments (Saxenian, 2006; Zeng & Wang, 2007). This, in turn, has encouraged a focus on later-stage investments. Meanwhile, the banks mainly provide finance to state-owned enterprises. As a consequence, private domestic venture capital funds have found it difficult to raise capital from the banks (Liu et al., 2006) – the main source of funds for venture capital funds in the West. Thus, the only authentic venture capitalists in China are foreign (Saxenian, 2006).

However, the regulatory environment in the past has discouraged foreign venture capital funds from investing in China. This has taken two forms. On one hand, international investors have faced a variety of regulatory disadvantages, for example regarding legal structures, preventing the use of the conventional limited partners model, and taxation (Ahlstrom et al., 2007; PwC, 2008). Although many of these rules have been relaxed in recent years, foreign funds continue to face constantly changing government regulations affecting their operations relative to domestic investors. In terms of financial incentives, the enforcement of policies has raised concerns that the Chinese government is skewing the playing field in favour of domestic investors (Financial Times, 2005). On the other hand, weak regulations have exacerbated the information asymmetries that are always present in an investment context, increasing the time required to undertake due diligence and compromising the ability of foreign venture capital funds to follow their normal risk-reducing practices. These include a lack of transparent information, notably in terms of objective financial performance measures—China’s accounting rules significantly deviate from international accounting standards since they are aimed at managing production rather than asset valuation, thus making timely, accurate, or useful

information about firms' financial performance difficult to obtain (Peng, 2000). This is combined with lack of external oversight, creating incentives for the concealment or falsification of information. Appropriate legal frameworks are embryonic at best, property rights are ill-defined and enforcement is weak. Licences and land use rights are further areas of difficulty. This prompted one Silicon Valley commentator to observe that "in many ways, venture capital in China is the wild west" (Hornik, 2008). The strength of regionalism creates additional problems. Laws differ from province to province, there are numerous barriers to trade, including provincial tariffs, and a lack of clarity in authority structures between central, provincial and local governments (Bruton & Ahlstrom, 2003; Saxenian, 2005; Ahlstrom et al., 2007).

Exits are also problematic. China's venture capital sector is threatened by problems ranging from the lack of a suitable domestic stock exchange to curbs on international equity transfers (Ernst & Young, 2008). There are two domestic stock exchanges in China – the Shanghai Stock Exchange and Shenzhen Stock Exchange established in the 1990s. The launching of the two stock markets was designed to finance the restructuring process of large and medium sized state-owned enterprises (SOE) rather than to finance the high-tech and high growth ventures (Lu & Tan, 2012). Furthermore, China Growth Enterprise Market (GEM)⁹, which was officially launched in October 2009 in the southern Chinese town of Shenzhen following 10 years of preparation, is aimed at smaller companies, has been seen as an equivalent to London's AIM market and New York's Nasdaq. However, companies listed on

⁹ It is also called ChiNext, it is a Nasdaq-style market in China.

China GEM are trading at P/E ratios (price-earnings)¹⁰ of up to 80 times, perhaps tempting companies that may not yet be ready to list (China venture capital report, 2010). In fact, at the end of its first day, the GEM soared. 20 of the 28 stocks saw their prices double—some even triple. For example, Chengdu Geeya Technology, a maker of digital TV equipment, up more than 300 per cent. Huayi Brother Media, the film maker soared 148 per cent above its flotation price on 30 October 2009, the first day of GEM launching. The other newly listed companies, ranging from software to robot designers, made similar gains (Financial Times, 2009). Brokers and analysts were concerned about the risks posed by excessive speculation and inflated stock prices. They commented, “*it shows the immaturity of the Chinese market. Everybody is out for a quick profit, without considering the actual worth of the company. The risk is that all the money will go into the GEM board*” (Financial Times, 2009).

In addition, cultural differences create difficulties in doing due diligence and establishing post-investment relationships, further exacerbating the information asymmetries between venture capitalists and investors. This makes the selection process more difficult and time-consuming and adds to the time, effort and cost of monitoring because of the emphasis on building relationships with entrepreneurs. The concept of *guanxi* - interconnections between people that can be traded upon –

¹⁰ A valuation ratio of a company's current share price compared to its per-share earnings. Calculated as: $\frac{\text{Market Value per Share}}{\text{Earnings per Share (EPS)}}$

For example, if a company is currently trading at \$43 a share and earnings over the last 12 months were \$1.95 per share, the P/E ratio for the stock would be 22.05 ($\$43/\1.95).

play a central role in Chinese business practices (Batjargal & Liu, 2004). For example, the Chinese are more likely to rely on *guanxi* mechanisms and channels to protect their interests than on contractual covenants (which may be difficult to enforce because of weak regulations). In a venture capital context, investors need *guanxi* to reduce their investment risks and increase their ability to support their investee firms and to be able to judge the *guanxi* capital of the firms that they might invest in and the entrepreneurs that they might support (Bruton & Ahlstrom, 2003; Batjarjal & Liu, 2004).¹¹ The importance of ‘losing face’ and ‘respect’ in Chinese culture and the avoidance of conflict creates difficulties for the value-added process (Bruton et al., 2004). In addition, there is a lack of intermediaries to perform support services such as legal, accounting and consulting (Pukthuanthong & Walker, 2007). The implication for Western venture capitalists entering the Chinese market is that they need to adapt to local market conditions rather than replicate domestic practices by combining “skills honed in the West with knowledge acquired in China” (Bruton & Ahlstrom, 2003, p. 255). For this reason foreign venture capital firms have typically sought out local partners to establish joint venture arrangements (PwC, 2008).

Compounding all of this are demand-side problems. There has been no start-up culture in China until recently and an absence of seasoned entrepreneurs apart from some returnee New Argonauts. There is a major shortfall in talented management executives with international experience. Chinese business executives have been

¹¹ Some early entrants into the Chinese market made the mistake of thinking that *Guanxi* relationships with Chinese government officials would be particularly important, for example in gaining licences or orders. However, as Ahlstrom et al (2007) note, this is not a sustainable advantage for a business: *guanxi* retire, get promoted, get thrown in jail.

trained to function in a culture of bureaucracy and Party connections and not the dynamic environment of technology start-ups (Hornik, 2008). The venture capital industry in China is a very young industry. The preferred, and most common, source of funding is from informal sources (Xiao & Ritchie, 2009). Entrepreneurs therefore lack experience of how to develop a viable business plan. They lack understanding of markets or management experience, and so they frequently adopt the model of the traditional Chinese family firm with husband and wife running the business rather than the professionally managed enterprise (which leads to struggles over ownership and control of the business) (Saxenian, 2006). Moreover entrepreneurs do not understand the value that an investor can bring (Ernst & Young, 2007). Another issue is that the entrepreneurs hope to get higher valuations while the investors exercise valuation discipline. This results in a large number of deals being at a stalemate (Ernst & Young, 2009). This is confirmed in a recent survey of Chinese high tech entrepreneurs which concluded that they lack motivation to pursue new opportunities, are less inclined to seek to grow their business and reluctant to engage in joint ventures, such as raising equity investment (Xiao & Ritchie, 2009).

Not surprisingly, this environment has resulted in a lot of poor quality investments being made which, in turn, has depressed returns (Bruton & Ahlstrom, 2003; Ahlstrom et al., 2007; Ernst & Young, 2007). Saxenian (2006, p. 238) observes that China's domestic venture capital funds have invested in thousands of high technology entrepreneurs, but "these investments have generated minimal revenues to date." Foreign investors have made a lot of poor investments on account of a

combination of their lack of familiarity with the Chinese context, increased competition for investments and low quality deals (Ernst & Young, 2008).

2.7 CONCLUSION

Although the venture capital industry has been overwhelmingly concentrated in USA and Europe, it is now becoming a global phenomenon, with significant growth, albeit from a low base, in emerging markets China, India and Brazil in particular.

To date China is the second hotbed of investment after the U.S., with investment capital of US\$1,97M in 2009, thanks to its booming economy with large numbers of increasingly wealthy consumers and trained engineers (Kenney, et al., 2008; Ernst & Young, 2010). However, China still faces many challenges such as an unstable regulatory environment, unfavourable tax policies, lack of seasoned venture capitalists and entrepreneurs, difficulty in achieving successful exits and lack of intellectual property laws (Deloitte & NVCA, 2010). Domestic venture capitalists lack investment experience and systematic exposure to the Western venture capital investment process. Foreign investors face many of the challenges such as differences in business culture, lack of local market knowledge and presence and a level of unpredictability in the government's impact on business (Ernst & Young, 2008) when entering to China. Therefore, the role that New Argonauts play as venture capitalists when returning to China is extremely important in terms of their deep understanding of Western capital market and new business models, international practices, and their former entrepreneurial or investment experience. New Argonaut venture capitalists are thus able to bring "virtual" venture capital as in the Western countries back to China.

The next chapter starts with an agency theory, and then explains five stages of venture capital investment process, notably, deal origination, deal evaluation process, deal structure, post-investment relationship and harvesting. The transnational links between Silicon Valley and China are particularly important for New Argonauts to reduce agency costs. The concept of transnationalism is therefore examined to understand their unique human capital assets. The chapter then moves on to consider how they deploy those assets at each stage in the venture capital investment process. As a result, seven propositions are suggested and the research question is raised at the end of chapter 3.

CHAPTER 3

THE VENTURE CAPITAL INVESTMENT PROCESS

3.1 INTRODUCTION

The venture capital industry is characterised as an agency relationship. The centre of agency theory is the relationship in which one party (the principal) delegates work to another party (the agent), who performs that job as defined in a contract (Jensen & Meckling, 1976). Two types of risk may exist for the principal. The first is adverse selection which arises as a result of informational asymmetries: the agent is better informed than the principal about their true level of ability. However, agents may deliberately misrepresent their abilities to the principal (Akerlof, 1970; Eisenhardt, 1989; Mason, 2006a). The second risk is moral hazard. In situations where it is not possible for the principal to observe the behaviour of agents the agent may shirk, engaging in opportunistic behaviour that is not in the interests of the principal or pursue divergent interests that maximise their economic interests rather than those of the principal (Eisenhardt, 1989; Mason, 2006a).

In the context of venture capital investment, there are two sets of agency relationships involved, i.e. the relationship between the venture capitalist and their fund providers (limited partners), and the relationship between the venture capitalist and the entrepreneur. In the “venture capitalist-fund providers” relationship, venture capitalists act as agents who invest the capital on behalf of the ultimate investors whereas the ultimate investors of venture funds act as principals who delegate their authority to venture capitalists (Sahlman, 1990). Venture capitalists have many

opportunities to take advantage of the fund providers and agency problems are exacerbated by the legal structure of the limited partnerships in which limited partners are prevented from playing a role in the management of the venture capital firms (Sahlman, 1990). In order to protect the fund providers, the contracts are designed in such a way that the venture capitalists will not make decisions against the interests of the fund providers. The contract includes: the limitation on the life of the venture capital fund; a compensation system that gives the venture capitalist appropriate incentives, and obvious areas of conflict between the venture capitalist and the limited partner (Sahlman, 1990).

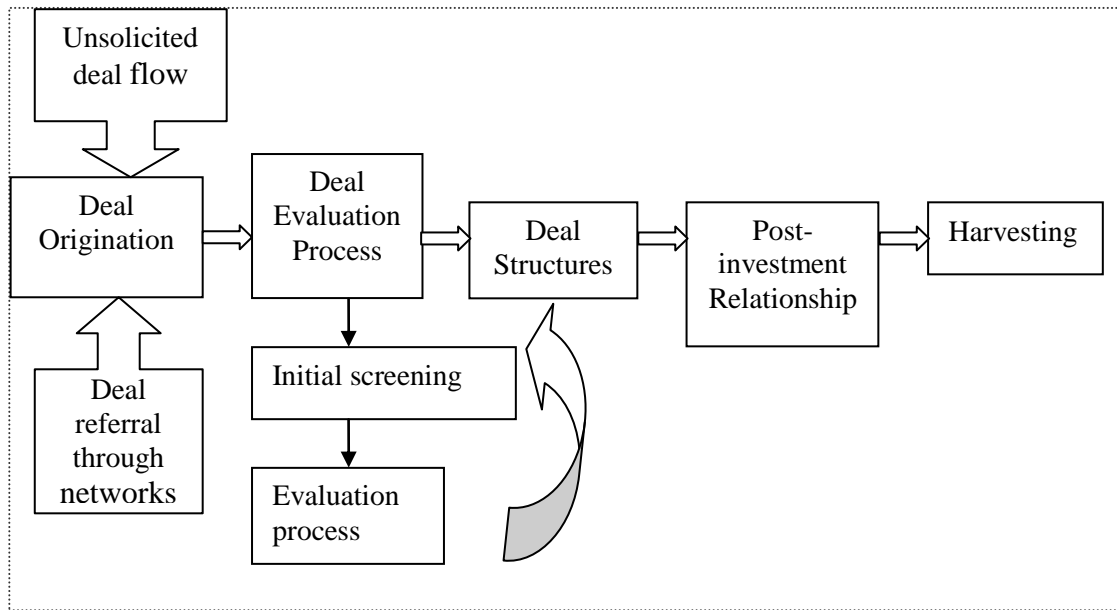
In the “venture capitalist-entrepreneur” relationship, venture capitalists act as principals who provide capital to entrepreneurs, whereas entrepreneurs act as agents who are involved in the daily management of the ventures on behalf of venture capitalists (Eisenhardt, 1989). From the venture capitalist’s perspective, an important question is how to ensure that entrepreneurs do not take actions that jeopardize the venture capitalists’ chances of generating maximum financial returns (De Clercq & Manigart, 2007). For example, once entrepreneurs have received money from the investors, they may alter their behaviour in ways that mislead the investors (De Clercq & Manigart, 2007). Investing in high growth potential firms is associated with serious agency problems due to the severe information asymmetry. When financing an entrepreneurial firm in emerging markets such as China, venture capitalists are not only exposed to market risks and agency problems, but also institutional uncertainties such as weak intellectual property protection and limited legal recourse (Lu et al., 2011). Moreover, opportunistic behavior of managers is more likely in

China due to the high costs of obtaining information for monitoring (Hoskisson et al., 2010). Investors may defer investments in high information asymmetric projects (Lu et al., 2011). This thesis suggests that Chinese New Argonaut venture capitalists are able to reduce informational asymmetries and control agency costs through their transnational networks, pre-investment decision making process, co-investment with foreign venture capital firms, active post-investment oversights and value added activities. As a result, it is important to introduce the concept of transnationalism, and its main elements consisting of transnational community and transnational networks. This chapter first explains the typical venture capital investment process including deal flow, deal evaluation, deal structure, post-investment, co-investment and exit. This is followed by the theoretical construct of transnationalism and seven propositions of how the venture capital investment process model is influenced by New Argonauts' transnational networks. At the end of the chapter, the research question is raised.

3.2 THE VENTURE CAPITAL INVESTMENT PROCESS

Mason (2006a) summarises 5 main stages of venture capital investment process (Figure 5).

Figure 5 the Venture Capital Investment Process



Sources: (Mason & Harrison, 1999; Mason, 2006a).

3.2.1 Deal Origination

For venture capital firms, there are two main sources of investment opportunities. The first source is unsolicited deal flow. Venture capital firms are very visible, being listed in various directories and websites (Mason, 2006a), and many venture firms have their own websites which can be found by on-line search. However, unsolicited deal flow has low acceptance by the venture capitalist. Many early stage companies were characterized with intangible assets and a heavy reliance on R&D, the venture capitalist has only a limited understanding of the quality of its project, and the competence and willingness of the entrepreneur to act in the interest of the other shareholders (Parhankangas, 2007). The high level of risks inherent in early stage venture capital investments can be partly explained by the existence of information

asymmetries between the venture capitalist and the entrepreneur (Chan, 1983; Sahlman, 1990). The second source of deal flow is the personalised network of venture capitalists from intermediaries such as bankers, brokers, lawyers, entrepreneurs, consultants and other venture capital funds (Mason, 2006a). Most venture capitalists focus on investment opportunities that come through their networks of trusted intermediaries rather than unsolicited deal flow. This is because some poor quality deals had already been eliminated or filtered by these intermediaries who know what kinds of deals will be of interest to these venture capitalists (Mason, 2006a).

3.2.2 Deal Evaluation

Newly-established high-technology companies are associated with serious agency problems and uncertainties due to the information asymmetry and high failure rate (Hall, 2002). As a result, venture capitalists employ sophisticated screening criteria as a major mechanism to avoid investing in bad projects. Venture capital funds operate a two-stage evaluation process comprising an initial screening process followed by a detailed evaluation process for those deals that pass the initial screening. The initial screening has two purposes: first, an investor specific-screen to ensure that the investment proposal fits the investment focus of the fund (e.g. industry, location, stage of development, and the deal size) and second, a generic screen is allied to search for features in the proposal that would indicate closer investigation is likely to be worthwhile (Mason, 2006a).

Those deals that pass the initial screening stage will be scrutinised in detail in a process involving the gathering of information from both inside and outside sources, a series of meetings with management, a review of the financial statements, and may also involve interviews with suppliers, customers, key employees, bankers, creditors, other investors and industry experts. Venture capitalists with different objectives emphasize different criteria. For example, a venture capitalist who invests in biotechnology will look at criteria differently (e.g. proprietary protection) than a venture capitalist who invests in retail. Similarly, venture capitalists who focus on early stage deals may place emphasis on the management team—can the entrepreneur execute on the opportunity?—since there is little past history of the venture to evaluate. Later stage venture capitalists can assess the team’s capabilities based upon what the venture has achieved in its earlier stages (Zacharakis and Shepherd, 2007). Though the investment criteria are different, the key evaluation criteria still hold: the entrepreneur, the product, the market size and growth, the business model, returns, and the competition etc. (Fried & Hisrich, 1994; Zacharakis & Shepherd, 2007). It is revealed that “human factors” like the entrepreneurs’ personality and experience, and the capability of the management team are of the utmost importance for venture capitalists when they screen investment projects (MacMillan et al., 1985). Moreover, financial analysis will be undertaken in order to evaluate the business and assess the possible financial return of the investment. This procedure is referred as ‘due diligence’. Though the general objective of this due diligence process is to gain a thorough understanding of all aspects of the business, the focus of investigation may vary from deal to deal (Dixon, 1989). It is not surprising that rejection rates of investments are high because few businesses have

the potential to generate the return that venture capitalists seek (Mason, 2006a). For every 100 business plans that come to a venture capital firm for funding, usually only 10 or so get a serious look, and only one ends up being funded (NVCA, 2010).

Similarly, venture capitalists in China regard the characteristics of the entrepreneurs as the utmost important factor when screening potential business proposals or businesses. Market and financial considerations are also emphasized by venture capitalists in China. However, due to the weak legal and other regulatory problems, venture capitalists in China are more demanding than their peers in the US, they pay more attention to the integrity, persistence, business experience and social network of the entrepreneur. Additionally, venture capitalists in China consider the public policies of local governments as major concerns (Guo, 2008).

3.2.3 Deal Structure

Having made an offer of investment, one possibility for the venture capitalist to reduce the agents' moral hazard problems is by writing appropriate contracts, thereby aligning the interests of the entrepreneur and the venture capitalist (Kaplan & Stromberg, 2003). As a result, venture capitalists structure their investments so they can keep firm control. Sahlman (1990) and Gompers (1997) confirm that venture capitalists enjoy a disproportionately large degree of control. Kaplan and Stromberg (2003) provide a comprehensive description of the basic rights found in venture capital contracts, in which the most important mechanism of reducing the agency cost and uncertainty in venture financing is staging the infusion of capital. Venture capitalists rarely invest all the finance that a company will require to accomplish its

business plan in one go. By staging their investments the venture capitalists preserve the right to abandon a project whose prospects look poor (Sahlman, 1990). Equally it can commit more if the project looks good. Furthermore, they devise compensation schemes that provide venture managers with appropriate incentives. Entrepreneurs who accept venture capital typically take smaller cash salaries than they could earn in the labour market. The shortfall in current income is offset by their stock ownership in the businesses. Common stock and any subsequent stock options received will not pay unless the company creates value and affords an opportunity to convert illiquid holdings to cash. Under these circumstances, the interests of the venture capitalists and entrepreneurs are aligned (Sahlman, 1990). In addition, venture capitalists closely monitor their portfolio companies formally by taking a seat on the Board of Directors of their portfolio companies (Rosenstein et al., 1993), and informally through periodical check-ups of the day-to-day activities and through interim financial reports (Gompers, 1995). Based on Dow Jones VentureSource' study on Venture-Backed Company Boards (2009), more than half of all venture capitalists sit on three to five boards. Respondents including CEOs and venture capitalists in this study agree that four to five is the ideal number of board seats for early-stage companies, and six to seven is ideal seats for later-stage companies. Venture investors are also in control of key decisions such as restructuring the management team and approving any expenditure above a certain limit (Campbell, 2003; Mason, 2006a). Moreover, venture capitalists preserve mechanisms to make their investments liquid (Sahlman, 1990).

Indeed, a key feature of venture capital financing is that they allow venture capitalists to separately allocate cash flow rights, voting rights, board rights, liquidation rights, and other control rights. Research carried out by Kaplan and Stromberg (2003) of 213 venture capital investments in 119 portfolio companies by 14 venture capital firms shows that venture capitalists control roughly 50 per cent of the cash flow rights on average, but have a majority of board seats in only 25 per cent of the investments. Furthermore, they claim that voting rights, board rights, and liquidation rights are allocated so that if the company performs poorly, the venture capitalists obtain full control. As company performance improves, the entrepreneur retains/obtains more control rights. If the company performs very well, the venture capitalists retain their cash flow rights, but relinquish most of their control and liquidation rights through the automatic conversion provision that is present in virtually all the financings (Kaplan and Stromberg, 2003). In addition, it is typical for venture capitalists to include non-compete and vesting provisions that make it more expensive for the entrepreneur to leave the firms, thus mitigating the potential hold-up problem between the entrepreneur and the investor. Vesting provisions are more common in early stage financings where hold-up problems are more likely (Kaplan and Stromberg, 2003).

3.2.4 Post-investment Involvement

It is argued that the venture capitalist may address the problems of asymmetric information not only by intensively scrutinizing firms before their investment decision and structuring their portfolio firms with great care, but also by monitoring their investment portfolios afterwards (Lerner, 1999). In addition to intensive

monitoring, venture capitalists tend to increase the value of their portfolio company through value-adding activities. Entrepreneurs are willing to accept significantly lower valuations and thus face higher dilution when they expect that the venture capitalists will contribute more to the development of their venture, particularly when the venture capitalist has a high reputation (Seppa, 2002). The venture capitalists' reputation can have a positive effect on the entrepreneur because a company backed by a venture capitalist with an outstanding reputation may be more capable of attracting customers, suppliers and highly-talented managers as venture capitalists' performance and experience are associated with a greater likelihood of success (De Clercq & Manigart, 2007). Reputation can also provide the venture capitalist with the ability to raise new funds and certify ventures to third parties (Gompers, 1996). Top tier venture capitalists also generate the highest returns at IPO.

Venture capitalists actively monitor, assist, and even intervene in their investments. The objective of venture capitalists is to leverage their involvement to increase the investee firm's probability of survival and rapid growth (Kenney et al., 2002). Most venture capitalists play an active role in working with their investments. This is the stage in which venture capitalists devote the greatest percentage of their time. Zider (1998) estimates venture capitalists spend 80 hours per year with each portfolio company—equivalent to just two hours per week. Their typical roles are: they help to recruit, train and retain senior level management or key individuals; introduce the firms to potential customers, strategic partners, later-stage financiers, investment bankers and various other contacts. Moreover, venture capitalists may need to help the investee firms to develop overseas markets and international channels, to help

establish tactics and strategy planning, to help the investee companies raise the next round of funding, and to help structure any transactions (e.g. mergers and acquisitions) that the company might take on (Sahlman, 1990).

Hands-on roles in their portfolio firms are variable in terms of geography and venture capitalists' past working experience. In the USA, most venture capitalists have entrepreneurial background, which provide investee firms invaluable advice from an entrepreneurs' perspective. In comparison, European venture capitalists have financial backgrounds. Most are bankers, financial advisers and accountants, therefore their hands-on role is based on financial skills. In Asia, however, venture capitalists must recognise the cultural/cognitive institution of *mian zi*—lose face or respect—in providing advice to the CEO of the funded firms, which is widely recognised to be of far greater importance particularly in Chinese-based cultures (Chen, 2001). As a result, venture capitalists in Asia typically advise managers in ways that allow the 'maintaining of face' and the avoidance of conflict. This can mean that rather than giving an ultimatum, the venture capitalists might put forth certain ideas as suggestions (Bruton et al., 2002).

3.2.5 Syndication/Co-investment

Syndication is a significant feature of venture capital investment. Syndication is common in venture capital investment, especially in 2nd and subsequent funding rounds (Mason, 2006a). In terms of motive, the desire to both *share* and *reduce* risks has been presented as a key driver of syndication. Syndication is a successful strategy to overcome agency problems of information asymmetries (Engel, 2004),

because syndication networks can facilitate the sharing of information, contacts and resources amongst venture capitalists. Another important rationale for venture investment syndication is that it avoids over-committing the fund to a small number of investments in situations where large follow-on funding rounds occur and so enables diversification (Mason, 2006a). Moreover, venture capital firms are able to limit underperformance with their peers. Venture capital firms may also try to be associated with other successful venture capital firms so as to increase the chance of raising new funds successfully (Leleux, 2007).

Additionally, syndication may benefit different stages in the venture capital investment process. Firstly, syndication may improve the evaluation process through improved screening, due diligence, and decision making (Lerner, 1994). Birkinshaw and Hill (2003) support this view that syndication may allow investors to make decisions regarding investments based on multiple judgements by other parties, thereby enhancing the accuracy of screening through the incorporation of greater experience and impartiality into the process. Secondly, it provides the original investor with a second opinion and helps to establish a fair price for the next round (Mason, 2006a). Thirdly, by syndicating, investors are able to bring new expertise, different views (Mason, 2006a), share their specific knowledge and complementary skills, and as a result, add more and different value to the portfolio company (Brander et al., 2002). Lastly, at exit, and more specifically at IPO, syndication may lead to enhanced certification and lower the chance of underpricing of the portfolio company (Stuart et al., 1999).

3.2.6 Harvesting/Exit

The objective of venture capitalists is to maximise the returns of fund rather than seeking for every investment to be successful. Successful exits are critical to ensuring attractive returns for investors and in turn in their ability to raise additional capital (Nahata, 2004). It normally takes three to five years for venture capitalists to make the initial investment to realise their cash (although some investments have taken rather longer) (Campbell, 2003). Venture capital firms regard perhaps three investments in ten being successful, three being failures, and four that remain steady. Their profits come from the successes (Kitchen, 1992). There are three main mechanisms for harvesting the investment: Firstly, a *public offering* (IPO) is where the venture capitalists and other shareholders have the opportunities to sell their shares on the stock market (Mason, 2006a). Venture capitalists' shares in an IPO are subjected to a lock-up period of 180 days, after which they will be liquidated or re-distributed to other partners, with few further restrictions (Dauterive & Fok, 2004). Secondly, a *trade sale* is where the business is sold to another company. This type of exit has the advantage that investors can sell all of their shares immediately and get paid straight away (in cash or shares of the acquiring company) (Mason, 2006a). Thirdly, *secondary purchase* involves the purchase of the venture capitalist's shares by another investor. In other words, there are some venture capital funds that specialise in buying the portfolios of existing venture capital funds rather than making their own individual investment (Mason, 2006a). Regardless, each exit route has a different consequence for both the firm and the entrepreneurs. Investee firms generally favour a public offering. First, IPOs tend to yield a higher return (Gompers & Lerner, 2001). IPOs also enhance venture capitalists' reputation and also result in

a public profile that will facilitate the sale of the company's product and assist in future capital raising efforts (Cumming & Macintosh, 2003). In addition, it preserves the independence of both the firm and the entrepreneurs, providing the firm with continued access to capital. For venture capitalists, a public offering rarely concludes their relationship with the investee firm, as the underwriters can prevent venture capitalists from disposing of all shares at the time of an IPO. In contrast, trade sales or secondary purchases will almost certainly end a venture capitalist's involvement with the investee firm (Rind, 1997). However, an IPO is only possible with the very best performing companies in a venture capital portfolio.

3.3 TRANSNATIONALISM

The transnational venture capital investment possesses many characteristics such as high uncertainty and high risk, because cross-border investments may bring added risks such as political risk, exchange rate risk and high agency costs. The transnational network of New Argonauts is particularly significant in overcoming these risks. Their professional networks and the ease of communication and information exchange within their ethnic professional networks allow Chinese New Argonauts to quickly identify promising new market opportunities, raise capital, build management teams, and establish partnerships with potential collaborators (Saxenian, 2005). Furthermore, Chinese New Argonaut venture capitalists seek to transfer venture capital finance, merit-based advancement, and corporate transparency to economies with traditions of elite privilege, government control and corruption. They also seek to reproduce the team-based firm with minimal hierarchy and horizontal information flows in an environment dominated by family-run

business or state-owned enterprises. (Saxenian, 2005). They also combine elements of the Silicon Valley venture capital eco-system with inherited local institutions and resources. As a result, they are able to mitigate the risks of the agency to the venture capital investment in China. It is therefore essential to explain the theory of transnationalism, and its main elements including transnational communities, transnational networks in much detail. At the end of this chapter, the distinctiveness of transnational entrepreneurs and criticism of transnational entrepreneurship are discussed.

3.3.1 What is Transnationalism?

Basch et al. (1994, p. 7) define transnationalism as “the process by which immigrants forge and sustain multi-stranded social relations that link together their societies or origin and settlement. We call these processes transnationalism to emphasise that many immigrants today build social fields that cross geographic, cultural and political borders. “Transmigrants” are immigrants who develop and maintain multiple relationships—familial, economic, social, organisational, religious, and political—that span borders. An essential element of transnationalism is the multiplicity of involvements that transmigrants sustain in both home and host societies. Faist (2010) agrees that transnationalism refers to migrants’ durable ties across countries, and to the capture not only of communities, but all sorts of social formations, such as transnational active networks, groups and organisations.

In recent years several developments have intensified immigrants’ linkages between home and host countries. Firstly, the sheer growth in temporary and permanent

migration, and the diversity of countries involved, has increased the total numbers of people living outside the country of their birth – hence the scale and scope of transnational linkages has multiplied (Coe et al., 2007). Secondly, technological developments have greatly facilitated the maintenance of strong ties: inexpensive telephone calls, satellite TV, email and text messaging, and even discount airfares, have all enabled relationships to be continued across global space with intensity not previously possible. Thirdly, institutional structures increasingly recognize and even encourage transnational activities—overseas investment by Diasporas is positively encouraged by many governments, and is increasingly backed up with provisions for dual citizenship, absentee voting, and state support to maintain the bonds of overseas citizens. The result is an increasingly dense network of ties based on migration, flows of financial remittances and commodities, and flows of information. In all of these ways, then, transnationalism is a phenomenon that has increased dramatically in both its extent and its intensity in the past couple of decades (Coe et al., 2007). There are two forms of transnational ties that are commonly established by migrants between home and host countries. The first relates to the sending of financial remittances to family members left behind in their home countries. These funds often have significant economic effects on a national scale in the receiving countries, but they may also transform the lives of households who receive them. The second relates to the development of transnational business practices that are rooted in ethnic boundaries and cultural practice (Coe et al., 2007).

3.3.2 Transnational Communities

Return migration is very often a group process instead of an individual process. Migrants draw heavily upon the social ties that they have established during migration. Most of these ties are developed in the host country (Qin, 2011). Transnational communities are comprised of dense networks across political borders created by immigrants in their quest for economic advancement and social recognition. Through these networks, an increasing number of people are able to live dual lives. Participants are often bilingual, move easily between different cultures, frequently maintain homes in two countries, and pursue economic, political and cultural interests that require their presence in both (Portes, 1997). Saxenian (2002) argues that transnational communities have rewritten the concept of international knowledge formation from one of brain drain to a two-way process of brain circulation. In the case of Asian or Asia-origin technologists and entrepreneurs, through their constant movements between different regions of the world, they have formed a transnational community of informal brain networks characterized by certain common social identity and, sometimes, nationalistic sentiments (Yeung, 2009b). For example, a triangle connection between Silicon Valley-Taipei (Hsinchu)-Shanghai originated in Silicon Valley and has been transferred first to Taiwan by overseas Chinese entrepreneurs (emigrated from Taiwan) and then from Taiwan (as well as directly from Silicon Valley) to China. Hsu (2005, p. 661) proposes that the dense social and professional networks foster flows of technology, capital, know-how, and information within the triangle, supporting entrepreneurship in the three regions while also providing the foundation for formal inter-regional business relations such as consortia, joint-ventures, and partnerships. Saxenian

(2002, p. 186) agrees, commenting that “transnational communities provide a significant mechanism for the international diffusion of knowledge and the creation and upgrading of local capabilities...they provide a direct mechanism for transferring the skill and tacit knowledge that can dramatically accelerate technology development in their developing countries.”

3.3.3 Transnational Networks

Salaff et al. (2006) identify four types of immigrant entrepreneur social networks: 1) family entrepreneurship, 2) collegial, organisational and work ties, 3) transnational networks and 4) ethnic community networks. Drawing on a data base of 100 highly educated and skilled Chinese immigrants in Canada, Salaff et al. (2006, p. 6) conclude that the first two networks are rooted in social structures in China and the third network connects the two countries. Participating as an ethnic minority in a foreign country, the fourth network is mainly an immigrant scenario.

The practice of immigrants drawing on business communities from their home country and from the receiving country is referred to as transnational networks. (Salaff et al., 2006). “By and large”, argues Tilly (1990, p. 84), “the effective units of migration were (and are) neither individuals nor households but sets of people linked by acquaintance, kinship, and work experience”. Boyd (1989, p. 641) notes that transnational networks connect migrants across time and space. Once begun, migration flows often become self-sustaining, reflecting the establishment of networks of information, assistance and obligations which develop between migrants in the host society and friends and relatives in the sending area. These networks link

populations in origin and receiving countries and ensure that movements are not necessarily limited in time, unidirectional or permanent.

3.3.3.1 Ethnic Communities

The ethnic community, the timing of migration, the social class of the migrants, and their dialect, or sub-ethnic, backgrounds shape the cohesiveness of the ethnic community (Benton & Gomez, 2000). For example, Chinese immigrants do not form a single Diaspora. They come from diverse dialect groups and places, and even those from the same original area came at different times and represent different cohorts (Wong, 1999). Amponsem (1996, p. 161) argues that ethnic communities co-exist alongside other networks such as national associations, old boys' networks, professional associations, class-based networks, women's clubs and church networks Mitchell (2000, p. 392) comments that networks of ethnicity are relational social and economic ties based on various commonalities shared by a group of people and include some combination of traits such as language, culture, religion, and/or home town origin. The newfound interest in ethnic networks has arisen at least partially as a result of the rapid growth and apparent economic success of the Pacific Rim countries and of transnational movements such as the modern Chinese Diasporas (Mitchell, 2000).

Social embeddedness is the assumption that individual entrepreneurs participate in ethnically specific economic networks that facilitate their business operations (especially in acquiring knowledge, distributing information, recruiting capital and labour, and establishing relations with clients and suppliers) (Rath, 2005; 2007). This would suggest that the proliferation of immigrant enterprises would be mainly the

result of the mobilization of the immigrant entrepreneurs' ethno-social networks. Their social embeddedness enables them to reduce transaction costs by eliminating formal contracts, gaining privileged access to vital economic resources, and providing reliable expectations as to the effects of malfeasance (Rath, 2007).

For example, Silicon Valley's new immigrant entrepreneurs are increasingly building professional and social networks that span national boundaries and facilitate flows of capital, skill, and technology. In doing so, they are creating transnational communities that provide the shared information, contacts, and trust that allow local producers to participate in an increasingly global economy (Portes, 1996). Unlike traditional ethnic entrepreneurs who remain isolated in low wage, low skill industries such as restaurant and newsagents owners, Silicon Valley's new immigrant entrepreneurs are professionals who are active, dynamic and technologically sophisticated. The Chinese engineering communities rely on ethnic strategies to enhance their own entrepreneurial opportunities. Seeing themselves as outsiders to the mainstream technology community, Silicon Valley's immigrant engineers created local social and professional networks to mobilize the information, know-how, skills and capital needed to start technology firms. This is reflected in a proliferation of ethnic professional associations (Saxenian, 2000).

Many of these associations have also become important forums for cross-generational investment and mentoring. Members of an older generation of successful immigrant engineers and entrepreneurs in both the Chinese and the Indian communities now play active roles in financing and mentoring younger generations of co-ethnic entrepreneurs. Individuals within these networks often invest

individually or jointly in promising new ventures, acting as angel investors who are more accessible to immigrants than the mainstream venture capital community and who are also willing to invest smaller amounts of money.

The Hua Yuan Science and Technology Association (HYSTA) is one example. It was founded in the Silicon Valley in 1999 by a group of pioneering Chinese immigrant entrepreneurs. Arriving in the U.S. first as students, they became founders and leaders of billion dollar public companies¹². They hoped to build better connections between China and the U.S., and to help aspiring Chinese professionals become successful entrepreneurs like themselves. Today HYSTA is the leading association for aspiring Chinese professionals and has created a unique network of successful Chinese entrepreneurs and executives. At the same time, it has become the first stop for networking and exchanging business ideas between successful Chinese entrepreneurs and executives in the Silicon Valley and those in China¹³.

3.3.3.2 *Guanxi*

Guanxi is a certain type of social exchange relationship in the everyday social practice and discourse of contemporary Chinese society (Yang, 2002). It is culturally rooted in traditional Chinese ethics and etiquette of interpersonal relations (e.g. the Confucian kinship-oriented society). *Guanxi* can serve as a resource that can be called on when needed but also represents a liability when a favour is owed. When maintained and employed properly, *guanxi* with key individuals both inside and outside one's organization can be used efficiently to create value both for the venture

¹²<http://www.hysta.org>, 2007

¹³<http://www.hysta.org>, 2007

capital firms itself as well as the firm it funds (Tsang, 1998). Another characteristic of *guanxi* networks is that they are driven by unwritten social rules. While business transactions in the West are typically based on carefully worded contracts that are enforceable under a country's laws and regulations, China's legal system provides comparatively little protection if things go sour. As a result, Chinese business partners rely more heavily on the social responsibilities that come with a well-maintained *guanxi* relationship.

In the venture capital context *Guanxi* refers to the interconnections and relationships between venture capitalists and their related network of investors, entrepreneurs, and other venture capitalists (Pukthuanthong & Walker 2007). *Guanxi* networks take time to develop and require a venture capitalist to offer and provide benefits to the parties with which they aim to establish a close relationship (Pukthuanthong & Walker, 2007). With venture capital being one of the youngest and thus least regulated industries, the absence of a basic legal infrastructure to support and regulate a planned investment is particularly problematic. As a result, foreign venture capitalists are particularly well advised to establish a broad *guanxi* network before entering the Chinese market and to continue to maintain it once they have established a presence (Pukthuanthong & Walker, 2007). Fuller (2010) suggests that ethnic Chinese venture capitalists embedded in ethnic Chinese communities and foreign venture capitalists will benefit from quality *guanxi* networks, which are based on the technical expertise of other members of the networks, while Chinese domestic venture capitalists will be hurt by their *guanxi* with the Chinese government. In conclusion, the overseas Chinese Diaspora has created a huge interconnected *guanxi*

and social network. This link is now regarded as an invaluable asset in those countries seeking to establish business ties with the booming Chinese market (Rauch & Trindade, 2002).

3.3.4 The Distinctiveness of Transnational Entrepreneurs

Drori et al. (2007, p. 3) defines transnational entrepreneurs as “individuals that migrate from one country to another, concurrently maintaining business-related linkages with their countries of origin and currently adopted countries and communities. By travelling both physically and virtually, transnational entrepreneurs engage simultaneously in two or more socially embedded environments, allowing them to maintain critical global relations that enhance their ability to creatively and efficiently maximize their resource base” Transnational entrepreneurs promote international trade by taking advantage of globalization and the entrepreneurs’ cosmopolitan way of life, enabling a more timely acquisition of resources required for operating cross-national businesses (Drori et al., 2007). Transnational entrepreneurs are thus defined as social actors who enact networks, ideas, information, and practices for the purpose of seeking business opportunities or maintaining business within dual social fields, which in turn force them to engage in varied strategies of action to promote their entrepreneurial activities (Drori et al., 2009).

There is a common misunderstanding that transnational entrepreneurs lie within the domain of international business and specifically in the subfield of international entrepreneurship (Drori et al., 2009). In their classic article *Toward a Theory of*

International New Ventures, Oviatt and McDougall (1994) define international entrepreneurship as the development of international new ventures or start-ups that, from their initial inception, engage in international business. International new ventures see their operating domain as international from the inception of the firm's operation. However, international business/international entrepreneurship studies are primarily concerned with the formation, entry modes, operations, and the role of transnational corporations (TNCs) and their subsidiaries (Drori et al., 2009; Yeung, 2009a). Furthermore, their initial and subsequent work focuses on the differential strategies employed by international firms versus domestic ones, but they avoid discussions of the individual entrepreneurs who engage in international activities (Wright et al., 2007) as do transnational entrepreneurs. In comparison with international entrepreneurship, the term "transnational entrepreneurship" offers a more precise description of the phenomenon under investigation – entrepreneurs who operate across national boundaries (hence 'transnational') (Yeung, 2004).

Nor is transnational entrepreneurship the same as ethnic entrepreneurship. Ethnic entrepreneurs are those individuals whose group membership is tied to a common cultural heritage or origin and are known to members outside the group as having such traits (Rath & Kloosterman, 2000). Ethnic entrepreneurship is a set of connections and regular patterns of interaction among people sharing common national background or migration experiences (Waldinger et al., 1990).

In contrast, transnational entrepreneurs focus explicitly on the significance and opportunity of cross-border business activities (Portes et al., 2002). More

importantly, transnational entrepreneurs promote international trade by taking advantage of globalization and the entrepreneurs' cosmopolitan way of life, enhanced by cheap travel and the internet, which enable the more timely acquisition of resources required for operating cross-national business (Drori et al., 2009). Moreover, transnational entrepreneurs may occasionally supersede the value of ethnic resources which facilitate their "breaking out" as they operate beyond the boundaries of their ethnic environment, by using either class or national resources to expand business contacts beyond their ethnic group (Yeung, 2002).

Returnee entrepreneurs can be defined as scientists and engineers or students who were trained to study/work in OECD countries, and then returned to their home countries to set up new ventures (Dai & Liu, 2009). Returnee entrepreneurs bring back human, social and technological capital which local entrepreneurs do not possess. They may no longer have direct business interests in the foreign country from which they have returned. However, the international social and human capital they have developed can help facilitate exporting activities by the ventures they establish in their home country (Filatotchev et al., 2009). On the other hand, transnational entrepreneurs address the entrepreneurial processes that are carried out in an international context and are embedded in at least two social and economic arenas (Drori et al., 2009). Thus, there is a slight difference between returnee entrepreneurs and transnational entrepreneurs.

3.4 THE CRITICISM OF TRANSNATIONALISM IN CHINA

When returnee venture capitalists act as entrepreneurs in setting up their venture capital firms, they should be aware that transnationalism may not apply as effectively as they expected. The existing research has shown that the performance of returnee firms is mixed (e.g. Amsden & Chu 2003; Chen, 2006; Obukhova, 2010). The researchers doubt highly skilled migrants are only partially able to transfer their skills and social resources, because the transfer of skills and resources from the mature to the developing economy is costly. Moreover, by comparing that the connection with Silicon Valley between Taiwanese and Chinese returnees (Table 3), Chen claims that Taiwan returnees have strong “transnationalism” with continuous industrial upgrading. In comparison, Chinese returnees have weak transnationalism, because most western trained engineers simply “return home” and do not travel between Silicon Valley and home. In other words, they are returnee entrepreneurs rather than transnational entrepreneurs. Therefore, the Chinese technology transfer is basically one way-from Silicon Valley to China-and not reciprocal two way flows.

Only some very experienced Chinese in Zhongguancun Scientific Park have the accumulated ability to manage their transnational innovation networks. Two barriers have limited transnationalism in China (Chen, 2006). The first barrier is in the length of the transnational history. Taiwan has a longer history by starting 30 years earlier than China in sending students to the U.S. (since the 1960s). The Taiwanese graduates have a much longer history engaging in the technological revolution in the Silicon Valley. Thus these pioneers have already acquired stronger and richer transnational networks when they began to return to Taiwan to build the Hsinchu

technologies in the late 1970s. In contrast, the numbers of Chinese overseas students going to the U.S. reached a peak only after the Tiananmen protest in 1989. Thus, it is no surprise that they form weaker transnational networks when compared to their Taiwanese counterparts (Chen, 2006). The second barrier of transnationalism in China is that China is still in the process of transforming from a planned economy to a market-based economy. During this transition, many important assets (research grants, venture capital, public research labs) are largely controlled by the various levels of government. In contrast, the Taiwanese government has been privatizing public research assets (via spin-offs) and promoting private venture capital since the early 1980s. This contrast means that in order to be successful, the Chinese returnees have to tap into the knowledge assets such as research labs, research grant etc which are mostly institutionalized and controlled by the state, and governmental contracts. Thus, the ability to embed themselves in the local institutions and exploit the institutionalized assets becomes a determining factor of technological development (Chen, 2006).

Table 3 Comparison of Transnational Technology Networks between Taiwanese and Chinese Returnee Entrepreneurs

		Taiwan Hsinchu	China ZGC
Transnational technological networks	Connection with SV	Strong “ transationalism ”, continuous industrial upgrading. History matters. Taiwanese overseas students have a much longer history (since 1970s).	Weak transnationalism , most western trained engineers simply “return home” and do not travel between Silicon Valley and home. Chinese overseas students have a shorter history: since the late 1980s.
	Embeddedness	Taiwanese transnational entrepreneurs are highly embedded in both regions through alumni, professional and industrial networks. Thus, it’s easy for new start-ups to quickly identify promising new market opportunities.	Weak embedded in both regions. Due to relative isolation, Chinese start-ups often do not know how to evaluate their own technological advantage, thus resulting in redundant and repetitive innovation and poorly defined products.
	Relation with SV	The Comparative advantage model: finance and manufacturing strength in Taiwan + engineering and technical skills in the Silicon Valley. Weakness: No domestic market to test their product designed and branded by leading multinationals in the U.S.; but this has improved as more OBM firms are showing up. Strength: Taking full advantage of the comparative advantage of the two regions.	The Dependency model: ZGC depends on technology transfer from Silicon Valley + depends on the state financially + depends on Taiwanese and Korean firms for manufacturing capabilities. Weakness: highly dependent and risky. Focus mainly on “localizing the product” and compete on cost and not on technology. Large firms rely too much on the strength of the domestic distribution channel, and less on technology. This advantage will soon evaporate with the opening up of distribution channels by MNCs. Strength: focus on own IP or own brand name; have a domestic market to test new products; large firms dominate the distribution in non-metropolitan markets.

Source: Chen, 2006, p. 17

3.5 PROPOSITIONS OF TRANSNATIONALISM ON INVESTMENT

This study aims to shed light on those Chinese returnees who have become venture capitalists, a theme that is underplayed by Saxenian (2006) in her account of New Argonauts. Developing countries typically have two major limitations: they are remote from the sources of leading-edge technology and distant from developed markets and the interactions with users that are crucial for innovation. A network of technologists with strong ties to global markets and the linguistic and cultural skill to work in their home country is arguably the best way to overcome these limitations (Saxenian, 2011). As already discussed, venture capital is a critical part of the entrepreneurship infrastructure, providing growing businesses with advice, information, know how, experience and contacts alongside money. The over-arching proposition is that those New Argonauts who have become venture capitalists will use their transnational networks (which are based on strong ties between China and Silicon Valley) to minimize agency problems of information asymmetries and the agents' moral hazard. As a result, they develop an investment style that is effective both in identifying which businesses to back and also in terms of providing value-added support. The specific impacts of the transnational networks of New Argonaut venture capitalists on their investment processes are proposed as following :

Proposition 1 Fund raising: *The networks that Chinese New Argonaut venture capitalists have set up with US investors and business communities enable them to raise funds from the US market.*

Proposition 2 Investment focus: *The networks that Chinese New Argonaut venture capitalists have set up with US investors and business communities provide them knowledge about emerging technology trends, new business models and business developments which inform their investment focus.*

Proposition 3 Deal sourcing: *The networks that Chinese New Argonaut venture capitalists have set up with US investors and business communities, and their frequent travel to and from the U.S. enable them to access a more geographically diverse deal flow.*

Proposition 4 Deal evaluation: *Chinese New Argonaut venture capitalists utilise the networks that they have set up with US investors and business communities especially in Silicon Valley in their evaluation of investment opportunities to avoid investing in bad projects.*

Proposition 5 Co-investment: *The networks that Chinese New Argonaut venture capitalists have set up with US investors and business communities enable them to bring US investors into their deals and to minimize agency costs.*

Proposition 6 Value-added contributions: *The networks that Chinese New Argonaut venture capitalists have set up with US investors and business communities, combined with their own technical and operational experience, enable them to provide value-added activities to their portfolio firms by*

creating relationships between them and international customers, suppliers, strategic partners and highly-talented managers, particularly in Silicon Valley.

Proposition 7 Exit: *The networks that Chinese New Argonaut venture capitalists have set up with US investors and businesses enable them to take their portfolio companies to US markets for their IPOs rather than taking them public on the Chinese stock market.*

Based on the discussions above, the research question has therefore arisen:

In what ways do Chinese New Argonaut venture capitalists use their transnational networks in their venture investment process, such as fund raising, investment focus, deal sourcing, deal evaluation, co-investment, value-added contributions, and exit to minimize agency costs?

3.6 CONCLUSION

The focus of this study is on the role of a particular kind of returnee migrants—New Argonauts—to China who have become venture capitalists. The importance of venture capital to economic development was noted in Chapter 2. It was further noted that China has placed considerable emphasis on its growth, but with mixed success. Saxenian (2002; 2006) has pointed to the transnationalism of the New Argonauts as being a critical resource for such individuals, enabling them to make a significant contribution to economic development. In an entrepreneurial context this

has enabled them to create businesses which have transferred effective knowledge and accelerated technology development in their nations. Much less attention has been paid to those returnees who have become venture capitalists. This chapter has proposed that these individuals will draw upon their transnational networks to reduce agency costs and enhance their effectiveness as investors. Chapters 5, 6 and 7 present empirical evidence for this. In the next chapter the sources of data are discussed.

CHAPTER 4

RESEARCH METHODOLOGY

4.1 INTRODUCTION

Methodologies are perspectives on research; they set out a vision for what research is and how it should be conducted (Potter, 1996). Methodologies comprise the point of view of the researcher or “issues of belief” (Potter, 1996) with regard to how the world is constructed as well as the verification of data collection. Issues of belief present the theoretical stance in which the researcher originates and this in turn influences the data collection procedures employed to aid insight into the phenomenon being studied (Pudliner, 2006). The objectives of this research are threefold: (1) to examine the role played by New Argonauts in developing a venture capital industry in their home countries; (2) to explore how their embedded networks between Silicon Valley and China might influence and shape their investment process, and (3) to assess their economic contributions to China’s economy. Through an extensive review of the literature, the following research question was generated: *In what ways do Chinese New Argonaut venture capitalists use their transnational networks in their venture investment process, such as fund raising, investment focus, deal sourcing, deal evaluation, co-investment, value-added contributions, and exit to minimize agency costs?* This chapter begins with an explanation of the selection of research method, which is inevitably inextricably linked with the aims, purposes, and research questions of the study (Yin, 2003; Maxwell, 2005). In-depth interviews and case studies of qualitative research are chosen as data collection tools. This is followed by the reasons why these two methods were employed. Finally, Nvivo, a

computer assisted software application is used to analyze the primary and descriptive data.

4.2 QUALITATIVE RESEARCH METHODS

Qualitative research, as a research strategy, predominantly emphasizes an inductive approach (Table 4) to the relationship between theory and research, in which the emphasis is placed on the generation of theories (Bryman & Bell, 2007). Qualitative research is multi-method in focus, involving an interpretive, naturalistic approach to its subject matter. This means that qualitative researchers study things in their natural settings, attempting to make sense of, or interpret, phenomena in terms of the meaning people bring to them (Denzin & Lincoln, 1994). By the term “qualitative research” we mean any type of research that produces findings not arrived at by statistical procedures (Strauss & Corbin, 1998). In contrast, quantitative research aims to collect data where the samples are collected in such a way that the opinions, perceptions, or behaviours of the sample can be assumed to be representative of the population from which the same came, and the degree of sampling error can be determined (Bracken, 1996). Quantitative research can be defined as a research design that emphasizes quantification in the collection and analysis of data and it entails a deductive approach to the relationship between theory and research, in which the accent is placed on the testing of theories (Bryman & Bell, 2007).

Table 4 Fundamental Differences between Quantitative and Qualitative

	Quantitative	Qualitative
Principal orientation to the role of theory in relation to research	Deductive; testing of theory	Inductive; generation of theory
Epistemological orientation	Natural science model, in particular positivism	Interpretivism
Ontological orientation	Objectivism	Constructionism

Source: Bryman & Bell, 2007.

Qualitative research methods are a set of data collection and analysis techniques that can be used to provide description, build theory, and to test theory (Van Maanen, 1979). The primary benefits of qualitative research methods are that they allow the researcher to discover new variables and relationships, to reveal and understand complex processes, and to illustrate the influence of the social context (Shah & Corley, 2006). Secondly, unlike the quantitative methods, it is perfectly legitimate to change the questions asked as a consequence of the information gained (Easterby-Smith, 2002). Qualitative research methods mainly employ participant observation, unstructured and semi-structured in-depth interview, field notes and case studies for gathering data. Phenomenological inquiry is inherently qualitative in nature. Cope (2005) claims that there is a connection between phenomenological inquiry and other interpretive, qualitative forms of research. The goal of this study is to gain an in-depth understanding of the returnee venture capitalists' investment process. To achieve this, the empirical research designed from a qualitative perspective would be best. Such an approach to data collection would enable the researcher to gather rich descriptive accounts of investment by providing the respondents with an opportunity to respond to an open-ended question rather than having them respond by choosing a number from a scale on a questionnaire.

4.3 DATA COLLECTION METHODS

Potter (1996) defines data collection methods as distinct from methodologies. He described methods as “tools—techniques of data gathering, techniques of analysis, and techniques of writing” (p.50). Bouchard (1976, p.402) focuses on how to

implement research techniques such as interviews, questionnaires, and observation. He notes, “the key to good research lies not in choosing the right method, but rather in asking the right question and picking the most powerful method for answering that particular question”.

Data collection in this study relied on a mixed method: in-depth interviews, case studies, and archival documents. Qualitative data including interviews and case studies are most appropriate for research where theory is nascent, and the research questions are exploratory (Baker, 2011). 33 returnee venture capitalists and 3 returnee business angels in 28 venture capital firms based in China were interviewed to answer the first and second research sub-questions: first, to build an understanding of the role of New Argonaut venture capitalists in the development of China’s venture capital industry; second, to test seven propositions of the influence of their transnational networks on their investment process, e.g. fund raising, investment focus, deal sourcing, deal evaluation, co-investment, value-added contributions, and exit; secondary data in the form of venture capital firms’ websites, articles in newspapers, media releases were used to provide context in the discussion of the findings and to validate the interview data. This includes the profile of the interviewees (their educational background and previous working experience), the venture capital firms’ histories, and their investment philosophies, general information on their portfolio investments and its status (private or public).

Furthermore, four high profile New Argonaut venture capitalists were chosen as case studies. Two cases including case 1 Feng Deng and case 2 Min Zhu were chosen

from 36 in-depth interviews with the same interview questions, while the other two, case 3 Dr. Hong Chen and case 4 Neil Shen, were composed from the secondary data, because they refused to be interviewed. These case studies answer the second and third sub-questions: to examine how New Argonauts use their transnational networks in their venture capital process; and their significant contributions to the effective venture capital industry in China. The reason these four cases were appropriate to answer these two research questions was their strong ties with U.S. venture investors and business communities, and their global reputation as successful entrepreneurs. They therefore corroborate the proposed relationships on New Argonaut venture capital investment processes and assess their economic contributions to China. The utilization of semi-structured in-depth interviews and case studies is an effective way of increasing both reliability and validity in this qualitative research, because the weaknesses of one set of methodologies are compensated for by the strengths from the other approach. (Lincoln & Guba, 1985; Aldag & Stearns, 1988; Saunders et al., 2003), and it also secures an in-depth understanding of the phenomenon (Denzin & Lincoln, 2003). Therefore, the empirical findings of three research sub-questions are in much more depth and in greater detail.

Two books (Chinese version) on Chinese returnees entitled *Movers on Wall Street* and *Investment Bankers* by Hui Yao Wang (2007) provided considerable detail on the background of each of the case study subjects. Each of the company's web sites was consulted, both Chinese and English language business media (e.g. *Financial Times*, *Red Herring*) were searched, and online searches were undertaken. This included the on-line magazine China Venture (www.chinaventure.com.cn),

Zero2IPO (www.zero2ipo.com.cn), Global Entrepreneurs (www.Gemag.com.cn), Bund Pictures (www.Bundpic.com), web interviews on www.Sina.com.cn, interviews by a commercial TV talk show—Boss Town, and interviewees’ weblogs on www.Chinaventure.com.cn (a portal on China’s VC and PE market).

4.3.1 Phase I—In-Depth Interviews

i) Why Use In-depth Interviews?

In qualitative research, interviews are usually undertaken to involve some form of “conversation with a purpose” (Burgess, 1984, p. 102). The style is conversational, flexible and fluid, and the purpose is achieved through active engagement by interviewer and interviewee around relevant issues, topics and experiences during the interview itself. In-depth interviews include structured interviews, which are prepared questions, unstructured interviews, which are based on rough checklists of topics, and semi-structured interviews, where the questions are generally developed in advance but do not attempt to anticipate replies. In-depth interviews are normally undertaken face-to-face but may also be conducted over the telephone, by email or video link.

Semi-structured interviews were chosen as it allows for the examination of participants’ experience and enables emergent theory generation. “To gather such data, one must undertake in-depth interviews with people who have directly experienced the phenomenon of interest” (Patton, 1990, p. 104). Semi-structured interviews are designed to have a number of interview questions prepared in

advance. However, these prepared questions are designed to be sufficiently open so that the subsequent questions of the interviewer cannot be planned in advance but must be improvised in a careful and theorized way (Wengraf, 2001) in response to the interviewee's answers.

Semi-structured in-depth interviews have several advantages. Firstly, in the context of Asia, it is often necessary when examining China-related business activities to establish a relationship or *guanxi* to obtain a response. This connection may come through a referral. Such a requirement encourages the use of interviews (Bruton & Ahlstrom, 2003). Secondly, interviews are less structured than questionnaires as they allow the spontaneous discussion of problems and solutions and for follow-up questions on a topic with the development of recommendations (Lee, 1999). Burgess (1982, p. 107) agrees: "the interview is ... the opportunity for the researcher to probe deeply to uncover new clues, open up new dimensions of a problem and to secure vivid, accurate inclusive accounts that are based on personal experience". Thirdly, face-to-face interviews give the interviewer an opportunity to read important non-verbal clues from the respondent in the form of body language and silences, to follow up issues more fully, to query discrepancies, and to verify certain answers (Healey & Rawlinson, 1993). Fourthly, the interviews are semi-structured so that the conversation can develop freely according to the answers of the informants, and to allow in-depth inquiry into the nature of the subject issues (Mäkelä & Maula, 2005).

ii) Sample Selection

The New Argonaut venture capitalists at the centre of this research are defined as first generation Chinese, who are well-educated in both their home country and overseas, with higher degrees in science, technology, engineering and mathematics (STEM)-related and other disciplines, and who have worked for global 500 corporations as technicians, engineers, consultants, or senior managers overseas. Some have also founded hi-tech businesses based in Silicon Valley. Having lived abroad for several years, where they have accumulated cultural, linguistic experiences, personal fortunes, and transnational networks, they then returned to China to catch the new wave of business opportunities in its emerging economy. Identifying the differences of venture capital activity between America and China, some of them have set up venture capital firms or joined existing venture capital firms as managing partners or venture partners or as an associate, where they draw upon the Western advanced venture capital concept, their business and technology backgrounds, operating experience and professional networks to conduct their investment in China.

Therefore, the participants need to meet three criteria. First, that he/she was born in China (first generation of migrants) (Saxenian & Sabel, 2008). Second, that he/she went abroad to study and work for at least several years (under one year, the migrants were not able to gain professional and cultural knowledge). Third, that he/she currently works in the venture capital industry.

There are three ways of sample selection: randomly, purposefully and snowballing. Researchers need to have a data base to be able to undertake random or purposeful sampling, which is the systematic research approach. However, there is neither data source nor exclusive list of returnee venture capitalists available. Snowballing was therefore used because it “identifies cases of interest from people who know people who know which cases are information-rich, which are good examples for study, good interview subjects” (Patton, 1990, p. 182). Snowballing also helps with access. It is not easy to get access to these interviewees. Interviewees are co-founders, CEOs and senior managers of venture capital firms or business angels and prefer privacy. So the best way to access them is to through the intermediaries or ‘snowballing’. Therefore, the majority of the samples were chosen from the author’s personal networks or from friends of friends in China. Some participants were chosen purposefully. Patton described a ‘purposeful’ sampling (1990, p. 169) as follows: “the logic and power of purposeful sampling lies in selecting information-rich cases for in depth study. Information-rich cases are those from which one can learn a great deal about issues of central importance to the purpose of the research, thus the term purposeful sampling”. Part of the sample was chosen from the speakers at the 10th China Venture Capital and Private Equity Forum in Shenzhen, China in Spring 2008. These individuals were approached immediately after they had spoken on the forum in order to conduct an interview. The rest of the participants were found randomly.

iii) Gaining Access

A practical problem faced in the study involved gaining access to interview the venture capitalists selected for the study. The original intention was to make initial

contact through a formal email outlining the research and its aims and requesting an interview. However, this did not generate replies. Because of the importance in China of building a personal relationship before conducting a survey, the author decided to go to China to build relationships with participants.

The author collected many venture capitalist business cards during the China Venture Capital Annual Forum in 2005 in Shanghai; additionally, a list of venture capitalists was given to the author on arrival in Beijing in 2008. At the beginning, contact was made with these venture capitalists by emails and their mobiles, most of them never replied the phone calls. Out of 30 emails, only 3 replied, with 2 of them refusing to be interviewed, and the third gave his mobile phone number, but then never answered. Furthermore, most venture capitalists were very busy, and they constantly postponed their appointments. Moreover, respondents were sometimes reluctant to answer the questions which could be sensitive or might expose their company's privacy. For example, one participant was concerned about a few sensitive questions such as "*how much is the amount of capital under management*"? Consequently, the data collected during the first fieldwork in March 2008 are poor. Only 5 respondents from friends' introductions were interviewed (See Table 5, the first field work in Beijing).

The author then flew from Beijing to Shanghai, and through friends' introduction 9 more respondents based in Shanghai were interviewed. Next, on 11th April 2008, the author flew to Shenzhen, a coastal city in southern China, to attend the 10th China Venture Capital and Private Equity Forum. During the first day of the forum, 8

venture capitalists, the attendees of the forum, were randomly chosen and asked if they were willing to be interviewed. They agreed to be interviewed during the coffee break or at the end day of the forum. The following day, three keynote speakers were purposefully chosen, and they were asked a few questions by the author during their questions and answers (Q&A) time. At the same time, they gained an impression of the author. They were then approached again immediately after their speeches, when they were willing to have a chat with the author whom they recognized from the Q & A time.

Table 5 Profiles of Respondents (according to chronicle order of the interviews)

Nos	Names	Sex	Age/ Age range	VC Firms	Positions	Interview Types	Date	Sample selection
March 2008, the first fieldwork, Beijing								
1	Yongping He	M	45-54	Zhongchao Venture Investment	Project Manager	Face-to-face	10/03/08	Snowballing
2	Zhiguang Liang	M	25-34	S&S Capital	Project Manager	Face-to-face	11/03/08	Snowballing
3	Jeff Qian	M	45-54	New Access Capital	Partner	Face-to-face	11/03/08	Snowballing
4	Michael Lee	M	35-44	Sino-Swiss VC Fund	General Manager	Face-to-face	12/03/08	Randomly
5	Steve Lee	M	35-44	Transport Technology System	President& CEO	Face-to-face	18/03/08	Randomly
April 2008, from Beijing flew to Shanghai								
6	Yuxin Zhang	M	35-44	Ouken Capital	Executive President	Face-to-face	01/04/08	Snowballing
7	Yu Qian	F	25-34	Fidelity Asia Ventures	Vice President	Telephone	02/04/08	Snowballing
8	Andrew Qian	M	45-54	New Access Capital	Founder & Managing Director	Face-to-face	04/04/08	Snowballing
9	Haodong Gong	M	45-34	New Access Capital	Partner	Telephone	06/04/08	Snowballing
10	Yang Liu	M	35-44	Nord Engine	Director	Face-to-face	07/04/08	Snowballing
11	Sheng Lu	M	35-44	Chengwei Ventures	Partner	Face-to-face	08/04/08	Snowballing
12	Leon Chen	M	45-54	Fidelity Asia Ventures	Managing Partner	Face-to-face	09/04/08	Snowballing
13	Jack Geng	M	35-44	Actis	Associate	Telephone	09/04/08	Snowballing
14	Joan Tan	F	25-34	New access capital	Vice president	Face-to-face	09/04/08	Snowballing

April 2008, from Shanghai to Shenzhen to attend one VC/PE Forum								
15	Zhikai Gao	M	45-54	Hope Fund	Founder	Telephone	11/04/08	Snowballing
16	Zhixing Zhang	M	35-44	Bode Equity Group	Senior Manager	Face-to-face	11/04/08	Randomly
17	Xuefei Huang	F	25-34	Asset China	Associate	Face-to-face	11/04/08	Randomly
18	Wanshou Li	M	45-54	Shenzhen Capital Group	CEO	Face-to-face	11/04/08	Snowballing
19	Shuxiao Li	M	35-44	Government-supported VC firm	Manager	Face-to-face	11/04/08	Randomly
20	Cong Ning	F	35-44	Orchid Asia	Investment Director	Face-to-face	12/04/08	Randomly
21	David Chen	M	35-44	Asset China	Senior Manager	Face-to-face	12/04/08	Randomly
22	Duane Kang	M	45-54	Qiming Venture Partners	Founder and Managing Director	Face-to-face	12/04/08	Randomly
23	Min Zhu	M	60	Cybonaut company	Founder	Face-to-face	12/04/08	Purposefully
24	Feng Deng	M	45-54	Northern Light VC	Founder	Face-to-face	12/04/08	Purposefully
25	Forest Zhong	M	45-54	KPCB China	Partner	Face-to-face	12/04/08	Purposefully
26	Albert Wang	M	35-44	SAIF Parnters	Senior Associate	Telephone	18/04/08	Snowballing
September 2009, the second time fieldwork, Shanghai								
27	Cidy Sun	F	35-44	SBC VC	Investment Director	Face-to-face	04/11/09	Snowballing
28	Jun Zhang	M	35-44	SBC VC	Investment Director	Face-to-face	05/11/09	Snowballing
29	Peter Hua	M	45-54	SBC VC	Managing Director	Face-to-face	09/11/09	Snowballing
30	Ray Hu	M	35-44	GGV Capital	Senior Associate	Face-to-face	10/11/09	Snowballing
31	Jack Zhen	M	35-44	DFJ China	Analyst	Telephone	10/11/09	Snowballing
32	Louis Ma	F	35-44	SBC VC	Research manager	Face-to-face	11/11/09	Snowballing
33	Alan Song	M	45-54	SBC VC	Managing Director	Face-to-face	16/11/09	Snowballing
The rest of 3 interviews were conducted by telephone, email or face to face in France								
34	Michael Kang	M	35-44	Deal Bed	Founder	Telephone	18/04/09	Snowballing
35	Mingpo Cai	M	35-44	Cathay Capital, Paris	President	Face-to-face	08/01/09	Purposefully
36	David Zhang	M	35-44	Matrix Partners	Founder& Managing Director	Email	08/12/10	Randomly

Note: the rows with grey highlights are business angels.

As discussed earlier, networking or *guanxi* in China is very important and it is also the main channel for venture capitalists to accept any interviews. This is because they do not want to refuse a business partner's introduction which might cause loss of the long-term business relationship. In realizing this, the author flew to Shanghai in October 2009 again, working as an intern for Softbank China, an investment engine of Softbank Corp. in China. During the internship, the author researched the targeted sectors and companies and reported to the investment team, and got involved in the investment process such as deal sourcing, and deal evaluation. For example, the author attended the presentations which the potential entrepreneurs were pitching for the investment funds. One Managing Partner in this company helped by asking his investment team members to be interviewed. Furthermore, one investment director introduced two of his friends working in two other different venture capital firms to accept the interviews.

iv) Conducting the Interviews

This study is therefore mainly based on two fieldwork periods in mainland China conducted between March - April 2008 and October - November 2009. The vast majority of interviews took place in Beijing, Shanghai, and Shenzhen, which is where most of China's venture capital firms are based. One interview was done in Paris, France. Interviews were undertaken with 33 returnee venture capitalists and 3 returnee business angels in 28 venture capital firms. The format included face-to-face, telephone and email interviews. The face-to-face interviews were mainly conducted at the participants' place of work, normally in a quiet meeting room in their offices. Some took place in the hall of Wuzhou Hotel, where the 10th VC/PE

Forum was held. A few were done in coffee shops, which is not an ideal place for interviewing because of crowded locations and background noise. Telephone and email interviews were conducted when the participants and the author were in different cities in China. On average, interviews lasted up to one hour. All the interviews were undertaken in Chinese, and recorded with a digital pen if the respondents gave their permission. A few participants refused to be recorded and in these situations detailed notes were made. Before the interviews, all the participants were assured that their responses would remain confidential and anonymous. Then the records and notes were transcribed into Chinese, and subsequently translated into English. To ensure the accuracy of the translation, the author returned to the original recording to listen to it several times to check for any missing words or misunderstanding of original meanings.

Six main themes were examined in the interview: (1) respondent profiles – their university educational backgrounds and working experience; (2) reasons for going overseas to study and work after graduation, and their entrepreneurial experience; (3) reasons for returning to China; (4) Their current investment in venture capital activities; (5) the effects of their transnational networks on their investment process and behaviour, and (6) the frequency of travelling to other countries.

4.3.2 Phase II—Case Studies

i) Why Use Case Studies

In phase II, a case study methodology (Eisenhardt, 1989; Yin, 1994) was employed. Yin (2003) defines case studies as rich, empirical descriptions of particular instances of a phenomenon that are typically based on a variety of data resources. Unlike surveys and experiments that are primarily concerned with theory testing, case studies lend themselves better to theory building (Eisenhardt & Graebner, 2007). The case studies method is an inductive theory building approach to learning rather than the deductive processes of surveys and experiments (Welch et al., 2011). There can be either single- or multiple-case studies, or numerous levels of analysis (Yin, 1984). Case studies are especially valuable to exploring unique phenomena, which are relatively new, and not well understood at the present as in this current study. The advantages are that they can gather extremely rich, detailed and in depth information (Berg, 2004) for studying the phenomenon in its natural setting. Punch (2005, p. 144) stresses that case studies are able to recognise complexity and context and have a holistic focus, aiming to preserve and understand the wholeness and unity of the case. Furthermore, the case study methodology is well suited to answer the research question of “how”, as Yin (2003, p. 1) argues: “*case study is the preferred strategy when ‘how’ questions are being posed, when the investigator has little control over the events, and when the focus is on a contemporary phenomenon within some real-life context*”. The transnationalism of returnee venture capitalists is an emerging theme and little relevant literature can be found. The main purpose of this thesis is to explore how New Argonaut venture capitalists use their transnational networks on

their venture capital investment process. For these reasons case studies were considered to be a suitable research strategy to be employed in this research.

Voss et al. (2002) discuss case study research design in terms of the number of cases. They categorise it as single cases and multiple cases, and illustrate the advantages and disadvantages (Table 6). Single-case studies have an advantage of greater depth (Voss et al., 2002), and can richly describe the existence of a phenomenon (Siggelkow, 2007). However, single-case study limitations might include: the generalization of the conclusions, because models or theories are developed only from one case study; the risks of misjudging the representativeness of a single event, and of exaggerating easily available data. These risks are also present in multiple cases, although they are then mitigated (Voss et al., 2002).

Table 6 Choice of Number of Cases

Choice	Advantages	Disadvantages
Single Cases	Greater depth	Limits on the generalisability of conclusions drawn. Biases such as misjudging the representativeness of a single event and exaggerating easily available data.
Multiple cases	Augment external validity	Less depth per case

Source: Voss et al. 2002, p. 203

In contrast, multiple-case studies typically provide a stronger base for theory building (Yin, 1994), because the theory is better grounded, more accurate, and more universal (all else being equal) when it is based on multiple case experiments (Eisenhardt & Graebner, 2007). Multiple cases also create more robust theory

because the propositions are more deeply grounded in varied empirical evidence (Eisenhardt & Graebner, 2007). Moreover, because case numbers are typically small, a few additional cases can significantly affect the quality of the emergent theory. For instance, adding three cases to a single-case study is modest in terms of numbers, but offers four times the analytic power. Thus, theory building from multiple cases typically yields more robust, common, and theory evaluation than single-case research (Eisenhardt & Graebner, 2007).

ii) Sample Selection

During the literature review stage there was a considerable quantity of media reports of the four cases because of their prior successful overseas experiences and their efforts to return to China to set up venture capital firms. These four cases were also highly recommended by other respondents because of their successful career paths in setting up hi-tech start-ups and venture capital firms. Hence, four high profile New Argonauts who had set up venture capital funds since returning to China were identified as appropriate multiple cases that would effectively illustrate the key role of such individuals in developing an effective venture capital industry in China (Table 7). The selection of these cases was influenced by the argument that extreme cases may be better suited to revealing processes than representative or random cases because they activate more actors and more basic mechanisms in the situation that is being studied (Flyvbjerg, 2004). The average or typical case, in contrast, is often not the richest in terms of the information or insights that it offers (Eisenhardt, 1989; Flyvbjerg, 2006). For example, four cases studied at the prestigious universities in science and technology subjects both in China and the US, went on to work for blue chip technology companies and then established their own technology businesses and

led their companies listing on NASDAQ market. They then use their invaluable entrepreneurial experience to help those nascent entrepreneurs to grow their businesses. As a result, they provide richer information than others.

The profiles of the four cases were on the key note speakers' lists of the 10th China Venture Capital and Private Equity Forum on 11th-12th April 2008. This is why the author attended this forum. The forum provided access to venture capitalists who would be difficult to gather together in the one city and have time to accept a researchers' interviews. Before the interviews, the secondary data of the four cases, including web-based information, news releases, media articles, and their companies' latest investment events were collected. In order to achieve the objectives of the thesis, Feng Deng and Min Zhou, the keynote speakers at the Forum were interviewed on the conference floor immediately after they had finished speaking. They were asked the same questions as the other 34 interviewees (Appendix B). In the case of Feng Deng, it was possible to conduct a supplementary interview with his venture partner. Another two keynote speakers, Dr. Chen and Neil Shen did not turn up to the forum. After the Forum, the secretary of Dr Hong Chen, case 3, was contacted by telephone but refused the request of the author to set up an interview with him. Neil Shen, case 4, did not reply to the author's email asking for an interview.

Table 7 Key Characteristics of Case Studies

NG VC Name	Sex & Age	Educational backgrounds	Pre-venture Career	Position & Name of current VC firms	Exit of Portfolio firms
Feng Deng	Male, 47	MS in Electronic Engineering in Tsinghua University and MSc in Computer Engineering at University of Southern California.	4 years in Intel as an engineer in US, then set up a Nasdaq-listed NetScreen with a value of \$2.4b.	Founding managing partner, Northern Light VC firm based in Beijing.	3 out of thirty-one portfolio firms went public on Nasdaq.
Min Zhu	Male, 60	Undergraduate in engineering at Zhejiang University, MS in Management Science Engineering at Stanford University.	First founded Future Labs which was acquired by Quarterdeck for \$13m. Then set up WebEx which went public on Nasdaq with market value of \$3.2b.	Founder of Cybernaut Capital Management, Hangzhou.	1 out of six portfolio firms went public on Shenzhen ChiNext.
Hong Chen	Male, 48	Bachelor degree in Computer Science from Xi'an Jiaotong University, a Ph.D in Computer Science from State University of New York at Stony Brook.	Set up AIMNET and sold it to NTT/Verio for \$10m. Then established GRIC Communications and let it IPO on Nasdaq.	Chairman and CEO of Hina Group, Beijing.	4 out of forty portfolio firms went public.
Neil Shen	Male, 41	Bachelor degree in Mathematical Applications from Shanghai Jiaotong University; dropped out PhD in Yale University.	8 years in investment banking in Wall Street, then founded Ctrip.com & Home Inns, which both went public on Nasdaq	Funding Management and Partner in Sequoia Capital China.	15 portfolio companies went on IPOs. Among them, 9 portfolio firms went public in 2010.

The disadvantage of this particular approach to case study research is that all of these entrepreneurs are very well-known individuals in China who have numerous business interests and are media targets, hence they are very busy, which created access problems. This is compounded in China by the frequent need to establish a relationship with a potential respondent before being able to conduct an interview. It is therefore perhaps unsurprising that few of them were interviewed.

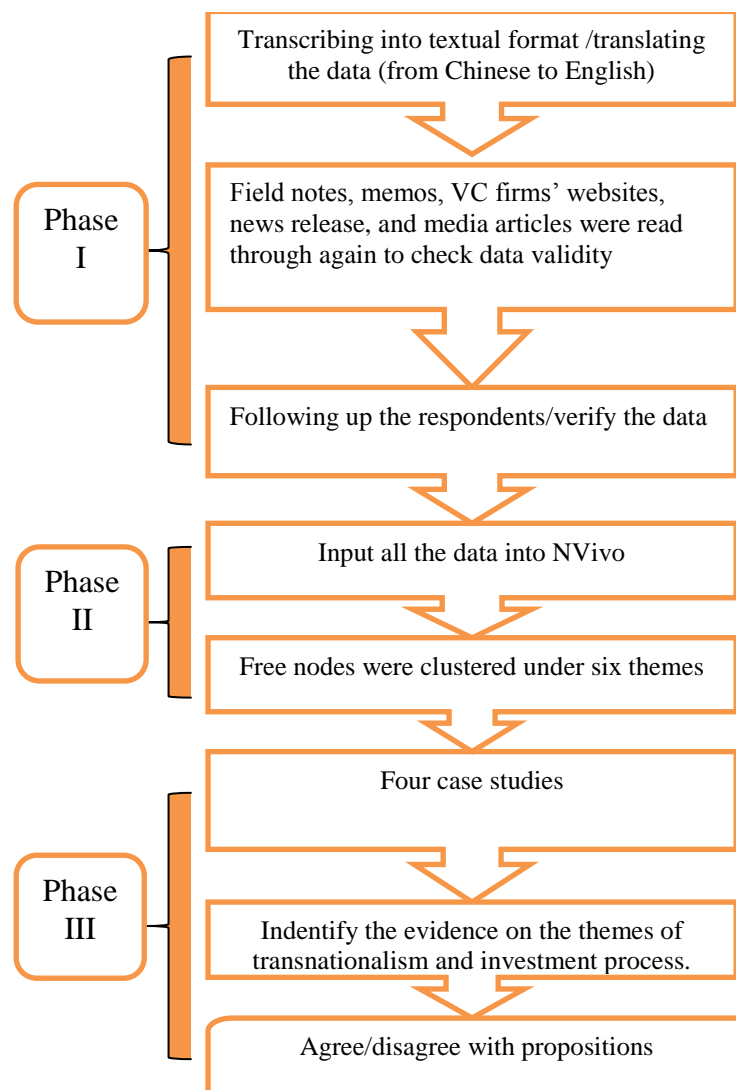
4.4 THE METHODOLOGICAL LIMITATIONS

This research may have several shortcomings. Firstly, the problems may result from the language used during the interviews. The author is a native Chinese speaker, and her interview participants are native Chinese as well, although both parties are able to speak fluent English through living overseas for at least a few years. Bryman and Bell (2003) suggest that the interviews should first be transcribed in the language spoken during the interview, then the transcript translated into English in order to analyse the data in the language that will be used when writing up the research. The invitation letters of interview (Appendix A) and interview questions (Appendix B) were first designed in English, and amended for English accuracy and relevance, then translated again into Chinese. As a result, there is an unavoidable *lost in translation* during the Chinese-English and English-Chinese translation procedure. Secondly, to some extent, the information collected during the interviews can be biased. For example, when questioning past investment events, it is difficult for respondents to recall everything in detail. Moreover, some information may not be entirely accurate, because sometimes the respondents may exaggerate their successful transactions and ignore the failures or bad experiences.

4.5 DATA ANALYSIS

The Nvivo software is a computer – assisted software application designed to help to analyse the qualitative data. However, it cannot analyse the data in itself. The software only can be used to facilitate the analysis process (Silverman, 2000). Three levels of data analysis were conducted (Figure 6).

Figure 6 Steps of Data Analysis



i) First Level Analysis

At the beginning, the tape records were uploaded and saved into the personal computer as MP3 format. The tape recordings were listened to, sentence by sentence, translated from Chinese to English, then transcribed into usable text format. A few interviews without tape recording were translated directly. In the meantime, field notes, memos, venture capital firms' websites, its news release and media articles were examined and triangulated in order to check the validity of the primary data and to update the latest investment deals and exits of portfolio firms. The transcripts were then sent to corresponding interviewees for validation. Some interviewees corrected a few words or sentences and sent them back to the author.

ii) Second Level Analysis

Next, all the English transcripts in word formats were imported to NVivo software. Each transcript was read several times. Then the information was 'clustered' together which confirmed emergent relationships (Hycner, 1985). NVivo's help system defines coding as 'the process of making passages of text in a project's documents with nodes'. Nodes are, therefore, the route by which coding is undertaken. In turn, nodes are 'items that you create to represent anything at all in or about your project, and to hold information about it, code text about it. A node belongs to a particular project and is kept inside its database.' When a document has been coded, the node will incorporate references to those portions of documents in which the code appears. Once established, nodes can be changed or deleted. Nodes can be held in tree nodes, whereby nodes are held in a treelike structure, implying connections between them.

In this way, you can have groups (trees) of related nodes. The other type is free nodes, which is independent of any tree (Bryman & Bell, 2003). The node tree is an important aspect of analysis, as it allowed modification of the initial results mentioned above. The reasons for having a node tree are to see all the answers of each interview question in one place (see tree node “co-investment” answered by some of the respondents in Appendix C1); to represent taxonomy; to gain an overall view of the growing conceptual framework; to prevent node duplication; and to form the basis for using matrix searching (Gibbs, 2003). The node tree can be used for keeping similar nodes together under a shared parent table.

iii) Third Level Analysis

A detailed report on each of the four case studies was written (See chapter 7). These reports were often simply pure descriptions, but they were central to the generation of insight because they helped the researcher to cope early in the analysis process with the often enormous volume of data (Eisenhardt, 1989, p. 540). Next, the primary and secondary data for each case were analyzed by reviewing the thematic data to identify the evidence on the themes relating to transnationalism and investment process. In the meantime, the propositions of the transnationalism on each stage of the investment were also reviewed. By using cross cases, the propositions from the analysis of the data by NVivo were further corroborated.

Table 8 the Six Categories under Tree Nodes

Parent nodes	Children nodes
1. Respondent profiles	<ul style="list-style-type: none"> • Age • Sex • University education
2. Overseas work experiences	<ul style="list-style-type: none"> • Reasons for going overseas to study • Reasons staying USA after graduation • Overseas working experiences • If getting involved in starting a business • The time and reasons for going back to China • Reasons for changing careers from entrepreneurs to venture capitalists
3. New Argonauts' venture capital firms	<ul style="list-style-type: none"> • A brief history of the VC firms • The legal form of their VC firms • Any affiliates • Numbers of partners inside the VC firms • The time, roles in their VC firms • Amount of capital under management • Who are the investors in New Argonaut VC's funds? • Investment criteria - size of investment, stage, sector, location, follow-on funding? • A breakdown of their portfolio investments
4. New Argonauts' investment processes	<ul style="list-style-type: none"> • Fund raising • Deal flow • Deal evaluation • Factors to encourage investment • Investment stages • Preferred investment sectors • Geography factor • Due diligence • Deal structure • Co-invest • Value added • Exit
5. Transnational networks	<ul style="list-style-type: none"> • If transnational networks enables them to have a distinct investment approach and style • Connections with US VC industry or Business Angel communities • How do they use their transnational networks in investing • How important their transnational networks in their current position
6. Travel to US	<ul style="list-style-type: none"> • Current nationality • The numbers of trips to USA for business purposes

4.6 CONCLUSION

This chapter has explained the methodological approach of the study. To be able to answer two research sub-questions, 36 semi-structured in-depth interviews including 33 China-born returnee venture capitalists and 3 returnee business angels, were undertaken to portray the roles of New Argonaut venture capitalists in the context of the Chinese market and to test seven propositions. Four successful New Argonaut venture capitalists were chosen as case studies because this allows for examination of the proposed relationships and their significant contributions in the development of emerging venture capital market in China in-depth and in greater detail. Chapter 5 will provide a profile of the New Argonaut venture capitalists including their personal characteristics, their career, their reasons for returning to China and for becoming venture capitalists, and categorize the different type of New Argonaut venture capitalists. These empirical findings along with a detailed discussion of the supporting or rejecting propositions are presented in Chapter 6 and 7. Chapter 6 explores how their transnational status impacts on New Argonaut ventures capitalists' investment process. Four case studies are presented and discussed in chapter 7.

CHAPTER 5

THE PROFILES OF NEW ARGONAUT VENTURE CAPITALISTS

5.1 INTRODUCTION

Immigrants have historically provided one of America's greatest competitive advantages (Wadhwa et al., 2009). In the U.S., nearly one-quarter of all scientists and engineers, 40 percent of all engineering professors, and more than half of all PhDs in engineering, computer science, and the life sciences come from foreign countries (Florida, 2007). Within the PhD level, immigrant students make an exceptional contribution to science as measured by Nobel Prizes, election to the National Academy of Sciences, patent citation counts (Kerr, 2007). These highly skilled migrants have contributed more than a quarter of U.S. global patent applications in the most dynamic part of the U.S. economy, in particular, the high-tech sector (Kerr, 2007; Wadhwa et al., 2009). Recently, Chinese Western-educated and Western-trained entrepreneurs, technologists, engineers—the first generation to study and work abroad since Chinese communism began in 1949—have returned to their homeland with advanced degrees and entrepreneurial know-how from Silicon Valley to start up new businesses (Fannin, 2008) or to create venture capital firms. Who are these returnee venture capitalists? What are their educational and working experiences? What are their career paths? What motivated their decision to leave the U.S.? Why did they join or set up venture capital firms? Are they homogenous with

Saxenian's New Argonauts? Based on the primary qualitative data collected, this chapter will portray the profiles of the New Argonaut venture capitalists including their nationalities, demographic characteristics, their educational and working experience, and their career paths. Finally, a typology of New Argonaut venture capitalists is developed in terms of their educational degrees and career paths both in the U.S. and China.

5.2 WHO ARE THE NEW ARGONAUT VENTURE CAPITALISTS?

5.2.1 Nationalities

With one exception, the respondents were all born in mainland China. The sole exception is from Taiwan (Table 9). Having lived in the U.S. for many years, 11 (31%) had attained U.S. citizenship or permanent residency, and one holds an American green card. In practice some of them travel back and forth between China and the United States on a regular basis. Twenty four of the 36 returnee venture capitalists and business angels (67%) have retained their Chinese nationalities. This is because Article 3 of China Nationality Law states that People's Republic of China will not allow a Chinese citizen to hold dual nationality. If a Chinese citizen takes a foreign citizenship, he or she will automatically lose his/her Chinese citizenship. Four respondents are from Hong Kong or hold a Hong Kong permanent identity card. Another respondent holds a French 10-year Carte de Sejour (10-year long stay resident card).

Table 9 Nationalities of Respondents

Nationality	American	Chinese				Taiwan
		Mainland Chinese	Hong Kongese	French 10-year stay	Who holds American Green Card	
Numbers	11	18	4	1	1	1
Total	11	24				1

5.2.2 Demographic Characteristics

The majority of the respondents (30) are male. There are six females in the sample accounting for 17% of the group. This is line with US evidence which reports both the small number of women in the venture capital industry (Brush et al., 2002) and also the small number of women business angels (Amatucci & Sohl, 2004). Most migrated when they were in their twenties or thirties to undertake postgraduate study. Migrants were typically single when they left China. The vast majority of returnees (86%) were aged between 35 and 54 when they were interviewed in 2009. Four people are in the 25-34 age group, and only one person is the 55 years-old or above group (Table 10).

Table 10 Age Group

Age Group	25-34	35-44	45-54	55-64	Grand Total
Total	4	15	16	1	36
Percentage	11%	42%	44%	3%	100%

5.2.3 Reasons for Leaving China

The vast majority of respondents went to the U.S. to study. The OECD (2008) observes that students opt to study abroad in order to access quality training and facilities and to maximize their work opportunities after graduation. Their home countries also encouraged this form of migration, particularly for students in specialist disciplines such as scientific and technical research, where the domestic supply and demand are insufficient to reach the critical mass needed to achieve satisfactory quality (OECD, 2008). This is also because some experimental techniques involve expensive equipment and high salaries. China is one of the leading sources of immigration to OECD countries. The U.S. is the most popular destination country for Chinese students because of its high quality education, studentship funding opportunities, and cutting-edge scientific and technical research. The Chinese Ministry of Education has also selected and encouraged talented Chinese students, especially in scientific and engineering subjects, to study abroad. Some of these students were awarded studentships by the foreign universities. For instance, Peter, a Managing Partner in one of the earliest venture capital firms in Shanghai, won a government scholarship which enabled him to study for a doctoral degree in Electrical Engineering at University of Wisconsin, after he graduated from Shanghai Jiao Tong Scholarship. Peter commented that a doctoral studentship was a great opportunity for him, because he obtained a Ph.D. degree in an engineering field which led to a teaching and industrial position with a leading institution in the US initially, and subsequently in China.

Other triggers for leaving China included higher earnings, the quality of life overseas, lack of personal development opportunities in the domestic market, and fears of political instability such as the events of Tiannanmen Square Protests in 1989. Jeff, a venture capital partner returning with a post-doc degree recalls, “*At the end of the 1980s, to tell you the truth, there were fewer opportunities for people in China, at least it was not like now. Going to America was a trend and it was very difficult. People wanted to go overseas to seek personal development. The American educational system is one of the best, so when I was doing my bachelor degree, it was very natural for me to think about going America*”. In other cases migrants moved to the USA simply to be with their family members abroad.

It is important to note qualitative differences in the talent of those Chinese who went abroad before the 2000s compared with those who migrated later. This is elaborated by Andrew, the founding manager partner of New Access Capital. “*During the early 1990s, China-born immigrant students were the elite, because most of them got a studentship to study in American elite universities which was not possible if they were not talented. When they arrived in America, they were caught up in the wave of development of internet in the U.S., and they witnessed or got involved in the rise of dot com websites supported by the venture capital industry. They then used what they had learned in China, raised funds, and established businesses, and brought their businesses on to the markets. However, after the year 2000, going overseas to study became much easier than before. As long as you can afford the tuition fees, you can go to good universities to have a gold painting (Du jin). The second batch of China-*

born migrants returned to China in 2005 or 2006. Compared to the first batch of returnees, they lacked working experience and entrepreneurial aspiration”.

5.2.4 Educational Level of New Argonaut venture capitalists

The majority of the New Argonauts (29, or 81%) completed their undergraduate degrees in leading Chinese universities including Shanghai Jiao Tong University, Tsinghua University, Shanghai Fudan University, Zhejiang University, and Beijing University. Seven New Argonauts had bachelor degrees from American universities such as MIT and UC Berkeley, or British universities such as Cambridge University. The main subject studied was Engineering (including Electrical Engineering), followed by Computer Science, and Finance and Economics. Other subjects studied included English Literature, Auto Control, Physics, and Biochemistry.

Nearly three-quarters of respondents (26, or 72%) held Master degrees. Three held dual Masters degrees from both China at Beijing University or Tsinghua University, and a US university such as Princeton University, University of Southern California or Yale Graduate School. Engineering (including Electrical Engineering) was the most popular choice of subject, followed by Computer Science and Economics. Finance, Political Science and Biochemistry were also popular disciplines. Just over half (19 or 53%) had a MBA degree, typically from a top American business school such as the Kellogg School of Management, Wharton Business School, and MIT Sloan School of Management. Over one-quarter (10 or 28%) obtained a PhD degree overseas, and two earned a J.D. (Juris Doctor) from Yale University Law School (Table 11).

Table 11 Educational Levels of New Argonaut Venture Capitalists

Education Levels	Bachelor				Master					MBA				PhD				Post-doc
Countries	CH	US	UK	FR	CH	US	UK	JA	CA	CH	US	H.K.	FR	CH	US	UK	BE	US
Total	29	4	2	1	10	12	3	1	1	2	15	1	1	1	6	2	1	3
Grand total	36				26					19				10				3
Percentage	100%				72%					53%				28%				8%

Note: in the table, CH refers to China, FR - France, JA - Japan, CA - Canada, and BE – Belgium.

5.2.5 Career Mobility

The career paths of the respondents reflect their educational backgrounds. The most common job position was software engineering which is consistent with the earlier evidence that computer science was one of the most common subjects studied. These individuals subsequently got promoted to become senior engineers or left their companies to start hi-tech companies in Silicon Valley. However, this preference for software engineering could also reflect the fact that some Chinese find it difficult to master English, in fact, their backgrounds are more mathematical, and they therefore embark on software engineering or technical positions which require less proficiency in English.

The three respondents who gained their degrees in Law School became lawyers after graduation. Two of them had followed similar educational and career paths. Both had English as their bachelor degrees, they then studied their Masters in political science

and finished their J.D. in Yale Law School. They then became lawyers, one in New York, and the other in Hong Kong. Before becoming a founder and a Managing Director, they worked respectively as a vice president and a financial adviser in venture capital firms in Hong Kong. Their current positions are founders of a venture capital financial advisory company and a private equity firm. The third interviewee with a law degree was a lawyer in a domestic law firm. He later became a Managing Director in a government supported venture capital firm.

Amongst those interviewees who graduated with finance or accounting subjects, some obtained their first jobs in investment banks or finance related industries as senior managers or associates, subsequently getting promoted to senior investment managers. For example, one respondent, who got his Masters degree in Finance from Tokyo, and EMBA from USA, worked for Sanyo Securities Group first as a manager at its international business division based in Tokyo, then as a senior manager in Hong Kong. Afterwards, he worked as a Vice President with First Securities (HK) Ltd, in its Japan Desk and Corporate Finance division. Now he is a partner of one returnee founded venture capital firm based in Shanghai.

There were a few young respondents (aged 30 to 35) in the sample who had consulting experiences in such firms as McKinsey China and Boston Consulting Group. They had normally undertaken an MBA or Master degree in the U.S and returned to China to work in the consulting companies directly after finishing their studying. Subsequently they joined venture capital firms as associates, analysts or investment directors. For instance, Jack, aged 32, prior to joining his current venture

capital firm as an analyst, was a consultant at McKinsey and Company Shanghai Office. Jack had his degree of M.Phil in Economics with Finance from Cambridge University, U.K. Before that he graduated with Bachelor's Degree in Economics (First Class) from Peking University.

Other respondents with Science and Engineering degrees, served in various technical and managerial roles in multinational companies. Realizing that they lacked business knowledge, they did MBA degrees at top business schools in America. They are now Managing Partners or hold the senior management position in venture capital firms in China. For example, Qian, a female Vice President in one Asian venture capital arm of an American firm, received her Bachelor's degree in engineering from Zhejiang University and her Masters degree in engineering from Tsinghua University. Before joining her current company, she spent five years in the telecommunications industry at one Technology company in Shenzhen, China. At her previous company, she gained extensive knowledge and experience in various management positions including product marketing, project management and business development. Qian also worked as director of sales and marketing in another company, a telecommunications start-up. Qian decided to study in an MBA course at the Wharton School of Business because she wanted to enhance her overseas experience and learn more systemic business concepts.

Those returnees, who had founded their own businesses in America, were likely to set up venture capital firms when they returned in China, using their previous connections with American banks, partners, and colleagues. Those who held senior

technical or management positions, were likely to join established venture capital firms or foreign venture capital firms on their return to China, becoming Managing Directors or Partners. Those who went to the USA to study for a few years and returned with little or no work experience were likely to join the venture capital firms as an analyst or associate.

Table 12 Typical Career Paths

No.	Industries	First job	Second Job	Current position
1	Law firms	Lawyer	Vice president or financial advisor of venture capital firm	Founder and Managing Director of VC firms
2	Technology companies	Soft engineers or investment managers	Co-founders of technical companies in Silicon Valley	Co-founders of VC firms
3	Consulting companies	Consultants	Strategic consultant or founder, or vice president	Analyst, Associate, Managing Directors or Partners of VC firms
4	Investing banks	Senior managers or associates in investing bankers or in financial industry	Senior managers	Vice president, Partners, or co-founder of VC firms
5	Business angels	Relevant backgrounds	CEOs or founders	Business angels

5.2.6 Reasons for Returning to China

When Chinese immigrants left for foreign countries they were motivated by the opportunities of a better future. They are returning to China for the same reasons. The post-2000 technology crash and resulting economic downturn in the United States, and China's booming economy, improved political situation and growing stature of its educational institutions has convinced them to return home (Heenan, 2005; Chappell & Glennie, 2010). Duane, the founder of Qiming Venture Partners who obtained his master in Computer Science from Stanford University and MBA degrees from Berkeley explains: *"I went back to China in 1994. Before going back to China, I had spent nearly 15 years in America. Although my career development was going well, I was always thinking about going back to China, because of the macro-environmental conditions, and the IT industry was developing slowly in America. At the same time, China's IT industry had emerged, the speed of development was very fast, and there were lots of opportunities that America didn't have especially in the telecommunications and internet industries"*.

In fact, many talented immigrants returned to China enticed by a handful of early successful homing pigeons' stories and fortunes of millions. They believed that opportunities for entrepreneurship are better in China. Leon, the founder of one venture capital firm focusing its investment on the life science sector in Shanghai, elaborates his motivation for returning to China,

"I returned to China in June 2005 after spending 10 years in Belgium and 11 years in the U.S. I like to do business in China not because I am a Chinese, but because China is a huge market, in which the growth rate is

the fastest around the world, as it will be over the next decade. It will be a historical opportunity doing business here, that's why I feel I can achieve some success in returning to China. I will be proud if I can help the life-science sector to grow, and to achieve the leading position in the world, which I believe is very meaningful. If you are only seeking financial rewards, there are some other ways to make money, which will be faster than being in the venture capital industry. But you will always ask yourself "so what?" China has its potential; its own unique situation. This is one of the reasons why I came back".

Another important factor encouraging many ambitious and talented Chinese to return to their home country is the invisible glass ceiling that they encounter in overseas companies, limiting their promotion opportunities (Saxenian, 2006). Dr. Chen, the former well-known Silicon Valley entrepreneur described in an interview¹⁴ how he felt about the glass ceiling in the U.S., *"when I was in Silicon Valley, I was lucky enough to be one of the few Chinese entrepreneurs whose company was listed on the Nasdaq. However, when I wanted to talk to other CEOs in multinational companies, they always told me they were busy. This was not the case when I was in China, where I simply made one phone call, everything was done much faster. I do feel that it is not easy for Chinese people to get in the mainstream in America no matter how*

¹⁴ Wang, H R (2007) Investment Bankers: Interviews with 10 Chinese Investment Bankers in China in H Y Wang (ed.) *Returnees developing China*, China Development Press of China State Council Development of Research Centre, Beijing, China

successful you are. I am glad that I made the right decision to come back to China”.

This respondent founded one private equity firm focusing on cross-border investment opportunities based in China in 2003.

A final influence on the decision to return home is based on an old Chinese proverb, “even though a tree grows so high, the falling leaves return to the root”. Chinese people who are influenced by Confucianism believe that they are like leaves and their place of birth is their tree root. When they are getting old, they need to go back to their home town. Because they grew up and lived in China for many years, their culture background and most of their family and friendship connections are in China. So the tug of family and the chance to reconnect with their roots while contributing to nation building are powerful magnets for returnees (Heenan, 2005). Joan, a female venture capitalist who had been living in the U.S. for more than ten years explains the reason why she now works for a venture capital firm in Shanghai, *“I returned to China at the end of 2005. China’s recent unprecedented economic growth has attracted foreign investors from the world and Chinese migrants. Besides, I was born in Shanghai, all my family members are based in Shanghai. My parents are getting old now. I am the only child. I want be around them”.*

5.2.7 Reasons for Becoming Venture Capitalists

The growth of the Chinese economy and improving political environments are the main triggers that have lured New Argonauts from Silicon Valley back to China. These individuals, many of whom have been entrepreneurs, have witnessed the

venture capital eco-system in Silicon Valley and in many cases experienced the fund-raising processes as an entrepreneur, and spotted the huge opportunity for venture capital in China. These returnees have therefore grasped this opportunity by establishing venture capital firms or firms providing services to the venture capital. Min, the former Silicon Valley successful entrepreneur explains why he established a venture capital firm after returning to China,

“Two reasons. First, I was impressed by Silicon Valley’s investment ecosystem. In Sand Hill Road in Silicon Valley which is full of investors, venture capital firms were set up by several partners. They make a profit of US\$ 3 billions each year. I think we can do it in China. Second, I wanted to bring the conception of venture capital, technology, and my entrepreneurial experience in Silicon Valley into China. And I wanted to help entrepreneurs build global enterprises as well”.

For other respondents it was natural for them to join the venture capital industry because of their previous working experiences. Zhikai Gao, a Yale J.D. graduate and former lawyer in America, joined Hopu Fund as a partner. Hopu Fund is a US\$2 billion venture capital and private equity fund focusing on China, led by Goldman Sachs’ China and Singapore’s Temasek Holdings. He recalls,

“I was a lawyer when I graduated from America. I was good at corporate law, securities law. I was a lawyer and worked in Morgan Stanley as a banker, and the financial supervisor in the Securities and Futures Commission of Hong Kong, and I was doing a venture capital investment of US\$0.9 billion in PCCW in Hong Kong at the end of the internet bubble

period. We did more than 80 investments. As a result, I can say I had experienced venture capital investments. In addition, when I was in the bank, I was helping the firms to go to an IPO to raise funding. Now being a venture capitalist is like a reverse of the time schedule, before IPO is the private equity, then venture capital investment. That's why joining the venture capital industry is a natural choice for me".

Other returnees have become venture capitalists because they were invited to join venture capital firms on account of their wide range of networks including their previous colleagues, customers, and American or Chinese alumni. Jun, the investment director in Softbank China Venture Capital firm based in Shanghai illustrates this point,

"I had working experience in the corporate sector (Motorola), consulting (McKinsey) and investment banking (Morgan Stanley), I felt that it was the right time for me to move forward to the venture capital / private equity industry back in late 2006, and I would like to try venture capital / private equity industry which I believe to be closer to the real business world and can achieve or deliver a bigger impact. In 2006, the Kellogg School of Management held an Asia Branding Conference. I attended the conference, and met one alumnus who is a managing partner of a VC firm. At that time, this VC firm raised its Fund II, and needed to build a team. That's why I joined the VC firm in the end of 2006".

5.3 TYPOLOGY OF NEW ARGONAUT VENTURE CAPITALISTS

Based on the empirical findings, Saxenian's New Argonauts are homogenous, but New Argonaut venture capitalists are not. It is clear that there is considerable diversity amongst New Argonauts who have become venture capitalists. Five types can be identified based on their educational backgrounds and career paths both in U.S. and China (Table 13):

The first category is New Argonaut venture capitalists with **technical backgrounds and operational experience**¹⁵. This comprises New Argonauts with engineering degrees and work experience in multinational companies in technology industries in Silicon Valley, and who have then gone on to set up their own businesses in Silicon Valley, sometimes leading their companies to a public listing via an IPO. Then they returned to China either to start up venture capital firms or become business angels.

One example is Feng, a co-founder of Northern Light Venture Capital Firm in Beijing. He gained an MS degree in electronic engineering from Tsinghua University in 1990, a MS degree in computer engineering from the University of Southern California, and a MBA from the Wharton Business School. Feng then worked at Intel Corp. where he held various technical and managerial positions. In 1997, Feng co-founded NetScreen Technologies in Silicon Valley, which has become one of the world's leading network security equipment vendors. At NetScreen, Feng served as Vice President of Engineering, Chief Strategy Officer and a board director. NetScreen went public on NASDAQ in 2001. In April 2004, NetScreen was acquired

¹⁵ This type of New Argonaut venture capitalists are also the extension of what Saxenian calls New Argonauts or returnee entrepreneurs.

by Juniper Networks for \$4 billion¹⁶. Chauncey Shey, the CEO and President of Softbank China, holds a B.S. in Electrical Engineering from Shanghai Jiao Tong University and an M.S. in Computer Science from the State University of New York. From 1990 to 1991, Chauncey was a consultant to AT&T Bell Lab. He was a co-founder and a director of UTStarcom, Inc(NASAD:UTSI), and served as UTStarcom's Executive Vice President from 1995 to 1999. Now Chauncey is the president and the founder of Softbank China in Shanghai.

The second group is New Argonaut venture capitalists with **financial backgrounds and investment banking or consulting experience**. This comprises those who studied Economics or Finance, and either worked in consulting companies such as McKinsey or Boston Consulting Group, or for the investment banks such as Goldman and Sachs; Merrill Lynch after obtaining MBA or master degrees at Ivy league business schools in America or at prestigious universities in other countries. They moved into the venture capital industry as a partner or a founder or an investment director after returning to China. Cindy, for instance, earned her bachelor's degree in International Business and Economics and an MBA degree at the China Europe International Business School. Later on she did her master's degree in Finance at London Business School. After finishing her studies in UK, Cindy went to back to China where she was employed as an internal auditor. After two years, she was transferred to the corporate acquisition department. Another example is Ray, who holds an MBA degree from the Kellogg School of Management, Northwestern University. Ray received an M.A. and B.A. degree in Economics from Fudan

¹⁶ www.nlightvc.com

University in Shanghai. Between 2002 and 2007, Ray was a consultant at the Boston Consulting Group with a focus on manufacturing, automotive and consumer goods. He also helped a number of international and local clients to identify and evaluate Merger and Acquisition (M&A) targets, developing market entry strategy and optimizing sales and marketing approaches. Later on, Cindy and Ray were both invited to join their current venture capital firms as investment directors by the venture partners.

The third category is New Argonaut venture capitalists with **biochemistry backgrounds and investor experiences**. This comprises individuals with PhD or a post-doctoral degree in Biochemistry in US elite universities such as MIT, Harvard, and who worked in U.S. in the large consultancy companies such as McKinsey and Boston Consultants and then went to back to China to join venture capital firms as partners or set up their own venture capital firms. For instance, Jeff is a Partner of New Access Capital International. He received a M.D. degree from Shanghai Jiao Tong University. He then obtained his Master's degree from Oklahoma State University in Biochemistry and Molecular Biology. Because this was on the doctorate track the university awarded him medical doctoral degree. After that, Jeff pursued post-doctoral work at Columbia Presbyterian Medical Centre for two years, on the subject of anti-angiogenesis. During his post-doctoral studies, Jeff found that he was more interested in business. In 1998, he therefore went to Vanderbilt University to pursue a MBA degree. Jeff describes his subsequent career path as follows.

“My first job was working for the Eastman Chemical Company, I was in charge of the company’s China strategy and for identifying potential collaboration and licensing opportunities for the company’s proprietary technologies. Then I was a senior consultant at Defined Health, a New Jersey-based boutique healthcare consulting firm. There, I managed a commercial evaluation team which advised global clients on licensing, M&A opportunities and U.S. market entry strategies. In 2005, I returned to Shanghai to join my brother’s VC firm as a partner”.

The fourth category of New Argonaut VCs is those with **law backgrounds and investor experiences**. This comprises individuals who studied law in Ivy League universities such as Yale Law School, and worked as lawyers or financial advisers. This is where they had their initial contact with venture capital. This enabled them to identify opportunities for venture investments between America and China. They then set up venture capital firms or joined existing firms as partners. One example is Andrew, the Founder and Managing Director of a venture capital firm. Prior to his investor career, Andrew practiced U.S. corporate law with premier law firms in New York and Hong Kong, where he participated in the IPOs of China Southern Airlines and China National Offshore Oil Company. He earned his bachelor degree in China Foreign Affairs University. In 1989, he went to UCLA to study for an M.A. in political science. In 1991 he was transferred to Yale Law School to study J.D. After graduation, Andrew worked on Wall Street. In 1996, he went to Hong Kong to become a lawyer. Then he joined Softbank China as a Vice President. When asked why he decided to change his career from law to venture capital, Andrew replies,

“When I joined Softbank China, I was lucky to be involved in good cases such as Alibaba, Good babies and so on. However, in March 2000, the winter of the internet was coming. During the years 2001, 2002, and 2003, there were very few investments. At that time, on behalf of Softbank China, I sold five or six companies to Public companies or management teams. During these procedures, I realized that Chinese firms and entrepreneurs lacked understanding of capital market and finance services. That’s why I started my current company - New Access Capital”.

The final category is **New Argonaut business angels**. Some New Argonauts have returned to China to be business angels by investing their own money. One example is Lu, who obtained his bachelor’s degree in English and a Master’s degree in comparative literature from Shanghai Fudan University, and an MBA in finance from the University of North Texas. He served in the capacity of Managing Director, Chief Representative, Business Development Director and Director for mergers and acquisitions in North America for various U.S. Fortune 500 companies such as Mirant and Coastal Power, in the U.S. and China. Before joining Capstone Asia as a general partner in 2009, he worked for Heidrick and Struggles (H&S) as a partner and founded and led the H&S Fund Placement initiative. At the same time, he became a venture partner of a Shanghai-based independent investment firm in China. After working for his American company, Lu was sent back to China as an expatriate and in his spare time, he used his own savings to co-invest with other business angels. Another example is Steve. He went to the USA at the age of 16 to study computer science in UC Berkeley. He then obtained his MS degree from Carnegie

Mellon University. After that, he served as CEO of two successful Silicon Valley high tech companies serving the wireless, telecom and consumer Internet industries. Now Steve has four angels' investments,

“I invested four deals, three of them are based in the USA, and one company is in China. The investee company in China is a Cayman Islands registered company. Through its wholly owned subsidiary, TTS China, Ltd., the company offers end-to-end ticketing solutions for highway travel in China. I live in the USA now, I trust my Chinese business partner; he is in charge of running daily-based business. Trust is very important”.

In fact the business angel category is not discrete. Some successful returnees have not only become successful venture capitalists, but they also invest their own money in projects that they are interested in but which are not related to the activities of their venture capital companies. For example, Feng, a famed Silicon Valley former entrepreneur and current founder of Northern Light Venture Capital, revealed that he has several private investments both in America and China.

Table 13 the Typology of New Argonaut Venture Capitalists

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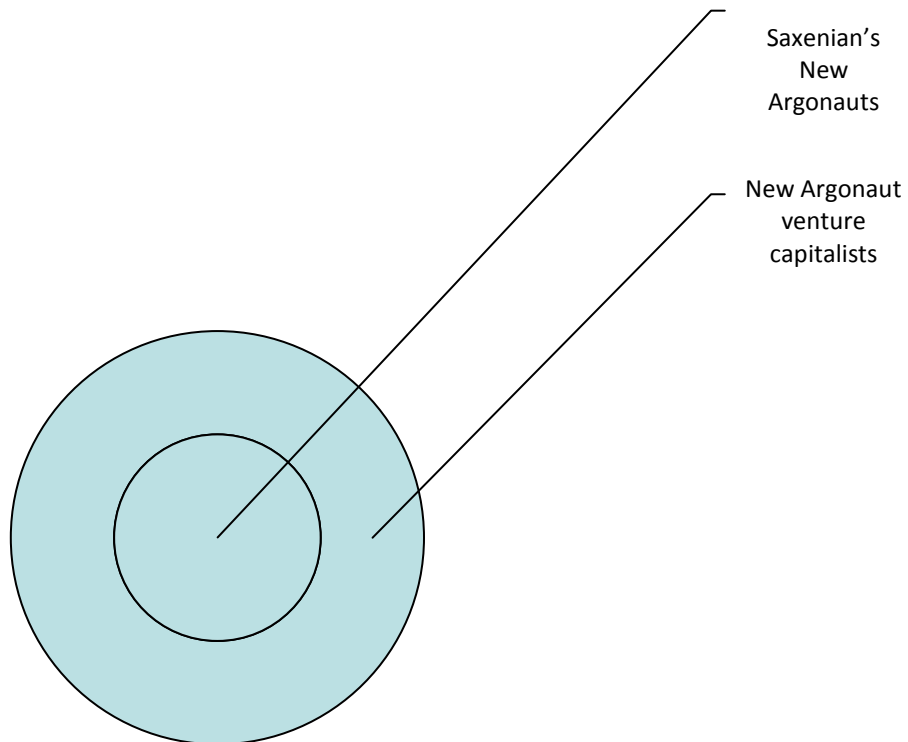
New Argonaut Venture Capitalists

TYPES OF NEW ARGONAUT VCs	EDUCATION					CAREER PATHES		
	China	U.S. (or other countries)				U.S. (or other countries)	China	
	B.A.	MS	MBA	PhD	Post-doc	First job after graduation	Second or third jobs	Current Job
Technical backgrounds and operational experiences	Science, technology, engineering, computer sciences,	Science, technology, engineering, and mathematics (STEM)-related disciplines	May have MBA degrees			Software engineers	Senior managers	Founder, partners of VC firms in China.
Law backgrounds and investor experiences	English literature	Political sciences, law		J.D. in Yale Law School		Lawyers or investors	VC investors; financial advisors.	Founder, partners of VC firms in China.
Biochemistry backgrounds and consultant/investor experiences	Biochemistry	Biochemistry	May have MBA degrees	medical doctoral degree	Chemistry	Managers or consultants	Manager partner	Founder, partners of VC firms in China;
Financial backgrounds and investment banking or consulting experiences	Finance or accounting	Finance or accounting	May have MBA degrees			Investing bankers	Manager partner	CFO, Founder, partners of VC firms in China;
Business angels	Finance, computer science etc.	Finance, computer science etc.	May have MBA degrees			Consultant, Director	CFO, Director, etc.	Invested few tech start-ups

5.4 CONCLUSION

Saxenian's New Argonauts are young, bright foreign-born entrepreneurs possessing postgraduate or PhD degrees from American universities, who have founded successful technology companies mainly in the information technology industry. In short, they are returnee technology entrepreneurs. By contrast, New Argonaut venture capitalists are much more diverse with only the first category New Argonaut venture capitalists – those with technical backgrounds and operational experiences – coinciding with Saxenian's New Argonauts (Figure 7).

Figure 7 the Relationship between Saxenian's NA and NA VCs



New Argonaut venture capitalists have diverse educational backgrounds and careers in a variety of sectors rather than just information technology. Some of the New Argonaut investors have financial backgrounds and investment banking or consulting experience, while others have biochemistry backgrounds and investor experiences. A few have law backgrounds and investor experiences. In fact, the portfolio firms which engage in different sectors such as consumer service, media and new energy benefit from Argonaut investors' different backgrounds in terms of deal evaluation and added value. China's booming economy, lack of professional investors, and family reunion has encouraged New Argonaut investors returning to China, where they set up or join the venture capital firms or co-operate with foreign venture capital firms who lack local market presence and deep understanding of unique Chinese culture. They bridge the gap between the emerging economy and the developed countries by cross-border investments. New Argonaut venture capitalists therefore play a vital role in China's innovation creation, technology development, economic growth, and facilitating the evolvement of the venture capital industry in China.

Chapter 6 investigates the effects of their transnational networks on New Argonaut venture capitalists' investment process.

CHAPTER 6

NEW ARGONAUTS AS VENTURE CAPITALISTS

6.1 INTRODUCTION

The previous chapter provided the first-hand, in-depth research which identified different types of New Argonaut venture capitalists. This chapter elaborates the effects of New Argonauts' transnationalism on their investment process and tests seven propositions raised in Chapter 3. Transnationalism is an increasingly important global phenomenon in the fields of international migration and economic-geographical research. Yeung (2009a, p. 212) defines transnational entrepreneurship as "the exceptional qualities required in the processes of creating and sustaining particular business ventures across national boundaries by social actors. These social actors are transnational entrepreneurs who operate simultaneously in their home and different host countries". Successful transnational entrepreneurship requires mobilization of social networks and balancing the degree of "dual embeddedness in two different institutional settings" (Drori et al., 2006). Among the studies of transnational entrepreneurship, the Chinese Diaspora has been paid particular attention. It has been argued that the Chinese Diaspora constituted an "ungrounded empire" which connects different places into a worldwide business network (Ong & Nonini, 1997). Often this network stretches successfully across regional and national boundaries (Mitchell, 2000). Within the network, ethnic community, kinship, and *guanxi* facilitated cross-border business

transactions which in turn promoted the construction of the business empire even in difficult economic times (Redding, 2002).

The transnational networks for New Argonauts are particularly significant. Saxenian (2005; 2006) indicates that they continue to maintain close professional relationships with the USA, particularly through ethnic professional associations, which complements their professional networks at home in China. They often maintain business involvement in both countries, necessitating travel back and forth on a frequent basis, with some even maintaining residences and citizenship in the USA. As a result, they are able to exploit entrepreneurial opportunities based on combining technological knowledge, market information and institutional knowledge, with their home country's resources and under-utilized technical skills.

However, there has been virtually no focus on how transnational networks affect New Argonauts venture capitalists' investment process. This thesis therefore fills an important gap. It elaborates how Chinese returnee entrepreneurs act as venture capitalists and presents the empirical findings for testing the propositions proposed in Chapter 3, that is, how their transnational networks influence on their investment processes, including fund raising, deal origination, deal evaluation, co-investments, value added on their portfolio companies and exit strategies.

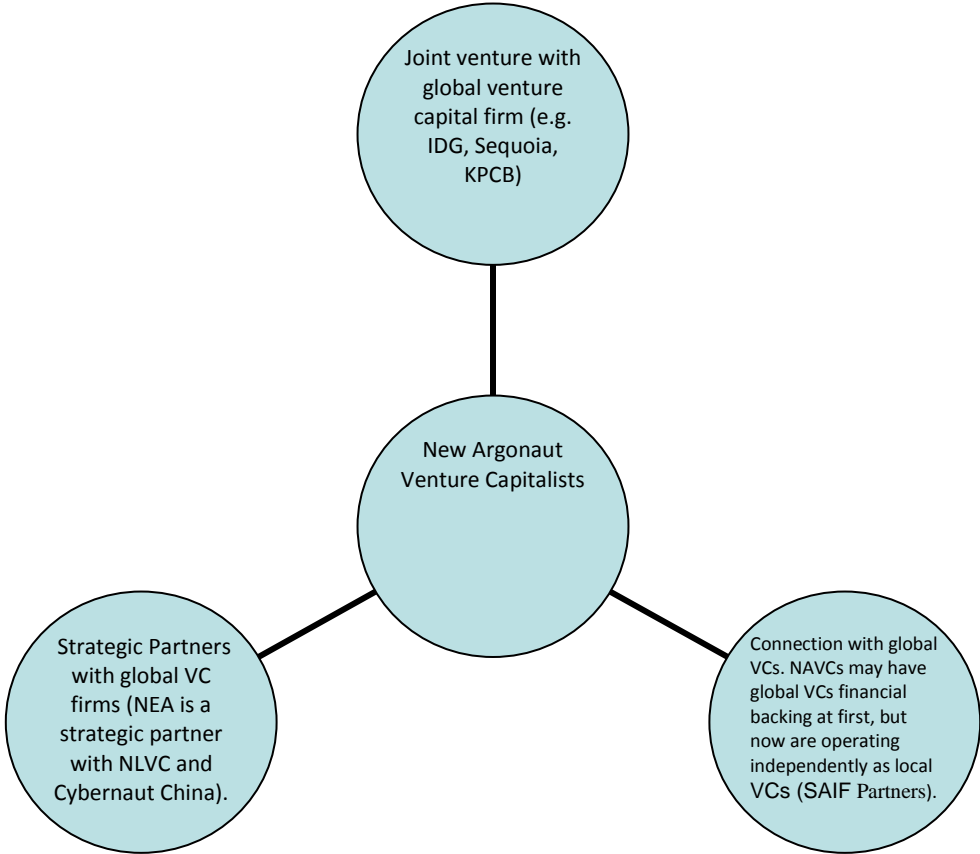
6.2 HOW DO NEW ARGONAUT VCS USE TRANSNATIONAL NETWORKS IN INVESTING?

Many New Argonaut venture capitalists have connections with foreign venture capitalists. Based on the secondary data¹⁷, there are basically three types of partnership between Chinese New Argonaut venture capital firms with other global venture capital firms (Figure 8): The first type is a joint venture between a global venture capital and a local entity led by returnees. There is collaboration between a US fund and a China-based fund in which the China team is responsible for the day-to-day operations and investments and the US-based team provides expertise and experience (Ernst & Young, 2009). Around two-thirds of (19 out of 28) New Argonaut venture capital firms adopt this model, e.g. Fidelity Asia Ventures, KPCB China and Orchid Asia. The second type is strategic limited partners. The local fund serves as a deal feeder and provides some local support to the fund overseas. Five New Argonaut firms (18% of the companies participating in this study) belong to this type. For example, NEA, a leading American venture capital firm, is a strategic partner for Northern Light Venture, and Cybernaut. The third type is formed by returning overseas Chinese, who have had technical and business experience, and have connection with global venture capital. They might have global venture capital financial backing at first, but now are operating independently as local venture capitalists. Four New Argonaut venture capital firms (14% of the companies participating in this study) such as SAIF Partners, and Softbank China

¹⁷ Ernst & Young, (2009) From Survival to Growth, *Global Venture Capital Insights and Trends Report 2009*.

employ this model. These three types of models might bring New Argonaut investors different investment process as follows.

Figure 8 Relationships between New Argonaut VCs and Other Global VCs



6.2.1 Fund Raising and The Impact on Transnationalism

Typically, venture investors do not invest their own capital. Rather, they raise the bulk of their finance from large institutional investors (limited partners) such as pension funds, university endowments, insurance companies, banks, plus high net-worth individuals and their families and also large companies (Lerner et al., 2005; Mason, 2006a). This raises agency problems because monitoring the prospects and understanding the business of each individual investment is difficult for fund investors. Besides, US investors who wish to invest in China lack knowledge of the country, lack networks with local customers, suppliers and China's government, and it would be time consuming for them to study the situation and culture of China. As a result, they find it more convenient to invest in funds managed by New Argonauts who have specialist abilities that enable them to deal more efficiently with the asymmetric information that occurs in such investment. This encourages them to work with New Argonauts who know how to minimise agency costs.

Within the New Argonaut venture capital firms, there are normally 3 to 7 partners, with between US\$ 20 million to US\$ 2.5 billion under management. In general, similar to traditional venture capitalists, New Argonaut venture capitalists utilise several channels to raise their funds. Based on the primary data, of the funds raised, 61% came from the New Argonauts' strategic partners or their global funds based in the U.S., 25% from American university endowments, 21% from American pension funds, 18% from US fund of funds. These were followed by venture capitalists themselves with 14%,

American high net worth family 7%. Interestingly, the renminbi fund (Chinese currency) has surged recently due to regulatory changes that permit a greatly expanded group of renminbi investors and the establishment of new growth from the China Growth Enterprise Market (Deloitte, 2010). 6 New Argonauts venture firms (21% of the companies participating in this study) disclose that except US dollar fund, they also raised renminbi fund from domestic market recently.

For New Argonaut venture capital firms who are joint ventures with a global venture capital or are strategic limited partners with U.S. venture capital firms, they are mostly like to raise the funds from their global funds (or have the same limited partners) or their strategic partners. 17 out of 28 New Argonaut venture capital firms (61%) in this study raised funds from this source. For example, Fidelity Growth Partners Asia is the venture capital arm of Fidelity Ventures based in Boston focusing on investing in China. Fidelity Growth Partners Asia invests Fidelity's own proprietary capital, which with over US\$ 1.5 trillion under management, and does not raise funds from other limited partners. *"This could allow us to be patient and have long-term view with our venture investing especially in hi-tech sectors"*, says Qian, the vice president of Fidelity Growth Partners Asia. Similarly, Kleiner Perkins Caufield & Byers (KPCB), one of the most respected venture capital firms in Silicon Valley, has backed more than 500 ventures, including AOL, Amazon, Google, Sun etc. In 2007 KPCB launched its China partnership by hiring three partners from the Shanghai venture firm, TDF capital. The relationship between KPCB and TDF capital is a cooperative Sino-US relationship, the Chinese team wholly

owning investment decisions in China, and KPCB providing TDF capital with the funding, technical assistance and its global resources.

Secondly, seven New Argonaut venture capital firms (25% of the companies participating in this study) have raised money from university endowments such as Princeton, Harvard, Stanford and Yale. For example, SAIF Partners, a leading venture capital firm that provides growth capital to companies in Asia, raised their fund III from four Ivy League Universities, including Harvard, Princeton, Cornell and Dartmouth, thanks to a string of lucrative exits from SAIF's prior funds¹⁸. Similarly, Qiming Venture partners raised its fund III from Harvard University Endowment, Princeton University Foundation, New York University Foundation, Carnegie Mellon University Foundation and University of Texas Investment Management Company. Thirdly, six New Argonaut firms (21% of the companies participating in this study) raised their funds from U.S. pension funds. For example, California Public Employees' Retirement System (CalPERS), one of the largest public pension funds in the U.S., is the limited partner of DT Capital Partners. When Softbank China raised US\$315 million for its Softbank China Venture Capital Fund III, CalPERS also committed US\$10 million to the fund. Fourthly, five New Argonauts' funds (18% of the companies participating in this study) are supported by a fund of funds (professional investment organizations). Qiming fund III received funds from Pangaea Capital and Siguler Guff. SAIF Partners's

¹⁸ <http://www.sbaif.com/>

limited partners also include three famous American funds of funds: Macarthur, DuPont, and Johansson.

In addition to these, fifthly, out of 36 respondents, 4 New Argonaut venture capitalists (14%) put their own capital into their firms. For instance, Yu, one female investor based in Shanghai, notes that *“in our company, all of our investment professionals are required to put in their own capital alongside that of our company for any investment. As a result, we are all focused, along with the entrepreneurs, on a common objective – to maximize business success and long-term wealth creation”*. Feng, the founder of Northern Light Venture Capital, points out that in 2008 Northern Light Venture Fund II raised a US\$350 millions from the institutional investors from the US including Princeton University, and non-profit foundations. And he also invested his own money of US\$5 million in the fund II, which accounted for 5% of the fund. Sixthly, 2 New Argonaut investors (7% of the interviewees participating in this study) admit that they raised money from wealthy individuals and families. For example, Forest, the partner of KPCB China, said his firm’s funding came from the founders of Google and Amazon.

Many venture capital funds in China started with reputable foreign limited partnerships. But limited partnership composition is in transition now that there are funds set up in local currency (renminbi, or RMB), which enjoy natural advantages (Ernst & Young, 2011). This is mainly because portfolio firms demand the renminbi investment, and renminbi investors could potentially have a higher return from the robust A-share market in China (Ernst & Young, 2010). The Chinese government treats local companies that

receive U.S. dollars or other foreign currencies as foreign-invested enterprise, which means additional layers of approvals from regulators, even for actions such as opening a retail store, which normally would not require clearance (Bloomberg, 2012). “Many Chinese companies realize taking money from any foreign-currency fund will result in more restrictive scrutiny, and they just cannot stand the red tape,” said Jessie, the partner at GGV Capital¹⁹. Of the funds raised, 21% (6) of New Argonauts’ funds are from a renminbi fund. For example, Qiming’s renminbi funds were supported by two state-owned investors and many funds and entrepreneurs. New Access Capital, a Shanghai-based venture capital firm, raised its fund I of 175 million yuan (US\$27 million) and fund II of 300 million yuan (US\$47 million). SBC VC raised its first RMB-dominated venture capital fund of 2 billion yuan (US\$292 million) from Shanghai Pudong Science and Technology Investment Company.

Based on the primary and secondary data, although New Argonaut investors have started to raise renminbi funds from China’s market in the recent few years, they mainly raise their funds from the U.S. market including strategic partners, university endowment, pension funds, fund of funds, venture capitalists themselves and family foundations. As a result, proposition 1 of the networks that Chinese New Argonaut venture capitalists

¹⁹ Bloomberg (2012) China Kicks U.S. Private Equity Aside As Local Funds Rise, by Chan, C. May 15, 2012. Available online: <http://www.bloomberg.com/news/2012-05-14/china-kicks-u-s-private-equity-aside-as-local-funds-rise.html>.

have set up with US investors and business communities, enabling them to raise funds from the US market is strongly supported.

6.2.2 Investment Focus and The Impact on Transnationalism

There are several key trends driving the venture capital investment focus in China. The first trend is that continued urbanization will see hundreds of millions of people moving into newly booming Chinese cities over the next five years. By 2025, China will have added 400 million to its urban population, accounting for 64 percent of its total (McKinsey, 2010). The second trend is the rise in demand for consumer goods driven by the “post-1980s” generation that is technologically fluent and eager to spend their disposal income. The third trend is a new government emphasis on lower carbon emissions which has led to increased government support for China-based clean-tech companies (The Wall Street Journal, 2011). These trends have spurred the venture capital firms to focus on investing in consumer-driven industry, TMT—technology, media and telecommunication and cleantech.

In recent years venture capital funding in China has also grown in nontech, consumer-driven industries such as food, beverages, franchise services, healthcare including medical devices, and the bio-medical productions, manufacturing, financial services, and education sector. Alan, a Managing Partner from Softbank China, explains why Softbank China tends to invest consumer-driven sector in China Venture Capital Forum 2007: *“We like recession proof industries. With a 550 million urban population in China, industries like food and beverage and packaging material are interesting, and trade at*

30 price-earnings ratios. A deal might require \$20 million and 3-4 years to reach IPO, and our return expectations on deals are 10 times”.

Venture capital firms have long favoured TMT companies as well in China. Venture capital firms cashed in when internet companies Baidu, Alibaba, Ctrip, and Shanda Interactive went public in the U.S. and Asia (Krause, 2009). Robin Li received his master’s degree in the US and went back to Beijing to establish Baidu.com, a Chinese-language search engine (Chinese Google), with funds secured from investors such as DFJ and IDGVC. Li’s company quickly rose to become the largest search engine in China going public on the NASDAQ in 2005, with a 354 percent rise on its debut (China daily, 2008). Internet start ups including E-commerce and online gaming are still attractive sectors and so continue to attract venture capital funds. The TMT sector secured US\$575 million, representing 56.1% of the total investment amount while the non-TMT sector garnered US\$451 million, accounting for 43.9% of the total investment amount (China’s Venture Capital Market Report, 2008). One New Argonaut business angel, Yuxin Zhang, explains why he likes to invest in the TMT sector, *“TMT is a good sector, and the investors like it. It’s easy-to-copy, has growth, and it’s easy to burst, it has huge markets. For example, PPS.tv, an online video site, raised \$20 million from LB Investment, Qiming Venture Partners and other investors in October 2008”.*

Cleantech emerged on the scene as a major investment trend with a nudge from former U.S. Vice President Al Gore and his 2006 documentary *An Inconvenient Truth* (Fannin, 2011). Cleantech investment globally increased rapidly to \$7.7 billion in 2010, a 28

percent rise over 2009. North America garnered the lion's share at \$4.9 billion. Asia's share was extremely small at \$771 million, with China making up two thirds of this amount²⁰. The year 2010 set a record for green IPOs globally, as 93 companies raised a total of \$16.3 billion. China accounted for 68 percent of the public offerings and 61 percent of the amount, plus gained 8 of the top 10 largest cleantech IPOs in 2010 (Fannin, 2011). With government support of cleantech, venture capitalists have begun to pay more attention to startups that monitor and improve energy use for telecom and utilities, and produce energy-saving light-emitting diodes (LEDs). GSR Ventures has made six investments in mainland China LED makers (Fannin, 2011). Furthermore, both of Softbank China and North Lightening venture capital firms' fund III mainly focus on investing in cleantech industries. According to the primary data, 18 out of 28 Chinese New Argonaut venture capital firms (64%) invested in consumer related industries, 23 out of 28 (82%) invest in TMT industry and 25 out of 28 (89%) invest in cleantech. These investment sectors of New Argonaut venture capital firms also confirm Ernst & Young's latest findings (2011), that the Chinese government supports venture capital by having issued policies in 2010-11 to stimulate the continued rapid growth of the venture capital industry, there is more investment in the middle and western regions of China and the emergence of high-value-added and environment-friendly products in several fields for venture capital investors, namely energy conservation and environmental protection, next-generation IT, biotech, alternative energy. Thus, the IT and cleantech sectors are likely to dominate venture capital activity in the years to come.

²⁰ Market research firm Cleantech Group in San Francisco.

For those New Argonaut venture capital firms which have strategic partnerships or joint-ventures, with American venture capital firms, their connections with the American venture capital industry can be extremely important, bringing New Argonaut investors information on new technological trends, new business models and business developments. Out of the 36 interviewees, 24 New Argonaut investors (67%) admitted that frequent travel to the U.S. such as attending strategic off-site meetings, annual review meetings, forums in Silicon Valley, e.g. Silicon Dragon events, and meeting suppliers and customers may introduce them to knowledge of emerging technology trends. Forest is the general partner of KPCB China, one joint-venture of American venture capital firm, he states,

“Every year we fly to our headquarters located in America to do strategy off-site, that is, living in hotels, and discussing our strategy, which is very interesting for me. As you know, our partners are from Ivy League universities, such a one is John Doerr, who has backed many of America’s best entrepreneurial leaders including Google’s founders Larry Page and Sergey Brin, Amazon’s founder Jeff Bezos etc. Bill Joy, who was Chief Scientist at Sun Microsystems, Ray Lane was President and Chief Operating Officer of the Oracle Corporation. They are experts in industries such as IT and digital markets, when they discussed one project, I think I learned the latest technology trends and got inspired by them. It’s meaningful. The discussion clarified some practical things from a strategic point of view”.

21 New Argonaut respondents (58% of the respondents participating in this study) agreed that the face-to-face discussions and/or weekly or monthly video conference with their American peers or business communities provides them with knowledge about new business models; they also argued that they have grasped knowledge of business developments from visiting hi-tech companies and attending relevant business forums based in Silicon Valley. For example, Steve is the business angel who invests in new innovative enterprises with his own money cashed out from his previous successful entrepreneurial experiences in Silicon Valley. He flew to the U.S. back and forth to attend forums such as Silicon Valley China Entrepreneur Forum as a keynote speaker or hold several-day workshops as a consultant for those nascent entrepreneurs and who want to set up their businesses at Stanford University, and to visit some young start-ups based in Silicon Valley. These face-to-face discussions and direct contact with entrepreneurs and other venture capitalists based in Silicon Valley allow him to have knowledge of new business models and business developments.

To sum up, out of the 36 interviewees, 24 New Argonaut investors (67%) in 28 New Argonaut venture capital firms admitted that the close connections with American peers such as strategic off-site meetings and annually reviews may introduce them to new technology trends, Moreover, 21 of them (58%) agreed that the visiting hi-tech companies based in Silicon Valley, face-to-face discussions and/or weekly or monthly video conference with entrepreneurs, their American peers or business communities provides them with knowledge about viable new business models and possible business

developments. However, the investment sectors (e.g. IT or energy-saving sectors) and investment stages (early or expansion or late stage) mainly depend on the macro environment of China including government's incentives, market trends, and consequently each venture firm's investment strategy and principle. Even though the investment focus might be influenced by the American market, the institutional settings and customers' needs are quite different between the Chinese and American markets. The venture capital market in China is primarily driven by the governments. As a result, proposition 2 of the networks that Chinese New Argonaut venture capitalists have set up with US investors and business communities provides them with knowledge about emerging technology trends, new business model and business developments are supported. But the investment focus does not link to transnationalism. Therefore, proposition 2 is partially supported.

6.2.3 Deal Flow and The Impact on Transnationalism

New Argonaut venture capitalists receive deal flow from four main sources: networks/*guanxi*; New Argonauts looking for good deals themselves; unsolicited deal sources; and their American venture capital partners. The first deal source for New Argonauts is their networks or *guanxi*, comprising financial advisers who have a good relationship with them, lawyers, investment bankers, alumni, friends, and venture capital and private equity peers, co-investors, relevant industry association, entrepreneurs' referral, old customers and their professional networks. The vast majority of the respondents (30 out of the 36 interviewees) admitted that most of their business projects were recommended by their networks. This has confirmed Lu and Tan's (2012) findings

that the reliance on relational intermediaries to gain access to good deals proves to be extremely important. Leon, Managing Partner in Fidelity Asia, summarizes the situation as follows:

“Actually, the networking of Chinese venture capitalists is not too large. The Chinese people who devote themselves to venture capital industry went to University, went overseas, returned to China. Some of them we met each other at the university, some of them we knew when we returned to China, and some of them built networks through friends’ introduction. Lots of deals were proprietary, if you have a good reputation, the others then are willing to syndicate the deals. On the other hand, if you don’t have a good reputation, you may suffer in getting the deals. This is the source of high quality deals. Another source is from financial advisers. However, this kind of deal source is less high quality. Normally, this kind of deal is polished before, and you don’t know the founders. It takes time to know the founders well, who normally have never been abroad before. Most of the deals cannot meet the standard”.

Louise, a female research manager in Softbank China, agrees,

“Unsolicited deal sources have very low success rates. For example, I used to spend lots of time reading business proposals which were posted or emailed by those passionate entrepreneurs. However, I realized it’s a waste of my time after reading hundreds of them. On the other hand, if the deals recommended by my trusted professional networks such as the industrial officials in the energy-saving sector, or other venture capitalists with whom

we had coordinated before, it may have high successful rates because they know our company's investment criteria and preferences”.

Second, 70% of New Argonaut venture capitalists interviewed (25) also look for good deals for themselves because of the fierce competition of “money chasing deals” in China. Recently, a few venture capitalists used blogs or Chinese twitter as a platform to communicate with potential entrepreneurs or to promote their venture capital firms. A handful of New Argonaut venture capital firms started building research teams who are in charge of finding potential investee companies. Jun is investment director in Softbank China, a colleague of Louise, who he reveals,

“Our research team targets some high potential growth companies which normally are top 10 companies within the industry, but this method is not very good, because these kinds of companies were either preparing their IPO, or refusing venture capital investment, so the successful rates are not so high. The best way is that we focus on our targeted sectors. Next, we look at the upstream and downstream channels of the industrial chain, and we pay attention to the potential companies and ask financial advisers or intermediaries to help us to introduce them”.

Third, some entrepreneurs send their business plans or investment proposals to the venture capital firms either by email or by post. out of the 36 interviewees, 20 of them (56%) said they often received emails or hard copies of business plans. Entrepreneurs also call or visit the leading venture capitalists especially those Managing Partners or

founders who were reputable entrepreneurs in Silicon Valley and have successful investment track records. Min, the successful returning entrepreneur, who has become a venture capitalist after returning to China, benefits from his fame of attracting entrepreneurs to submit proposals, *“I do not need to publicize my company’s name. I receive enough proposals from local entrepreneurs, mostly from Zhejiang province. Most VCs are in Shanghai and Beijing, competing for good investment opportunities. We are much more localized in that sense”*.

Fourth, six New Argonaut venture capitalists (17%) who have strategic partnerships or joint-venture firms with American headquarters receive business projects that come recommended by their American partners. For example, Ray, a MBA graduate from the Kellogg School of Management, currently works as a senior associate in GGV Capital (formerly Granite Global Ventures). Ray admits that their team members in China sometimes get business projects recommended by their American team, because GGV Capital is a venture capital firm with a dual focus on the U.S. and Asia. Ray explains,

“GGV Capital is a global fund, all our GP are Chinese and American, each week our team members who are based in China, USA, and Singapore have video conferencing to discuss the latest business projects and investment processes The American team introduces some interesting business projects or business plans to us”.

Cross-border transnational networks bring in other business opportunities as well. Duane, a venture partner of Qiming Ventures, had been working in Silicon Valley more

than 10 years. He recalls, *“I got deal referrals through my American networks. I returned to China in 1994, I have social networks, especially in IT industries such as my old colleagues in Cisco, Intel, or the companies related to IT industry I'd contacted before when I was working in America”*. However, it is worth noting that many New Argonaut venture capitalists focus on their investment in the context of the Chinese market. David Chen, a senior manager of Asset Managers Co. Led, explains the deal sourcing his company receives, *“Some overseas venture capital institutions recommend deals to us; in addition, our founder’s personal experience has a high reputation. But our company only invests within China, because the Chinese market is huge enough to invest in”*.

To summarise, the cross-border networks, and the strategic partnerships with American venture capital firms do bring New Argonaut venture capitalists new business opportunities. However, as discussed, deal referral is mainly from *guanxi* (83%) such as friends, companies, financial advisers. It is less related to transnational networks, except for a handful of venture capital firms that are global funds (17%). Thus, deal referral is partly related to transnationalism. Therefore, there is weak support of proposition 3.

6.2.4 Key Investment Criteria and Its Impact on Transnationalism

For those business projects which passed the initial screening stage, their companies’ founders, team members, products, business models and other characteristics were evaluated by venture capital investors. New Argonaut venture investors regard the

entrepreneur as one of the most important factors in investment. According to Ahlstrom and Bruton (2006), the selection of firms willing to fund in emerging markets is different to that in Western countries. The relative absence of formal institutions such as legal and accounting standards results in a venture capitalist having difficulty knowing whether investment opportunities are what they seem to be and not merely a vehicle for funnelling money to an overseas account. That is why it is important in emerging markets to find competent and reputable managers. And it is no surprise that venture capitalists rely heavily on close connections with entrepreneurs whom they know to ensure they have the necessary capabilities. Close relations with the entrepreneur would generate trust, which is regarded as an important factor to overcome the informational asymmetry and complement the weak formal institutions in the protection of contacts and property rights (Aghion et al., 2009). As a result, the initial screening of ventures to fund appears less dependent on industry criteria and more on the entrepreneur associated with the venture, and with whom that entrepreneur was in turn connected (Ahlstrom and Bruton, 2006). In other words, *“the money invested must go to people who are capable and trustworthy”* says by Albert, the senior partner in one of the leading venture capital firm in Hong Kong, he continues, *“we are also looking for entrepreneurs in China who have successful track records, high levels of integrity and the vision to build world-class companies”*.

Interestingly, Porter’s (1979; 2008) “Five Forces”, namely the intensity of rivalry, threat of substitutes, buyer power, supplier power and barriers to entry, are considered by some venture capital firms as key investment criteria. First, New Argonauts want their

portfolio companies to be in fast-growing markets. They can be small at the point of investment but should have high growth potential. In slow growing markets growth requires firms to fight for market share. However, in a growing market firms are able to improve revenues simply because of the expanding market (Porter, 1979; 2008). The companies' products or services should have significant market growth potential in China and have export opportunities. Market considerations also include the scale of market, the rate of growth, the position of the company in the market, and the convergence of the market. Second, companies' business models must be scalable and have been proven effective. Alan, a Managing Director who had extensive experience in the IT industry elaborates why he likes the razor and blades business model, *"I like the business model of inkjet printers or the razor and blades. It is the concept of either giving away a saleable item for nothing or charging a low price to generate a continual market for another, generally disposable item"*. The third key factor New Argonaut VCs focus on is the technology barriers against competitors. Many respondents confirm that they are more interested in the products with patents and proprietary knowledge which are not easily copied. In other words, potential portfolio companies have to have their own sustainable competitive advantage. Cong is the investor director of Orchid Asia. She declares her firm's investment philosophy as follows: *"We look for companies that have significant competitive advantages in their industries, which are sustainable for the foreseeable future. The source of such advantages could be something as direct as a government license or patent; or something less apparent such as a name brand, a uniquely low cost structure resulting from high market share, extensive distribution channels, advanced and proprietary technologies and processes or a unique source of*

natural resources". The fourth factor is the team in the investee company. Team members should work together rather than perform as individuals. The team members have to be complementary and have the same business goals. The biggest risk of the venture capital investment is people, and as a result, the entrepreneurs and the founder teams require integrity and trust.

It is worth noting that some New Argonaut venture capitalists do not only pay attention to one or two criteria. Instead, they prefer to evaluate the investee team holistically. Feng discusses Northern Light Venture Capital's key investment criteria:

"Some companies with huge potential could attract us, with the combination of other factors, with the analysis of the market, and the investigation of team members, and the trend of the whole industry, especially high-tech companies. In a nut shell, if one investee company wants to be successful, it has to have three capabilities: profitability, scalability, and sustainability".

From the above discussion, the key investment criteria for New Argonaut investors are mainly based on a few significant factors, notably the entrepreneurs and the team, the scale of the market, portfolio companies' business models, and if the products have patents or intellectual property, or has technology barriers against competitors. This reflects the investment criteria of venture capitalists worldwide. It is not related to New Argonauts' transnationalism.

6.2.5 Deal Evaluation and The Impact on Transnationalism

New Argonaut venture capitalists draw upon state-of-the-art knowledge of technology and business practices and use networks for independent appraisal of the people to make good investment decisions. Leon, a Venture Partner from Fidelity Asia Ventures, points out that his transnational networks enables him to have a distinctive investment approach and style compared with his peers who have never been abroad.

“For returning VCs, the advantages are that we know more advanced technologies since technologies in America are state-of-the-art, which is better than China’s. At the current stage, in China, the companies worth investing in are “me too” or “me better”; this approach is not a radical innovation, instead, it is a conservative innovation, but because of the low cost, large group of talents, the local market is large enough, with high growth, you can command a good valuation. From this point of view, the returning VCs have major advantages, because we know the overseas market very well. We know American VC companies and how to evaluate the companies, it could help you to understand the valuation process to a large extent. For example, the same company I know of is in the overseas market, it is possible to be evaluated to \$500 million. If I invest, and if I know the infinity, then there is huge space for appreciation of the companies”. Leon continues, “What differentiates me from most local VCs, or even returning VCs, is that I have contacts with some CEOs overseas, and have built up networking with CEOs, which has helped me a lot.

Sometimes, I can make a phone call to one CEO, ask “what is this”, they would tell me. That’s why I feel my VC career is running smoothly. This is why the local VCs cannot compare with me”.

Out of the 36 interviewees, twenty-eight New Argonaut venture capitalists (78%) who have close relationships with the U.S. investors agree with Leon’s point of views. For example, Peter, current Managing Director of Softbank China, holds a PhD in Electrical Engineering from the University of Wisconsin. Regarding technology due diligence, he admits that he benefits from his previous working experience in various technical and managerial roles in R&D, marketing and strategic planning in Siemens USA. Peter says, “for technology due diligence, we ask industrial experts both in China and America (American we have known before) to do it”. Ray, senior associate of GGV Capital, a global fund which has offices in Silicon Valley, Shanghai and Singapore, claims that they discuss commercial due diligence with their American team every Monday by video conference.

Moreover, 20 respondents (56%) confirmed that various forms of co-coordination with their seasoned American venture capital partners, such as a weekly, quarterly, or annual partners meeting, video conferencing, and off-site discussion, all help them to be aware of current American industrial trends. Duane, founder of Qiming Venture Partners, which was backed by their U.S. affiliate, Seattle-based Ignition Partners, agrees that the cooperation with Ignition provides them with information on the latest trends in American market, *“for example, internet technology has been running in America for*

ages, American venture partners would give us suggestions, and introduce American experience and models to us. This is good in the way of avoiding risk of making faulty investment decisions”. Similarly, David, the founder of Matrix Partners China, which is affiliated to Matrix Partners, a premier U.S. venture capital firm, says, *“our team members have studied abroad before, and they are from entrepreneurial, telecommunication, media and technology, engineering backgrounds. Sometimes we compare our portfolio companies with successful American case studies, when we intend to invest in high technology companies. We benefited from our American peers’ rich experience”.*

In a nutshell, the previous technical background, entrepreneurial experience and understanding of the Silicon Valley entrepreneurial eco-system has enabled New Argonaut venture capitalists’ to evaluate business projects from unique angles and with a global perspective. Moreover, for those New Argonaut venture capital firms with partnerships with American venture capital firms, the connections between them and American venture capital industry can be important and may bring New Argonaut investors awareness of American industrial trends, cutting-edge high-tech products, new business models, and help them avoid the investment failure if American peers have invested in similar hi-tech companies and received no return. As a result, proposition 4 which suggests that Chinese New Argonaut venture capitalists utilise the networks that they have set up with US investors and business communities especially in Silicon Valley, in their evaluation of investment opportunities to avoid investing in bad projects is strongly confirmed.

6.2.6 Deal Structure and Its Impact on Transnationalism

Deal structure refers to the organization of a business transaction which will be reflected in a legal agreement governing the relationship between the various parties who are interested in a company (Bygrave et al., 1999). Deal structure includes the valuation of the business idea/venture, term sheets, and equity shares.

Entrepreneurs often have unrealistically high beliefs with respect to the future success of their business idea or venture. Consequently, their own valuation often exceeds the venture capitalist's valuation of the business. In early-stage technology investment, because the technology is under development, the market is not ready and main customer preferences are yet unknown, venture capitalists cannot rely on traditional valuation methods such as ratios and multiples (P/E ratio, free cash flow etc), discounted cash flows and net assets. In order to circumvent this valuation problem and information asymmetry similar to practice in the United States, for sectors where agency problems are more severe, stage financing is used more frequently in China (Guo, 2008). Lu, a business angel from Chengwei Ventures based in Shanghai explains, *“Regarding the term sheet, it includes: first, the entrepreneurs have to come up with their milestones. In other words, they complete the profit which they promised before. For example, they promise in the future year they will make US \$10 million. The entrepreneurs have to achieve what they promised in the term sheet, such as which position the company will be within the industry; what is the condition of cash flow with specific numbers; when*

they achieve the goal; what they will do next, and if they cannot achieve the goal, what they will do. We do stage funding as the American VC industry does”.

In the term sheet, a valuation adjustment mechanism²¹ is often used by Chinese investors. A valuation adjustment mechanism would occur when entrepreneurs could not achieve planned performance. Convertible bonds are the preferred instrument in the valuation adjustment mechanism. If entrepreneurs achieve the agreed goals, venture capital investors can convert the bonds into shares to entrepreneurs. Otherwise, entrepreneurs shall repay the investment at high interest rates or sell majority shares to their investors. For example, on a term sheet drawn by NDA Venture Partners signed with its investee company—Wangyong Holdings, Ltd. (“Holdco”), a limited liability Cayman Islands company, “The management team guarantees to generate revenue of no less than \$2,000,000 each year for the first three years of business operations (“Performance Target”). If the company fails to achieve the performance target, the post-money valuation on a fully-diluted basis will be adjusted (such adjustment to be further defined based on Series A Investor’s due diligence and subsequent negotiations)”.

²¹ It can also be called Ratchet Arrangement, which can be defined as “a financial arrangement that allows one party to increase the share of its equity stake in a venture depending on the performance of the enterprise” (Van Osnabrugge & Robinson, 2000). Ratchets can be seen as a way of gaining more control in ventures/investments that are performing poorly. With ratchets, the valuation does not change but only the balance of power (who is in control).

However, it is arguable that the valuation adjustment mechanism is very unfriendly to entrepreneurs, because it requires them to make up the entire difference in price from their own holdings (Keane, 2010). Second, it tends to make the deal structuring very complicated. Third, it is a negative incentive for entrepreneurs who perform poorly, as venture capitalist will then take control, and venture capitalists' stakes in portfolio firms may be increased.

Lu also describes how his business angel syndicate controls the risk of investment on new technology ventures.

“We control the risks in two ways. The first way is that we maximize the value for founders. That is, the investee founder team will get maximized profit. In other words, it is their companies, so they have to do their jobs well, this is the way we minimize the risk. The second way is very common, Ratchet arrangements. Simply, we give a little of our shares, we do milestone investing and establish benchmarks which drive entrepreneurs to reach the estimated value of the next stage. When we budget, we have 6 months, 1 year, 2 years, 3 years, 5 years milestones, when you reach the milestone, we give you more of our shares. We guarantee the maximized profit of the founder team”.

For equity shares, New Argonaut venture capitalists typically make individual equity investments of between \$10 million and \$100 million, in one or more rounds of financing, and generally seek to obtain a significant minority equity ownership position

in the range of 15% to 40% of a portfolio company. In some investee companies, New Argonaut investors take seats on the board of directors and have certain management rights so as to work closely with portfolio company management teams to significantly enhance value. Jack Geng is the senior associate in Actis based in Beijing. He recalls,

“We look for legal documentation. We may take a controlling or a minority stake depending on the particular needs of the business and vendor. The terms and conditions are: we value of the price of the investee companies. And we set out the rights for minority shareholders, to protect the right of shareholders, to regulate the management team’s behaviours and ensure sound corporate governance and transparent accounting practices within the investee companies”.

To summarize, there does not appear to be any effect of transnationalism on deal structure. It would appear that deal structures follow standard venture capital practice that is established in the U.S.

6.2.7 Co-Investment /Syndication and The Impact of Transnationalism

Most investments made by the venture capital funds of New Argonauts are syndicated with other funds. Based on round-by-round venture capital investments from the Securities Data Corporation Platinum VentureXpert database for firms that received venture capital financing between 1980 and 2005 in the U.S, Tian (2007) observes that among 30,861 firms, 9,720 are backed by individual venture capital firms and the remaining 21,141 by syndicated venture capital firms. Syndicate-backed firms constitute

roughly 70% of all entrepreneurial firms that received venture capital investment during this 25-year period. The vast majority of New Argonaut respondents indicate motivations for co-investment that are in line with those proposed by Castilla (2005). Venture capital firms typically syndicate their investments with others in order to share information, assess ventures, resources, expertise, and risk. Yongping He, the project manager of Zhongchao Venture Investment, confirms,

“Yes, we co-invest several deals with other venture capital firms. Some venture capital companies wanted to do investments through my referral in order to enter the new areas. For example, the real estate industry, is one which I think is worth investing in, which I would like to recommend to venture capital peers in other firms to co-invest. There are reasons why I co-invest, one of them is that we lack sufficient funding, second, the more shareholders in one portfolio companies, the more resources you have. Based on my understanding, venture capital not only provides capital, but also provides the concept and resources including social resources, management resources, market resources, which are the most important means of bringing in venture capital. There are some conservative entrepreneurs who claimed that they don’t need venture capital, they are not lacking funding, but actually, this is wrong. Venture capital not only brings in your funding, but also offers you the associated social resources. The added value to the portfolio companies will be invaluable in terms of venture capitalists’ experience with other venture capital team members”.

In other cases a good project attracts interest from several venture capital firms at the same time. In such circumstances these investors can be syndicated with each other rather than being rivals. A further reason for syndication occurs when a business needs further rounds of finance. The initial investor will normally make a follow-on investment but also bring in bigger funds with the capability to provide expansion capital. These bigger venture capitalists, who may be investing US\$10 million in the round, will always want to be in the driver's seat and thus be the lead investor in the deal.

It could be a risk for foreign venture capital funds to enter the Chinese domestic market without domestic partners. The obstacles include the fact that foreign investors are unfamiliar with local rules, practices, unstable and inconsistent regulations, immature stock exchanges, and limited exit channels. Foreign investors are more mindful of investment risks and more capable of securing co-investment partners from their established networks. *“In venture capital investing, especially early-stage, relationships are really important, and it's important to have a ground team made up of local people who understand the culture, know the people,”* Feng, the founder of Northern Light Venture Capital firm, told a journalist from The Wall Street Journal²² in 2011. *“A U.S. partner living in Silicon Valley and investing in China wouldn't work.”*

²²Basich, Z. (2011) Riding China 'Mega-Trends', Northern Light VC Closes \$400M Fund, October 10, 2011, available online: http://blogs.wsj.com/venturecapital/2011/10/10/riding-china-mega-trends-northern-light-vc-closes-400m-fund/?mod=google_news_blog

New Argonauts VCs can communicate with their Western peers both linguistically and culturally. Moreover, the good track record and reputation of the New Argonauts can reduce the length of the due diligence process before setting up partnerships and agency risks. For these reasons venture capital funds established by New Argonauts are also likely to be co-investors or strategic partners with foreign venture capital firms. Feng discloses, *“New Enterprise Association (NEA) and Greylock Partners are our strategic partners, we have some strategic prior cooperation contracts including China, and America. NEA also refers some American projects to us”*.

Jeff was awarded a medical doctoral degree in America. He then worked as a senior consultant for a New Jersey-based boutique healthcare consulting firm to advise global clients on licensing and M&A opportunities and U.S. market entry strategies. He says: *“the biggest advantage of returning venture capitalists is that we’ve been working overseas for ages, know American culture well, and we can communicate both with American investors and with local Chinese”*.

Thus, arguably the most significant outcome of the transnationalism of New Argonauts’ venture capitalists is that they are attractive co-investment partners for foreign venture capital firms seeking to reduce agency costs. Because of their lack of familiarity with the Chinese context they prefer to syndicate with a venture capital firm led by returnee teams with whom they have a shared Western business context and good communication. Based on the primary data, 24 out of the 28 (86%) New Argonaut venture capital firms claim they co-invest business projects with foreign venture capital

firms. As a result, proposition 5 which suggests that the networks that Chinese New Argonauts have set up with US investors and business communities enable them to bring US investors into their deals and to minimize agency costs is strongly confirmed.

6.2.8 Value-Added and Its Impact on Transnationalism

From the point of view of most investors, the biggest challenge in building Chinese start-ups is identifying entrepreneurs. Because there has been no start-up culture prior to a handful of years ago, there are essentially no seasoned entrepreneurs (Hornik, 2008). To compensate for this, Shao (2008), a Harvard graduated returnee, having both start-up and investor experiences, suggests that good venture capitalists can add far more value than they can in the U.S. New Argonauts play a particularly important role in helping these inexperienced Chinese entrepreneurs. Albert is the senior associate of SAIF Partners based in Hong Kong, he agrees with Shao's opinion,

“Good investors not only bring their investee companies capital, in China, we need to help investee firms to do a lot of things, for example, we make the firms’ law structures more clear. Also, we need to increase the firms’ transparency in terms of its financial conditions. In addition, in terms of corporate governance, we should make it more professional. Last but not least, we help to recruit the key managers”.

Differing from those traditional venture capitalists who are from investment banking, financial advisory or senior management backgrounds, New Argonaut

venture capitalists were either former Silicon Valley entrepreneurs, technology experts, consultants, lawyers or investment veterans who have been investing in China for a decade, Bottazzi et al. (2008) find that venture capital firms with partners that have prior business experience (as entrepreneurs, managers or consultants) are more likely to be more active investors. Alan Song is the Managing Partner of Softbank China. He holds B.S. and Master degrees in Electrical Engineering and PhD from School of Economics and Management from Tsinghua University. From 1991 to 1995, he was an assistant professor at the University of Connecticut where he conducted research in the field of computer networks and information system through grants from the US government and fortune 500 companies. In 1995, he joined UStarcom's founding team as the Director of Information Technology²³. *"Our company provides more than just capital", says Alan, "our management team leverage their rich experience both in entrepreneurship and investment, operation global network and China know-how, to assist our portfolio companies. We play active hands-on roles"*. From the primary data, out of the 28 New Argonaut venture capital firms, 20 firms (71%) are actively involved in their portfolio companies for value-adding services.

New Argonaut venture capitalists bring an array of skill sets, their own technical and operating experience, and international connections, to help nascent Chinese entrepreneurs to recruit key personnel, find international strategic partners, structure

²³ <http://www.sbevc.com/english/index.htm>

corporate governance, and develop new product and business ideas. Shenzhen Capital Group is a leading venture capital firm established in 1999. Wanshou Li, the CEO of Shenzhen Capital Group, adds that one important factor of adding value is help the investee firms bring in some customers, in order to increase the chances of connections with international markets. He says,

“We invested in one company at the end of 2003. At that time, the company was very small with only 20 employees. After our investment, we helped them to do the corporate shares’ structure, and hired a CFO, more importantly, we introduced UTStarcom to the company, and brought in Nokia and Lucente from America, now this company is going to go IPO in Hong Kong”.

Actis, has invested US \$40m in Shunda Holdings Co., Ltd, one of the leading manufacturers of mono-crystalline silicon ingots and wafers in China. In addition to the fund, Actis has helped Shunda engage a senior American consultant and recruit several senior managers which significantly strengthen the management team at Shunda, says Jack Geng, the investment manager of Actis. Based on the primary data, out of 28 New Argonaut venture capital firms, 17 of them (61%) are a crucial bridge between their investee companies and the US investors and business communities, linking finance and technology between two very diverse markets.

New Argonaut investors leverage their knowledge and experience in the US to assist local Chinese entrepreneurs as they navigate similar market opportunities and challenges. At the same time, they are applying on-the-ground market expertise and relationships to this effort, so they can effectively translate that knowledge to local cultural and market dynamics. The transnationalism of New Argonaut venture capitalists is therefore quite profound at the value added stage. Thus proposition 6, which suggests that the networks that Chinese New Argonaut venture capitalists have set up with US investors and business communities, combined with their own technical and operational experience, enables them to provide added value to their portfolio firms by creating relationships between them and international customers, suppliers, strategic partners and highly-talented managers, particular in Silicon Valley, is strongly supported.

6.2.9 Exit and The Impact on Transnationalism

There are three main ways for a venture capital firm to exit their investment: merger and acquisition (M&A), initial public offering (IPO), and secondary sale. Some venture capital exits are realized when portfolio companies are acquired by larger, often public, cash-rich companies. For example, GGV Capital has exited from several of their investments through acquisitions. These include Kintana (acquired by Mercury Interactive); NetScaler (acquired by Citrix Systems); Oculex (acquired by Allergan); P-Cube (acquired by Cisco Systems); QPass (acquired by Amdocs) and XFire (acquired by Viacom). Says Ray, the investment manager of GGV, “*Our extensive network of relationships in Asia and the U.S. help expand our portfolio companies’ reach and achieve successful exits*”.

Most New Argonaut VCs prefer their portfolio firms to be listed on equity markets, because their ultimate goal is to create substantial return to their limited partners. New Argonauts with technology backgrounds and operational experience tend to guide their portfolio companies' initial public offering on overseas capital market. Feng, a former seasoned technology entrepreneur in Silicon Valley, had successfully led his own company – NetScreen Technologies, a network security equipment vendor – to a listing on Nasdaq in 2001. Now Feng's Northern Light Venture Capital firm, founded in 2005, has three portfolio firms including Actions Semiconductor, Spreadtrum Communications, and Hotel chain China Lodging Group listed on NASDAQ. Neil Shen, the founder of Sequoia China, established in 2005, had led five portfolio companies listed on NASDAQ, three listed on the New York Stock Exchange, and five on the Hong Kong Stock Exchange by the end of 2010. This has confirmed Hsu's finding (2006) that compared to non-venture capital backed group, venture capital-backed companies are more likely to go IPO, especially if financed by more reputable venture capitalists. Moreover, most of the early Chinese startups financed in dollars by Sand Hill Road investors were set up offshore, usually in the Cayman Islands, allowing them to directly list on NASDAQ or on the NYSE. This helps to explain why IPOs of Chinese startups have a higher profile internationally (Fannin, 2011).

When explaining where the portfolio firms should go public, Peter, the managing director of Softbank China, who has over 10 years of experience in venture capital investment, claims, *"it is better for IT or high-tech firms to be on the list of Nasdaq,*

because the investors understand IT or high-tech industries well.”, However, he continues, *“for traditional industries such as manufacturing and energy, the portfolio firms have advantages if they go public in Asian stock exchanges”*. Tax and the timing of the exit are also important issues to be concerned in the exit decision. Recently, encouraged by the high PE ratio of the first batch of high-tech enterprises listed on China Growth Enterprise Market (CGEM), which commenced its operation on 1 May 2009, more venture capital backed enterprises are willing to go IPO on CGEM, which is expected to become the major channel for venture capital to exit (Zero2IPO, 2010).

Table 14 A Summary of Chinese New Venture-backed IPOS From 2005 to 2011

Market	No. of Chinese NA Venture-backed IPOS	Percentage of Chinese NA Venture-backed IPOS
NASDAQ	32	36%
New York Stock Exchange (NYSE)	14	16%
Hong Kong Stock Exchange (HKSE)	27	31%
China Growth Enterprise Market (CGEM)	14	16%
London AIM	1	1%
In Total	88	100%

According to the primary and secondary data, between 2005 and 2011, there were 32 (36%) Chinese New Argonaut venture-backed companies listed on NASDAQ, and 14 IPOs (16%) were listed on the New York Stock Exchange, the Hong Kong Stock Exchange and China Growth Enterprise market garnered 27 (31%) and 14 (16%) listings respectively (Table 14). 1 portfolio company (1%) was listed on the London AIM equity

market. American stock exchanges including NASDAQ and NYSE are the main channel in supporting Chinese young hi-tech start-ups to exit, accounting for 52% (46) of all New Argonaut venture-backed IPOs. As a result, the proposition 7, that the networks that Chinese New Argonaut venture capitalists have set up with US investors and businesses enable them to take their portfolio companies to US markets for IPOs rather than taking them public on the Chinese stock market, is strongly supported.

6.3 CONCLUSION

This chapter has illustrated that the transnational networks of returning venture capitalists have enabled them to take a distinctive investment approach and style. Seven propositions that were developed in chapter 3 have been tested. The majority of propositions were strongly supported: the exceptions were propositions 2 and proposition 3. The former was partially supported, while there was weak support for the latter. The fund raising, evaluation of the business projects and co-investment, hands-on roles and exit strategy in overseas market of New Argonaut venture capitalists all benefit from their insights from working in the USA and their extensive US networks, especially in adding the value to their portfolio companies. New Argonaut venture capitalists have had successful careers in global technology companies or investment banking industry and then often gone on to create and grow successful venture capital-backed, entrepreneurial ventures. They use their Silicon Valley or Wall Street work experience to invest in early and growth stage technology-focused start-ups. The

outcome of “marinating in the Silicon Valley environment”²⁴ for many years, is that they have both a deep domain knowledge of technology and business models and an intimate understanding of the US entrepreneurship model and the role of venture capital in building global technology companies. Their contributions to Chinese economy and technology development are therefore equally significant.

The themes addressed in this chapter are considered further in Chapter 7. This chapter is based around four case studies that further illustrate the contribution made by New Argonaut venture capitalists, characterized by strong transnationalism, to the development of the venture capital industry in China and in turn to its entrepreneurial dynamism and economic development.

²⁴ Saxenian used this phrase in a presentation to NESTA in London in 19th January 2007.

CHAPTER 7 NEW ARGONAUT INVESTORS IN THE DEVELOPMENT OF VC INDUSTRY IN CHINA

7.1 INTRODUCTION

The previous chapter tested how the strong transnational links of New Argonauts are reflected in their fund raising, investment focus, deal flow, deal evaluation, co-investment, hands-on roles and exit strategy. This chapter uses four New Argonaut venture capitalists as cases to chronicle the journey of such individuals from immigrant students to returnee venture capitalists and their economic contributions in the development of venture capital in China. The purposes of this chapter are to provide further descriptions of the stories of New Argonaut venture capitalists; how their Silicon Valley or Wall Street experience and relationships are used to aid them to set up current venture capital firms and to add value to their portfolio companies, and in turn to develop an effective venture capital industry in China; and to corroborate the supported propositions in chapter 6. Four high profile New Argonauts who had set up venture capital funds since returning to China were identified as appropriate cases since they are extreme cases revealing processes better than representative or random cases (Eisenhardt, 1989; Flyvbjerg, 2006). This chapter starts with the illustrations of four cases including Feng, co-founder of Northern Light Venture Capital Firm; Min, founder of Cybernaut Capital Management, Dr. Hong Chen, Founder, Chairman and CEO of the Hina Group; Neil Shen, a founder and Executive Partner of Sequoia Capital China. The various themes and insights into New Argonaut venture capitalists are then developed.

7.2 CASE STUDIES

7.2.1 Case 1. Feng Deng: Northern Light Venture Capital

Mr. Feng Deng, is a co-founder of Northern Light Venture Capital Firm (NLVC), a China concept venture capital firm focused on early and early growth stage opportunities in technology enabled business. NLVC manages approximately \$500 million in committed capital with two US dollar funds and two renminbi funds. By October 2011, NLVC had raised \$400 million for its third dollar-denominated fund, which was committed by leading institutional investors from the U.S., Europe and Asia. NLVC's investments focus on TMT, clean tech, new material, healthcare and consumer industries. Feng is very positive about investment opportunities in China: *"China continues to be a compelling market and is poised to lead global innovation. The entrepreneurial spirit and many elements that shaped Silicon Valley are also taking hold here,"* Feng talks about NLVC's investment focus,²⁵ *"additionally, we see exceptional opportunities in the domestic market driven by mega-trends such as urbanisation and the evolution of middle class consumption patterns"*. Feng has three investments in the U.S., so he goes to America to attend the board of director meetings every four to six weeks. This frequent travel to the U.S. and the contact with American peers, business communities informs the latest technology trend, business models and new product developments. However, the investment focus of the venture capital firms depends on

²⁵ Marketwatch (2011) Northern Light Venture Capital Forms \$400 Million Fund: Third Fund Continues Focus on Early Stage China Opportunities. The Wall Street Journal, Oct. 11, 2011, available online: <http://www.marketwatch.com/story/northern-light-venture-capital-forms-400-million-fund-2011-10-11>

each venture capital firm's investment strategy, thus are not related to the transnationalism. As a result, proposition 2 was partially supported.

After finishing his MS degree in electronic engineering from Tsinghua University in 1990, Feng went to America to study for an MSc in computer engineering at the University of Southern California. In 1993, he obtained a job at Inter Corp as an engineer where he subsequently became leader of a 12 person team²⁶. As the Internet began to develop Feng realised that website security would be the major issue that would influence its future development. Having had this hunch that security would become a growth sector Feng started to look for business partners to join him in a start-up business that would exploit this opportunity. At that time, Yan Ke, another graduate from Tsinghua University who had subsequently obtained an MS and PhD from Johns Hopkins University, was working as a senior software engineer at Cisco Systems, and met another friend Qing Xie on the basketball course. In 1997, three of them created NetScreen Technologies in Feng's garage, following a well-trodden Silicon Valley tradition. *"We didn't know what we could do, but we just said, 'Let's do security, and let's do some hardware acceleration' because we know hardware acceleration could help the performance issue in security"* Feng recalls (Li, 2007).

Feng borrowed \$50,000 from a classmate to provide NetScreen's start-up finance. Later, through referrals from his alumni and friends, they found business angels who invested \$1 million in their business. Even though NetScreen's products were at the development

²⁶ www.nlightvc.com

stage, they quickly went on to raise four rounds of venture capital totaling \$8.8m from such elite venture capital firms as Sequoia Capital which enabled the company to accelerate its R&D, develop products and launch them on to the market. On 11th December, 2001, NetScreen went public on NASDAQ with the value of \$2.4 billion, the first high-technology company to do so following the September 11 terrorist attack (Wang, 2007). In February 2004, with NetScreen's shares standing at \$26 it was acquired by the internet device manufacturer Juniper for \$42 a share, valuing the company at \$4 billion. Feng worked as a Vice President of Juniper for 18 months after the acquisition. By early 2005, when the acquisition of NetScreen had bedded down, Feng decided to go back to China and start a new career by establishing a venture capital fund firm, having had prior experience as a business angel in the US. He therefore returned to China to co-found Northern Light Venture Capital (NLVC) in Tsinghua Technology Park with Yan Ke, his former NetScreen business partner who, like Feng had also become a vice president of Juniper Networks. Since its inception, NLVC partnered with New Enterprise Associates and Greylock Partners in the USA, who are identified as special limited partners of the fund. Feng used his Silicon Valley contacts when he returned to China to found NLVC in 2005. *"We have had a very good relationship with NEA and Greylock for the last six years,"* Feng says *"they helped us shorten the learning curve in our early days of venture investing"*. In return, NLVC, with its home-grown partners, helped American firms gain access to Chinese market²⁷.

²⁷ The Wall Street Journal (2011) Riding China 'Mega-Trends' Northern Light VC Closes \$400M Fund. Available online: <http://blogs.wsj.com/venturecapital/2011/10/10/riding-china-mega-trends-northern-light-vc-closes-400m-fund/>

NEA, NLVC and Keystone Ventures together invested \$35 million in Redbaby, an online retailer for middle class consumers, for a collective 60 percent of its shares (Fannin, 2011). This further supports proposition 1 of fund raising, and proposition 5 of co-investments, which states that the networks that Chinese New Argonaut venture capitalists have set up with US investors and business communities enable them to raise funds from the U.S. market and to bring US co-investors into their deals.

Because Feng and Ke were unfamiliar with the Chinese market, they initially established a small fund with their own money rather than seeking to attract external investors. They later raised \$1.21 billion from external investors. Currently, Northern Light Venture has three general partners - Feng Deng, Yan Ke, and Robert Shuhua Zhou - and three venture partners - Datong Chen, Lixin Li and John Wu. They are supported by a team of experienced investment professionals. Chen is the co-founder and CTO of SpreadTrum Communications Inc., a China/Silicon Valley public company which develops IC chipset for 2.5G and 3G cellular phone systems. He received his BA, MS, and PhD from Tsinghua University, and was a post-doctoral researcher at the University of Illinois and Stanford University. Li served as CEO in a Chinese public company in the field of optical technology, and previously, co-founded a start-up company focusing on image processing and recording, which was later acquired. Li received his MA and a BS from Tsinghua University. Wu worked as CTO of Alibaba Group and Yahoo! Inc. in the US.

He received a BA degree from the University of Michigan and studied at Shanghai Jiao Tong University²⁸.

Northern Light Venture Capital has two features that made it distinctive from local Chinese venture capital firms. First, the principals all have operational experience and technology backgrounds, have started and run their own businesses and have grown these businesses into large enterprises. Unlike those venture capitalists from investment banking, consultant companies, or senior management backgrounds, NLVC's Managing Directors bring deep experience of management, strategy, engineering and product development from seed stage to IPO in venture backed companies. The partners therefore understand the entire entrepreneurial growth cycle and so are able to adopt a hands-on approach to investing, assisting entrepreneurs through the provision of advice, strategic contacts and introductions based on operational experience, and encouraging them to reach ambitious goals. Feng is very proud of the partners within his team,

“We have operational and management experience, and we all had our own businesses grow from small firms to big firms. We know entrepreneurs and which stages they should do, and not do. These features make us distinct from other venture capitalists. That's why we invest in early stage companies, and our suggestions are from operational perspectives. Also, the good relationship with New Enterprise Association and Greylock in

²⁸ www.nlightvc.com

Silicon Valley enables us to help our investee companies in terms of corporate governance, hiring talents for human resources, and hiring international talents, developing international channels and the strategic planning.

This provides further support to proposition 6 which relates to the value-added contribution of New Argonaut venture capitalists.

The second feature is Northern Light Venture Capital's cross-border culture which enables it to invest in cross-border deals. It has close links with two US venture capital firms, NEA and Greylock. Feng is a limited partner in some American venture capital funds, including NEA, Sequoia and Excel. He maintains links with Sequoia which invested in NetScreen, the company that he founded. He is also a business angel in the USA which provides further connections with US venture capital firms who co-invest in the same businesses as he does. Feng believes that the link between Northern Light and US venture capitalists is his company's main feature. *"The link with American VCs doesn't only mean my personal relationship with them you know. I have some good American VC friends. The important thing is that we have a cross-border culture. We are Chinese, we grew up in China, we had careers in Silicon Valley, and we are very familiar with American business culture. But my home is in America as well. And I am American"*. Feng continues: *"American VCs like us because we can bridge both China and USA when trying to enter into the Chinese market. We understand both countries' cultures and markets, which is quite valuable. That's why American VCs like to sit on*

the boards with us, because they can reduce the risks. This is our company's feature”.

Feng also has three investments in the USA. These links require him to fly to USA every four to six weeks to attend board of director meetings and conferences in Silicon Valley (e.g. Silicon Asia). These connections enable NLVC to make three kinds of cross-border deals. First, they invest in companies started by Chinese entrepreneurs that bring American technology to the Chinese market. Second, they invest in companies using Chinese R&D to address foreign or international markets. Third, they invest in Chinese entrepreneurs who have started ‘born global’ companies in Silicon Valley, have set up their R&D centres in China, and sell their products around the world. Therefore, proposition 3 of the networks that Chinese New Argonaut venture capitalists have set up with US investors and business communities, and their frequent travel to and from the U.S. enables them to access a more geographically diverse deal flow is confirmed.

By June 2012, NLVC had 56 portfolio firms. Three of its portfolio firms went public on NASDAQ including Actions Semiconductor (ATCS), Hanting Hotels (HTHT) and Spreadtrum Communications (SPRD). Therefore, proposition 7 that the networks that Chinese New Argonaut venture capitalists have set up with US investors and businesses enable them to take their portfolio companies to the US market for their IPOs rather than taking them public on the Chinese stock market is strongly confirmed.

7.2.2 Case 2. Min Zhu and Cybernaut Capital Management

Min Zhu is the founder of Cybernaut Capital. Cybernaut invests in early to growth stage companies in financial services, health care, education, and consumer services and high tech etc. Cybernaut's investments include Redbaby, a supplier of mother and infant products and a website for shopping for newborns' babies' products, Lian Lian Technology, a leading alternative payment channel for mobile, telecom and value-added service providers in China, and Focused Photonics Inc, a company that has developed photoelectric measurement products in the Chinese market²⁹.

Min graduated from Zhe Jiang University with a degree in engineering, moving to the USA in 1984 to study for his MS in Management Science Engineering at Stanford University. With his extensive knowledge and experiences in computer science and web communication spaces he went on to found two American firms in Silicon Valley. The first was Future Labs which he founded in 1991 in his garage. Future Labs was the one of the earliest companies to develop multi-point document collaboration software (Zhang, 2007). After several years struggling, it was acquired by Quarterdeck for \$13million in 1996. He then co-founded WebEx Communications, Inc with an Indian business partner Subrah Zyar. WebEx attracted first round business angel funding of \$7 million. WebEx's most successful product was Microsoft Net Meeting, internet conferencing software. In July 2000, WebEx went public on NASDAQ. It was named in

²⁹ www.cybernaut.com.cn

the Forbes list of 25 Fastest-Growing Technology Companies for five consecutive years. In March 2007 it was acquired by Cisco for \$3.2 billion.

With the fortune he made from WebEx, Min decided to change career to become a venture capitalist, using investments “*to cultivate a different generation of Chinese firms.*” He started by making some angel investments. He recalled his start-up experience. “*In 1991, when I started my first business, I kept looking for funding, and I felt like a beggar at that time*”. As a result, Min wanted to help some nascent entrepreneurs to avoid having the same experience as he did. He started making angel investments in 2002, setting up Min’s Lab near Zhejiang University in Hangzhou.

In 2003, New Enterprise Associates (NEA) was considering entering the Chinese market to invest directly in startup companies in China. Knowing that Min had set up software development teams for Webex in China, NEA invited him to join NEA as a venture partner. He worked closely with NEA's information technology and healthcare practices in sourcing and evaluating new investment opportunities with a focus on opportunities in the expanding Chinese market. “*I helped NEA to become the largest investor in Spreadtrum Communications, a fabless semiconductor company in Shanghai, which went IPO on Nasdaq in 2007 with a valuation \$850 million, even though NEA participated only in a late round of venture investment*”, Min recalls. In 2005, Min decided to leave Webex and become a full time venture capitalist in China. He founded Cybernaut in Hangzhou, Zhejiang Province, which runs a venture investment fund and operates an incubator. NEA is a strategic investor of Cybernaut. NEA invests money in

Cybernaut and helps Cybernaut to go through all the processes³⁰. This further confirms proposition 1 that the networks that Chinese New Argonaut venture capitalists have with US investors and business communities enable them to raise funds from the US market.

The connections with NEA and Min's reputation enable his portfolio companies to reach global resources. Min says, "*Our team takes an active role in our portfolio companies. We even go as far as helping them in preparing a PowerPoint presentation. We may help the company in creating their business model, designing their marketing, sales, customer service, and the technology platform. The second part is the whole fund-raising and exit strategy to help this company grow. The third part is to reach global resource. We helped an insurance company to set up a connection with AIG, an e-commerce company to reach Amazon as a strategic partner, or reach Wal-Mart to understand their supply chain management*" (Fu, 2008). This gives further support for proposition 6 that transnational networks with US investors enable New Argonaut venture capitalist to create relationships between their portfolio firms and international customers, suppliers, subcontractors and strategic partners, particularly in Silicon Valley.

Having joining forces with NEA, Min's first step was to spend time "educating" his new US colleagues to understand the Chinese market. He comments that "*Many Silicon Valley venture capitalists fall in love with China and want to invest in everything they*

³⁰ This paragraph is based on Fu Shenzhao (2008), "[An interview with Min Zhu, Webex founder and active venture investor in China](#)". *Journal of Asia Business Studies*.

see. But 70% of venture capitalists could lose money. Most venture capitalists are unqualified because they are using Silicon Valley thinking to manage their fund in China” (The New York Times, 2007). “That is the reason that I established Cybernaut. I wanted to bring the concept of venture capital in Silicon Valley to China to improve their understanding of Chinese market. And I wanted to help entrepreneurs build global enterprises as well”. Min notes three distinctive features of the Chinese market that foreign investors often do not appreciate. First, differences between the Chinese and US market environment have to be appreciated. Min explains, “In America, the company which has 20-million customers will be worth at least \$1 billion. In China, however, this kind of customers’ base size will have no special meaning. Second, are the obstacles of doing due diligence in China. This arises because of the difficulties of getting accurate information about people. According to Chinese traditional culture, it is not polite to say bad things about people. Instead, we say good things. If you ask entrepreneurs to give the list of referees, normally, the referees are their good friends. As you can imagine, you can always hear positive comments about entrepreneurs during the due diligence stage.” The third difference is the understanding of the logging orders. Min explains, “Chinese entrepreneurs don’t have as strong a legal awareness about executing the contract as American entrepreneurs. So if you want to evaluate a firm in terms of its orders from other firms, you should apply a discount.” (Li, 2007). “For example,” Min continues, “if you have an order from China Mobile Communications Corporation - the largest mobile communication company in China with wholly-owned subsidiaries in 31 provinces - please do not be too optimistic. It doesn’t mean you will

definitely have the orders from each province; it only means you can negotiate with China Mobile subsidiaries in the different provinces”.

7.2.3 Case 3. Dr Hong Chen and the Hina Group.

Dr. Hong Chen is Founder, Chairman and CEO of the Hina Group, an investment banking and private equity firm focusing on cross-border opportunities between China and the global community. Hina was launched in 2003 with offices in Silicon Valley, USA; Shanghai and Beijing, China; and Singapore³¹. Prior to establishing the Hina Group, Dr. Chen was Founder, Chairman and CEO of GRIC Communications, and led its successful IPO on NASDAQ in 1999. Prior to GRIC, he was Founder, Chairman and CEO of AIMnet, a leading regional Internet service provider, which was sold to NTT/Verio in 1996³². Hong got more than \$10 million on selling AIMnet.

Chen received a Bachelor’s degree in Computer Science from Xi’an Jiaotong University in 1982 at the age of 19, and a Ph.D in computer science from State University of New York at Stony Brook in 1991. He initially worked for Litton Industry as a software engineer, but quickly moved to TRW as a senior engineer for bank system coloration. In 1993, he set up an internet service company called AIMNET. *“My initial purpose for creating my company was not making money. Instead, I wanted to demonstrate that people who are from China can not only be good cook or engineers, but also excellent entrepreneurs”* Cheng says. He raised about \$0.5 million first round business angel

³¹ www.hinagroup.com

³² www.hinagroup.com

funding which was used for basic infrastructure construction. AIMNET got a second round funding of about \$2 million from Vertex Management Venture Capital Firm. It grew rapidly and by 1995 was one of the top three internet service providers. However, in the mid 1990s, it was difficult for Chinese enterprises to garner support from Wall Street. Gradually, AIMNET began to lag behind its competitors. In 1997, the major competitors of AIMNET went public in search of the external capital. Chen noted: “*We were fighting for the first position. Since AIMNET could not gain the first position, I sold it*”. AIMNET missed the opportunity to fight for the leading position in the market because it lacked capital support. The importance of finance for an enterprise made a deep impression on Chen (Ye, 2007).

Two years later, AIMNET was acquired by Verio and Chen received more than \$10 million in cash. Verio went on to make further acquisitions on its way to becoming public, by which time it had become the biggest internet service provider. Three years later, Verio was acquired by NTT for \$5.6 billion. Chen recalls, “*The M&A was amazing. In the American capital market, few start-ups can be merged and transformed rapidly into a giant company with valuation of \$5.6 billion*”. This was the first time that he realized the power of the American capital market to achieve M&A. Some years later Chen admitted that he had made a huge mistake when selling AIMNET because of his ignorance of Western capital markets. “*\$10m in cash was a lot of money for me at that time. However, if I had asked for equity in AIMnet instead of cash I would have got a*

*much better return when NTT bought Verio*³³. In 1997, after selling AIMNET, Chen established Global Roaming Internet Consortium (GRIC) which focused on the global virtual network roaming, developing it to become the second biggest supplier in the world. In December 1999, GRIC went public on NASDAQ. This was the first public company on NASDAQ founded by a mainland Chinese immigrant.

Chen later resigned his position as CEO of GRIC, retaining his seat on the board of directors. With Hua Yuan Science and Technology Association (HYSTA), the ethnic association in Silicon Valley, as a platform to build his transnational networking, being a multi-millionaire, and with entrepreneurial experience, Chen decided to found the Hina Group, an investment banking firm, to meet the needs of cross-border business. He observed that *“some foreign companies wanted to get entry into China. At the same time, the emerging status of China in the global marketplace had allowed many domestic Chinese companies to look outwards. These companies are looking for financial help.”* Hina can help Chinese firms to internationalize themselves by bringing together highly experienced Wall Street investment bankers with the CEOs of Chinese and US public companies to provide the best combination of world class financial advisory services with in depth knowledge of the local Chinese marketplace.

The Chinese meaning of “Hina” is “Chinese people can do it”. Chen’s objective is to develop the Hina Group to become like Goldman Sachs as a leading global investment

³³ Based on Chen’s interview from Chinese TV show -Boss Town, 2007

banking firm. The Hina Group has two principal businesses: Hina Investment Banking and Hina Capital Partners. Hina Capital Partners (HCP), the private equity unit of Hina, focuses on investing in China-oriented technology, media and telecommunications, energy, and biomedical related opportunities in China and the United States. Hina Capital Partners is venture partner with TransLink Capital, a Silicon Valley-based venture capital firm focused on investments in early to expansion stage start-up companies in the TMT sectors. *“Through our partnership with TransLink Capital, we co-invest hi-tech companies engaged in TMT sectors based in China together”*, says Chen. As a result, the networks that Chinese New Argonaut venture capitalists have with US investors and business communities enable them to bring US investors into their deals. Proposition 5 is thus confirmed. Chen describes its key investment criteria as follows, *“First, the entrepreneurs must have passion, and they should be confident about their businesses, they should have long-term vision. Second, the entrepreneurs should have leadership, and the capability of attracting talent. Third, entrepreneurs should provide good career prospects for their employees, who should develop their career paths with the companies together”*.

Chen describes the Hina Group as a “proactive investor”. He says, *“We work in partnership with each of our portfolio companies to add value by providing strategic insights, bringing in management best practices, assisting with globalization initiatives, and accessing financings and other liquidity channels. Hina Capital Partners will leverage the full resources of the Hina Group to create value, whether it is in “internationalizing” a locally oriented China based company or assisting a US*

company to grow in China through M & A". This provides further support for proposition 6 which suggests the transnational networks with US investors enable New Argonaut investors to create relationships between their portfolio firms and international customers, suppliers, subcontractors and strategic partners, particularly in Silicon Valley.

Chen comments that his transnational status provides him with a distinctive investment approach and style which contrasts with local venture capitalists. Chen explains that, *"generally speaking, China's venture capital firms are segmented into two groups, that is, foreign and local venture capital firms. Foreign investors have deeper international investment experience and broader overseas business networks, while local venture capitalists have better access to deals and are better equipped to due diligence transactions. Hina possesses both local deal sourcing and execution capabilities, as well as international business experience and networks. Moreover, because Hina Capital Partners is fully integrated with Hina's Investment Banking group, we are better equipped to source deals and help our portfolio companies in their corporate finance initiatives which include finding exit opportunities for our investments"*.

7.2.4 Case 4. Neil Shen and Sequoia Capital China

Neil Shen (also known as Shen Nanpeng) is a founder and Executive Partner of Sequoia Capital China, a US\$3 billion venture with the well-known Silicon Valley venture capital firm which invested in such outstanding companies as Cisco, Yahoo and Google.

Sequoia Capital China manages three funds³⁴ with \$1 billion under management. Shen co-funded Sequoia Capital China with Fan Zhang³⁵, who is a former Founding Management Partner.

Shen was born in 1967. He graduated from Shanghai Jiaotong University in 1989 in mathematical applications, going on to Columbia University to undertake his PhD. However, he became more interested in working on Wall Street and so transferred to Yale University to undertake a PhD. He was eventually hired by Citibank working in Latin America securities. However, following a clutch of IPOs by several Chinese firms in 1994 the few Chinese investment bankers working on Wall Street found themselves in demand. Chen received several approaches from head-hunters but continued working for Citibank where he enjoyed success. However, in 1996 he decided to take up a post as the China representative in the Hong Kong subsidiary of Lehman Brothers, the former 3rd biggest investment bank in the USA³⁶. Two years later he was hired by Deutsche Bank to become their Chinese regional director. At just 30 years old he was the bank's youngest director.

When the internet boom began, Shen was quickly able to appreciate its significance, as a result of his investment banking position, reinforced by the continuous stream of

³⁴ Sequoia China VC Fund I, Sequoia China VC Fund II and Sequoia China Growth Fund I

³⁵ Zhang was recently reported to have resigned from Sequoia Capital China in late 2008 in order to establish his own investment fund. Shen remains with the firm but is embroiled in a \$206m law suit with Carlyle Group who alleges he illegally thwarted Carlyle's planned investment in a Chinese medical research firm (Reuters, 2 February 2009).

³⁶ Lehman Brothers went bankrupt on September 15, 2008.

information he received from his former classmates. Shen reflects: *“my job on Wall Street made me view the holistic picture standing on top of the mountain which enabled me to grab the industry’s skeleton in a short period of time. This was the main reason I decided to go back to Shanghai with an initial idea for founding a travel website with my friends in Shanghai.”* Having decided that travel was the internet business that might work best in China, in 1999 Shen and his friend James Liang founded Ctrip.com International Ltd, an online travel agency offering airline tickets, hotel reservations and packaged tours, similar to Expedia.com. Shen and Liang were school friends. Like Shen, Liang also went to the USA to study, and then worked for Oracle in Silicon Valley where he recognized the importance for Chinese companies to embrace top-notch software and modern management practices. He returned to China in 1997 determined to put these ideas into practice in his own company. After several rejections Ctrip.com raised first round investment of \$430,000 from IDG. Five months later Softbank made a second round investment of \$4.5m, and in the following year The Carlyle Group invested \$11m. Ctrip.com went public on NASDAQ in December 2003.

In 2002 Shen led a team from Ctrip to found Home Inns, a hotel operator across China. Shen noted that *“from developing Ctrip we identified that there is a great need to provide hotel reservations. However, there are no economic hotels that provide high quality services for business travellers. That’s why we set up Home Inns”*. It currently operates 266 hotels across 66 Chinese cities. The Ctrip partners initially owned 55% of Home Inns with a state-owned hotel management company owning the remainder. These shares were reduced when Home Inns attracted venture capital investment. In

2006 the company went public on NASDAQ, just four years after starting and the second time in three years that a company founded by Shen achieved a stock market listing.

Shen resigned from his positions as CEO and CFO of Home Inns, in August 2005, before its IPO, to found Sequoia Capital China with former Draper Fisher Jurvetson Vice President Fan Zhang. Shen explained that his reason for doing this was “*My personal interest to help other Chinese entrepreneurs to grow quickly and healthily using my entrepreneurial experience accumulated since I was in Ctrip and Home Inns. I think that I can use these abilities as an investor.*”

Fan Zhang entered Tsinghua University at 18 to study computer science. Three years later he moved with his parents to the USA. Initially he studied at a community college but later transferred to Stanford University to complete an economics degree. He obtained a job with Goldman Sachs in Hong Kong as a financial analyst in the investment banking division. He notes that “*during my career at Goldman Sachs I had a big interest in investment. At that time I was helping Chinese enterprises to go public. The two important things I learnt when I was in Goldman Sachs were, first, financing plays a core role in the development of the whole company. Second, a good capital market will benefit the enterprises, economies and the countries.*” In 1999 Zhang returned to Stanford University to obtain an MBA, primarily because he wanted to immerse himself in the Silicon Valley culture. In 2000 he returned to China to become a Senior Vice President of Draper Fisher Jurvetson ePlanet Ventures, a \$700 million

global venture capital fund established by Draper Fisher Jurvetson, a prominent Silicon Valley based venture capital fund with over US\$2bn under management. Fan Zhang resigned from this post in 2005 to set up Sequoia Capital China with Neil Shen.

Sequoia Capital is one of the leading VC companies in the US. It had considered several ways in which it might enter the Chinese market but had never reached a conclusion about how to do so. When Sequoia did decide to partner with Shen and Zhang it was not only because of their previous successful entrepreneurial and investment experience but also because of shared values (Zhang, 2006). This was only Sequoia's second international move (after Israel) and was one of the earliest moves by a leading Silicon Valley venture capital firm into China (Ernst and Young, 2007). Shen notes that "*if Zhang and I had not had such kinds of experience, Sequoia Capital would not have trusted us and chosen us.*" The General Partners in Sequoia Capital China comprise both Chinese venture capitalists and also Sequoia's US team. However, Sequoia Capital China has total authority for investment decisions. As Shen notes: "*Sequoia Capital trust us, we use their brand, and we always communicate with our venture partners such as Don Valentine, Michael Morris and Doug Leone.*"

Sequoia now has a \$4 billion in assets under management³⁷. In Sequoia Capital China, Shen has a team of 24 investment managers with expertise in a range of different industry sectors and based in Beijing and Hong Kong and led them in making 65

³⁷ www.nasdaq.com

investments (by October 2010), mainly in consumer services, energy, healthcare, IT, media and the agricultural sector. The potential of the wide-open and fast-growing consumer market in China is why Shen has funded dozens of consumer-oriented start-ups, from hotel brands to sportswear makers to organic vegetable farms (Fannin, 2011). Proposition 2 of the networks between US investors and Chinese New Argonaut venture capitalists inform their investment focus is further rejected. Shen's ambition is to build the breakthrough enterprises in each emerging industry. Indeed Sequoia has been the most active investor in China between 2007 and 2010. Fifteen of its portfolio companies have had IPOs on the Hong Kong market, NASDAQ and New York Stock Exchange, including Country Style Cooking Restaurant Chain Co., Ltd (NYSE: CCSC), VanceInfo (New York, VIT), a pioneer and leader of the IT outsourcing industry in China, Renhe (HKEx: 1387.HK), a branded commercial property developer. This provides further support for proposition 7 that the networks that Chinese New Argonaut venture capitalists have with US investors and businesses enables them to take their portfolio companies to US markets for their IPOs rather than taking them public on the Chinese stock market. Shen explained at the summit, held at the Reuters office in Beijing³⁸ why Sequoia China's portfolios have diversified exit alternatives, *"If the companies receive investments from U.S. dollar funds, they may prefer listing abroad, which will be easier for foreign investors to exit. On the other hand, I see there are companies that are more willing to list themselves on the domestic stock exchange whereby they want renminbi*

³⁸ www.reuters.com, by Michael Wei and Doug Young, *Sequoia Sees China IPOs good deal-exit strategy*. Tue Sep 1, 2009, Beijing

funds (Chinese currency). Certain industries are better understood domestically, so there is a better investor base”.

7.3 THE ATTRIBUTES OF NEW ARGONAUT VCS

These case studies are archetypical illustrations of the profile of New Argonauts. All four individuals migrated to the USA to study for higher degrees in science and technology subjects, went on to work for blue chip technology companies and then started their own technology business, raised angel funding or venture capital, and grew the business either to the point where it achieved a NASDAQ listing or was acquired, and became extremely wealthy as a result. Some went on to start another company that also achieved a NASDAQ listing. They are all strongly networked in alumni and other associations, both in China and the USA. Shen deviates from the standard Silicon Valley ‘teckie’ profile of New Argonauts. He worked in the financial services sector and in Hong Kong, rather than in Silicon Valley technology companies where he developed an understanding of corporate finance. Shen set up his two companies in Hong Kong. This career path of New Argonauts provided them with significant assets to become successful venture capitalists.

7.3.1 Technology Experts

The four former entrepreneurs have deep domain knowledge of their field of technology and experience of working in leading edge global technology companies. For example, while working in Intel in the U.S., Feng participated in the development of several generations of Intel microprocessor and chip-set products and holds five U.S. patents in

computer system architecture and IC designs. Chen established Global Roaming Internet Consortium (GRIC) which focused on the global virtual network roaming, developing it to become the second biggest supplier in the world. Min has significant entrepreneurial experience in computer science and web communication area. He developed the "Interactive Multi-media Communication Technology", which allows companies to engage in real-time and asynchronous data conferences over the internet as well as share web-based documents and workspaces, regarded as the next generation of communication. Min had developed his technology expertise at the IBM Scientific Centre in Palo Alto after he had been studying his master degree in Engineering from Stanford University. These technology backgrounds enable them to evaluate the state-of-the-art technology business opportunities and make good investment decisions, therefore, proposition 4 that Chinese New Argonaut venture capitalists utilise the networks that they have set up with US investors and business communities especially in Silicon Valley in their evaluation of investment opportunities, is strongly confirmed.

7.3.2 Reputations as very Successful Entrepreneurs

These four entrepreneurs have reputations as successful entrepreneurs. For example, the acquisition of WebEx by Cisco provided Min with a global reputation for his business experience and outstanding innovation achievements and he became a role model for Chinese immigrant entrepreneurs. This fame not only attracted many good business projects from China and the U.S.A., but also brought him to the attention of American strategic partners. New Enterprise Associates (NEA), one of America's biggest venture capital firms specializing in start-ups, works closely with Min. Min has benefited from

the long-term coordination with Silicon Valley Bank and others. Now he is ambitious to help the portfolio companies build global enterprises with the resources he possesses. Similarly, Feng is a recipient of the 2002 Ernst & Young Entrepreneur of the Year Award for Northern California. Feng's high profile has attracted NEA and Greylock, one of the oldest private venture capital firms with over \$2 billion under management and it has operations in the Bay Area, Boston, China, India and Israel, as the anchor investors in Northern Light Venture Capital. Furthermore, Neil Shen was chosen by Michael Moritz in Sequoia Capital USA as one of the founding managing partners to set up Sequoia Capital China, because he worked in the investment banking industry for more than eight years in New York and Hong Kong, and he co-founded Home Inn, a leading economy hotel chain in China listed on Nasdaq, and Ctrip.com, a Nasdaq-listed consolidator in China. Shen believes his working experience in America and reputation are important reasons why Sequoia Capital USA chose him as a strategic partner in China.

7.3.3 Experience of the Entire Entrepreneurial Process from Start-up to Harvest, and Specifically the IPO Process

All the New Argonauts have built up their firms from scratch in Silicon Valley or in Hong Kong. They all had experience of raising funds from business angels and venture capital investors. New Argonauts understand the role of the venture capital process and the importance of the harvest event as their previous companies have been listed on the capital market abroad. Now, they use their experience of the entire entrepreneurial process to help start-up teams to become industry leaders and to harvest especially in

overseas capital market. For example, Northern Light Venture Capital has invested in 56 early stage firms, which are at early-stage, in clean technology, TMT, semiconductors and consumer services fields. Three portfolio companies including the hotel chain China Lodging Group Ltd., Actons Semiconductor, a producer of audio and multimedia chip set solutions, and Spreadtrum Communications, a fabless semiconductor company developing digital wireless communications products, went IPO on Nasdaq. Moreover, since its inception in 2005, Sequoia China has invested seventy-one portfolio companies in TMT, consumer service, healthcare and new energy industries, of them, five went public on Nasdaq, three are listed on New York Stock Exchange, five went IPO on Hong Kong Stock Exchange, and one was listed on China Growth Enterprise Market. Interestingly, nine out of fifteen Sequoia-invested companies went public in 2010.

The majority of New Argonauts' portfolio companies have been listed on US equity markets. Proposition 7 on the networks that Chinese New Argonaut venture capitalists have set up with US investors and businesses enables them to take their portfolio companies to US market for their IPOs rather than taking them public on the Chinese stock market is strongly confirmed. It also confirms that the presence of foreign venture capitalists and top managers with foreign experience increases the probability that a portfolio firm will list on foreign markets (Mäkelä & Maula, 2006). Furthermore, American exchanges are the natural springboard for foreign companies with a strong export orientation, since it allows them to capitalize on their product market reputation and expand their foreign sales rapidly, possibly via acquisitions in the United States (Pagano et al., 2002).

7.3.4 Strong Networks both in China and the US.

New Argonaut venture capitalists remain deeply embedded in both China and Silicon Valley through their social, professional and ethnic networks. For example, Chen, Feng, and Min are the three former chairs of the Hua Yuan Science and Technology Association (HYSTA), one of the largest and most influential of the Chinese high-tech business associations. HYSTA, which is based in Silicon Valley, has more than three thousand members, with chapters in Beijing and Shanghai. Chen served as the founding president from 2000 to 2003. HYSTA plays an important role in facilitating business collaborations. For example, the partnership between YAHOO and Alibaba (a Chinese customer to customer business website) came about as a result of this association. Lenovo (a Chinese PC producer which acquired IBM's PC division) recruited their senior employees through the association's help. Chen, Feng, and Min are now actively involved in the venture capital business in China and their venture capital firms collaborate closely with each other.

Their transnationalism has enabled New Argonaut investors to use their networks to provide their investee companies with access to resources (skills, technology, capital and management talent), potential customers, specialised suppliers and partners. New Argonaut venture capitalists constantly fly to the U.S. to attend on-site, annual meetings to meet their American peers and to attend technology forums. It also ensures that their technical and business know-how is continually refreshed. In addition, local connections and professional networks remain extremely important in China's market. This places

U.S.-trained Chinese, with business connections and local knowledge on both sides of the Pacific, in a great position to create tomorrow's successful, global enterprises (Roberts, 2007).

7.3.5 Bridging the Gap

New Argonaut venture capitalists not only facilitate the technology development and economic growth in China, but also use their transnational status to build a bridge of knowledge transfer between American and Chinese universities.

As one of the outstanding alumni of Zhejiang University, Min donated \$10 million to the University, and set up Zhejiang University Innovation Institute (ZII), a non-profit organization, dedicated to global innovation and entrepreneurial exchange, commercializing university R&D efforts and nurture local entrepreneurship³⁹. Min explains the motives for his donation as follows: *“I see it as our obligation to give back to my country and people. My wife and I want to create the Zhejiang University Innovation Institute, International which is modelled after Stanford Research Institute to help incubate new companies and commercialize university innovations. It is also a platform for international exchange, especially with Stanford University, my other alma mater.”* (Fu, 2008).

³⁹ www.zii-china.org

Feng, an alumnus of Tsinghua and University of Southern California (USC), donated 10 million RMB (around \$1.5 m) to Tsinghua University in 2004. He also sponsors the Tsinghua University Annual Start-up Competition to encourage students to set up their own businesses. Moreover, to attract the best Chinese students who are studying at the top business schools in the U.S., such as Harvard and MIT universities back to China to join venture capital or private equity industries, Feng has co-ordinated with other venture capital firms to create a venture capital and private equity workshop. Every summer, they sponsor 50 students to come back to China to attend the workshop, to receive essential training of venture capital concepts, to meet high profile venture capitalists in China, and to do internship in different venture capital firms. Furthermore, Feng sponsors USC Viterbi School of Engineering and Tsinghua University's annual workshop. Through Feng's sponsorship, the faculties from the two schools alternately gather in China and California to discuss green and smart energy. The workshop series was launched four years ago and continues to date⁴⁰. This allows several Viterbi and Tsinghua students who are selected each summer to visit and study at the partnering campus for five to eight weeks. Viterbi Senior Associate Dean Cauligi Raghavendra says, *"That exchange has paved the way to bring a number of undergraduates from Tsinghua to Viterbi School graduate programs"*⁴¹.

⁴⁰ <http://viterbi.usc.edu/news/news/2010/usc-and-tsinghua.htm>

⁴¹ <http://viterbi.usc.edu/news/news/2010/usc-and-tsinghua.htm>

7.4 CONCLUSION

This chapter has highlighted four investors as case studies to describe the important contributions they have made to the development of know-how, economy and innovation in China. Having returned to China these New Argonaut investors have transferred their first-hand knowledge of the Silicon Valley entrepreneurial eco-system and the institutions needed to support indigenous economic development. They possess the deep domain knowledge of their field of technology and experience of working in leading edge global technology companies, and they therefore accelerate independent innovation and encourage the rise of start-ups in China. Their cross-border connections are bridging the gap between Chinese inexperienced entrepreneurs and American suppliers, customers, investors. This chapter has therefore provided further descriptions and deepened the understanding of the profiles of New Argonaut as venture capitalists and their transnational effects on their investment processes, and providing further support for propositions 1, 2, 3, 4, 5, 6 and 7 (Table 15).

Table 15 The Propositions Supported by Case Studies

	P 1 Fund raising	P2 Investment focus	P3 Deal sourcing	P4 Deal evaluation	P5 Co- investment	P6 Value-added contributions	P7 Exit
Case 1	√	√	√	√	√	√	√
Case 2	√			√	√	√	
Case 3				√	√	√	
Case 4		√				√	√

CHAPTER 8 CONCLUSION

8.1 INTRODUCTION

This study has been inspired by “The New Argonauts” written by AnnaLee Saxenian (2006), an American economic geographer. Saxenian defines New Argonauts as talented immigrants from developing countries, in particular, Taiwan, Israel, China and India. They initially came to the US to earn a graduate degree in engineering, accepted jobs in Silicon Valley rather than returning home, where professional opportunities were limited. Florida’s study (2007) found that by the early 2000s, nearly a third of all graduate students in science and engineering in the USA were from outside the U.S., including more than half of all PhDs in engineering, computer science, life science, and physical science. This migration of talented youth from developing to advanced countries has traditionally been seen as a “brain drain”.

Over the past ten years or so it has been observed that a substantial number of highly skilled immigrants have started returning to their home countries, including persons from low-income countries such as India and China (Wadhwa et al., 2009). These highly skilled emigrants are now increasingly transforming the brain drain into “brain circulation” by returning home to establish business relationships or start new companies while maintaining their social and professional ties to the U.S. (Saxenian, 2006). They

bring back their accumulated capital, technical and operating experience, cultural and linguistic know-how, first-hand knowledge of US capital markets and business models, and networks of contacts to peripheral regions (Saxenian, 2005). However, these returning entrepreneurs retain their links with colleagues and businesses in the United States by maintaining regular contact communication and visits to them. This enables them to become a critical link in boosting the technology development capacities of the home countries and boost indigenous entrepreneurship.

The transnationalism of New Argonauts is particularly significant (Saxenian, 2006). They continue to maintain close professional relationships with the USA, particularly through ethnic professional associations, which complement their professional networks at home, and often maintain business involvement in both countries, necessitating travel back and forth on a frequent basis, with some even maintaining residences and citizenship in the USA. As a result, they are able to exploit entrepreneurial opportunities based on combining technological knowledge, market information and institutional knowledge, with their home country's resources and under-utilised technical skills (Saxenian, 2005; 2006). In Yeung's (2009a) terms, New Argonauts are "transnationalizing entrepreneurs", a particular form of entrepreneurship embodied in specific actors who transcend multiple spaces, territories and scale by moving across spaces and territories.

Rather than focusing on New Argonaut entrepreneurs as Saxenian does, this study extends and deepens the New Argonaut concept by focusing on those New Argonauts

who have become venture capitalists after returning to China. It is an established fact that venture capital is a critical factor in the development of high growth entrepreneurship. The agency theory is considered as the most important theory in understanding the mechanisms of venture capital investment in the existing literature. There are two agent relationships involved in the venture capital industry, i.e. the relationship between the venture capitalist and their fund providers (limited partners), and the relationship between the venture capitalist and the entrepreneur, so the converse selection and moral risk will exist in the operation of portfolio firms because of asymmetry of information. Moreover, opportunistic behavior of managers is more likely in emerging markets due to the high costs of obtaining information for monitoring (Hoskisson et al., 2010). As a result, investors may defer investments in high information asymmetric projects (Lu et al., 2011). This study suggests that the transnational networks between the US and China might assist returning Chinese venture capitalists, who have earned a reputation for integrity and success in the field, to overcome the problems that agency costs to the venture capital investment process.

This research aims to examine the role played by New Argonauts in developing a venture capital industry in the context of Chinese market; to explore how their embedded networks between Silicon Valley and China might influence and shape their investment process, and to assess their economic contributions to China's economy. This research therefore raised the question: *In what ways do Chinese New Argonaut venture capitalists use their transnational networks in their venture investment process, such as fund raising, investment focus, deal sourcing, deal evaluation, co-investment, value-*

added contributions, and exit to minimize agency costs?

Based on a review of the literature, the following propositions were made:

Proposition 1 Fund raising: *The networks that Chinese New Argonaut venture capitalists have set up with US investors and business communities enable them to raise funds from the US market.*

Proposition 2 Investment focus: *The networks that Chinese New Argonaut venture capitalists have set up with US investors and business communities provide them knowledge about emerging technology trends, new business models and business developments which inform their investment focus.*

Proposition 3 Deal sourcing: *The networks that Chinese New Argonaut venture capitalists have set up with US investors and business communities, and their frequent travel to and from the U.S. enable them to access a more geographically diverse deal flow.*

Proposition 4 Deal evaluation: *Chinese New Argonaut venture capitalists utilise the networks that they have set up with US investors and business communities especially in Silicon Valley in their evaluation of investment opportunities to avoid investing in bad projects.*

Proposition 5 Co-investment: *The networks that Chinese New Argonaut venture capitalists have set up with US investors and business communities enable them to bring US investors into their deals and to minimize agency costs.*

Proposition 6 Value-added contributions: *The networks that Chinese New Argonaut venture capitalists have set up with US investors and business communities, combined with their own technical and operational experience, enable them to provide value-added to their portfolio firms by creating relationships between them and international customers, suppliers, strategic partners and highly-talented managers, particularly in Silicon Valley.*

Proposition 7 Exit: *The networks that Chinese New Argonaut venture capitalists have set up with US investors and businesses enable them to take their portfolio companies to US markets for their IPOs rather than taking them public on the Chinese stock market.*

Based on a sample of 36 New Argonaut venture capitalists in 28 venture capital firms based in Beijing, Shanghai, and Shenzhen, seven propositions were tested with empirical data findings derived from semi-structured in-depth interviews. From this evidence the

following propositions were supported: 1, 4,5,6,7 were strongly supported. Proposition 2 was partially supported, and there was a weak support of proposition 3.

8.2 DATA COLLECTION METHODS

The study was based on three sources of data: semi-structured in-depth interviews, case studies, and secondary sources. The primary source of information was semi-structured interviews. This approach was chosen because it allows for answering the first and second research sub-questions: to build an understanding of their roles in developing venture capital industry in China and to test seven propositions of venture capital process. A total of 33 returnee venture capitalists and 3 returnee business angels in 28 venture capital firms were interviewed over the period of March - April 2008 and October - November 2009 in Beijing, Shanghai, and Shenzhen. One interview was carried out in Paris in January 2009. The interview format included face-to-face, telephone and email interviews. The average interview lasted between 45 minutes and over an hour. Twenty three respondents were contacted using snowballing approaches. This approach was used because in China *guanxi*, or a relationship building, is extremely important. Snowballing therefore helps with access. 4 respondents were selected purposefully because purposive sampling calls for selecting participants with specific characteristics (Lincoln & Guba, 1985). The rest of the respondents were chosen randomly in 2008 China VC and PE Forum held in Shenzhen. Some respondents were contacted again via email to verify the validity of the transcriptions.

These interviews were complemented by cases studies of four outstanding New Argonauts venture capitalists, who were previously successful start-up founders in Silicon Valley or Hong Kong, and current founders of venture capital firms in China. The purpose of these case studies is to answer the second and third research sub-questions: the proposed seven relationships and their impact on the venture capital investment approach; and to illustrate the key role of such individuals in contributing an effective venture capital industry in emerging markets. As a result, four case studies together with 36 in-depth interviews allow for the discussion of empirical findings in much more depth and in greater detail. Case 1 Feng Deng and case 2 Min Zhu were from 36 in-depth interviews with the same questions in order to meet the consistency of the study. Other two cases, case 3 Dr. Hong Chen and case 4 Neil Shen were derived from the secondary data including venture capital companies' websites, news media and press releases, and articles from the on-line magazines such as Financial Times, the Wall Street Journal, China Venture, Zero2IPO etc.

The semi-structured interviews were translated from Chinese to English and then transcribed, and at the same time, field notes, memos, venture capital firms' websites, news releases, and media articles were examined to verify and complement the primary data. Then the transcriptions were inputted into NVivo software. Six tree nodes were built under the six categories: respondent profiles, overseas work experiences, New Argonauts' venture capital firms, their investment processes, transnational networks and their travel to the U.S. In the end, the relevant quotation was clustered under their children nodes. The similarities and the differences of the quotations were compared,

and as a result, seven propositions were tested. Next, a detailed report on each of the four case studies was written. The primary and secondary data for each case were analyzed by reviewing the thematic data to identify the evidence on the themes relating to transnationalism and investment process. In the meantime, the propositions on the transnationalism in each stage of the investment were also reviewed. By using cross cases, the propositions from the analysis of the data by NVivo were further corroborated.

8.3 SUMMARY OF KEY FINDINGS

8.3.1 Profiles of the New Argonaut Venture Capitalists

The profile of the typical New Argonaut venture capitalists is characterised as follows:

Nationalities: New Argonaut venture capitalists are China-born, typically went to school and university in mainland China, and then moved to the USA or another country for postgraduate study and subsequently obtained employment. Having lived in the USA for several years, one-third of them changed their nationalities to become American citizens. The remainder kept their Chinese nationalities, although a small proportion of them hold American green cards or Hong Kong permanent identity cards, which allow them to easily travel around the world.

Gender: The vast majority of New Argonaut venture capitalists (30) are male, with only six (17%) women engaged in the venture capital industry. Compared with 8.8 percentage of women in the venture capital industry in 2000 in the US (Brush et al.,

2002), this indicates that nowadays more women are engaged in the venture capital industry at senior levels in China.

Age Group: New Argonaut venture capitalists are mainly in the 35-54 year age group. This reflects the length of time required to build their working and entrepreneurial experience and reputation. Few of the returnees who were interviewed are in the age group of 25-34. These people started their careers at junior levels in the venture capital firms such as associates or analysts.

Reasons for Leaving China: Most respondents went to the U.S. to study for a postgraduate degree because of its high quality education, studentship funding opportunities, cutting-edge technology and advanced scientific research facilities. Other key factors such as higher earnings after graduation, better quality of life in America, together with poor personal development opportunities, and Tiananmen Square Protests in 1989 in China, have also pushed young Chinese talent to the U.S. or other countries.

Academic Degrees: Most New Argonaut venture capitalists graduated from Chinese prestige universities such as Tsinghua University, Beijing University, and Zhejiang University etc. They then received government scholarships or American university studentships to study Masters or PhD degrees at US universities where they studied science, technology, engineering, and mathematics (STEM)-related disciplines. Some subsequently studied for MBA degrees after working for a few years. Finance and

Economics, English Literature, Physics and Biochemistry were other subjects chosen by Chinese immigrant students.

Working Experience in the USA: Most New Argonauts worked in Silicon Valley, becoming senior managers or CEOs in multinational companies and later some started their own technology companies. Wadhwa et al. (2007) confirm that 25% of engineering and technology companies founded in the USA between 1995 and 2005 had at least one founder who was foreign born and over half of all Silicon Valley start-ups has at least one immigrant as a key founder. The proportion of Indian or Chinese founders was 28%. Seven respondents in this study have had successful experience of setting up internet - related high technology firms in Silicon Valley. Their businesses grew either to the point where they achieved a NASDAQ listing or were acquired, and these respondents became extremely wealthy as a result. Some went on to start another company that also achieved a NASDAQ listing. They are all strongly networked in alumni and other associations, both in China and the USA. However, some New Argonauts deviate from this standard Silicon Valley profile of New Argonauts. These New Argonauts worked in the financial services sector and in Hong Kong or Wall Street; or they worked as business consultants in McKinsey and Co. or Boston Consulting firm, rather than in Silicon Valley technology companies, where they developed an understanding of corporate finance, or business consulting.

Reasons for Leaving the U.S.A.: In recent years, China has experienced rapid economic development. It now offers a better quality of life and professional opportunities, and

offers opportunities for middle- and upper-class standards of living not previously available (Wadhwa, et al., 2009). Having focused on independent innovation, China's government is now making a strong effort to lure back Chinese talent from abroad, especially those engaged in cutting-edge technologies (IT, new energy etc), by providing incentives such as returnee science parks, tax incentives, house and car subsidies, start-up funding up to 1 million yuan (around \$147,500) and through overseas job fairs. Family reunion and the desire to reconnect with their roots while making a contribution to nation building are also powerful magnets for returnees. Other key factors inducing these individuals to return to China include the difficulty of getting or renewing H1B visas in the United States after September 11, 2001, the bursting of the internet dotcom bubble and the resulting economic downturn in the United States, the greatly enhanced research and career opportunities in China, and the achievement of a specific goal such as completing a MBA or Master degree in Computing Science.

8.3.2 Typology of the New Argonaut Venture Capitalists

Based on their educational degrees and career paths, five types of New Argonaut venture capitalists were identified in this study.

The first type is the New Argonaut venture capitalist with **a technical background and operational experiences**. These New Argonaut venture capitalists obtained Science and Engineering degrees, had rich working experience in technology industries such as Microsoft, Intel, IBM, and Cisco in Silicon Valley, then set up their own businesses in

Silicon Valley, and in some cases led their venture to an IPO listing. They then returned to China to found venture capital firms or, by using their contacts with previous classmates or colleagues, joined an existing venture capital firm as a Managing Director.

The second type is New Argonaut venture capitalists with **financial backgrounds and investment banking or consulting experience**. They studied Economics or Finance, and then worked for consulting companies such as McKinsey and the Boston Consulting Group or for investment banks such as Goldman and Sachs; Merrill Lynch after their MBA or master degrees in Ivy League business schools in America or other countries, continuing their careers in the venture capital investment industry as a partner or a founder or an investment director after returning to China.

New Argonaut venture capitalists with **biochemistry backgrounds and investor experience** are the third type. They studied for a PhD in Biochemistry in elite American universities such as MIT and Harvard, and then worked in the U.S. in large consulting companies such as McKinsey and Boston Consulting Group., then went to back to China to join venture capital firms as partners or set up their own venture capital firms.

The fourth type is New Argonaut VCs with **law backgrounds and investor experience**. They studied law in Ivy League universities such as Yale Law School, and worked for lawyers or financial advisers, in which they have developed their interests and identified market opportunities in China, subsequently becoming venture capital investors.

The fifth type is **New Argonaut business angels**. Some New Argonauts have returned to China to be independent investors, investing their own money in entrepreneurial businesses. Some became investors undertaking their investments and play hands-on roles on their investee companies in their spare time while having full-time jobs such as venture capitalist or senior management position in other companies.

8.3.3 The New Argonaut Venture Capital Firms

One of the key themes in the New Argonauts literature is their role in promoting cross-region economic links by connecting the complementary capabilities of their home country with those of Silicon Valley. This feature is seen in the activities of New Argonaut venture capitalists, with most of their venture capital funds linking the Chinese businesses that they have invested in with resources from the USA. This has two dimensions. Some New Argonauts' venture capital funds have partnered with US venture capital firms to benefit from their complementary capabilities. New Argonauts' funds have better access to local investment opportunities and superior ability to undertake due diligence and post-investment monitoring which reduces risks for the US investor. They, in turn, have larger funds and so can provide follow-on funding and are able to draw upon their extensive networks to connect the Chinese businesses to customers, suppliers and strategic partners in the USA. Other New Argonauts' funds have invested on their own but used their cross-country cultural and international networks to help internationalize their investee businesses, for example, by embedding them in global supply chains (Yeung, 2009b). The contribution of New Argonaut venture capitalists to China's economic transformation is therefore extremely significant.

8.3.4 How Do the New Argonauts Use Their Transnational Status in Investing?

Five propositions of the effects of New Argonauts' transnational networks on their investment process in Chapter 3 were strongly supported (Figure 9), whereas proposition 2 was partially supported and there was weak support for proposition 3.

Proposition 1 Fund Raising: when U.S. funders tend to invest in China, it is difficult for them to monitor the prospects and understand the business of each individual investment because of information asymmetry. New Argonaut venture capitalists' previous track records of success of leading firms to exit and financial returns generated are important factors to encourage US funders to work with them who know how to reduce the agency costs. Based on the primary data, New Argonaut venture capitalists utilise several channels to raise their funds. 17 out of 28 (61%) New Argonaut venture capital firms participating in this study raised funds from their American strategic partners or global funds. 25% of the funds raised from American university endowments, 21% from American pension funds, 18% from US fund of funds, 14% from the venture capitalists themselves, and 7% from American high net worth families. Although New Argonaut investors have started to raise renminbi fund (21% of the companies participating in this study) from the Chinese market in recent years, the funds they raised were mainly from the U.S. market. As a result, proposition 1 of the networks that Chinese New Argonaut venture capitalists have set up with US investors and business communities enables them to raise funds from the US market, is strongly supported.

Proposition 2 Investment Focus: Out of the 36 New Argonaut venture capitalists being interviewed, 24 of them (67%) admitted that the close connections with American peers such as strategic off-site meetings, annual reviews, forums in Silicon Valley, introduce them to new technology trends. And 21 of them argued that the visiting innovative start-ups based in Silicon Valley, face-to-face discussions and weekly or monthly meeting with entrepreneurs, their American peers or business communities provides them with knowledge of viable business models and possible new business development in the American market. However, the investment sectors (e.g. IT, cleantech, or consumer driven industries) and investment stages (early, growth or late stages) mainly depend on Chinese macro-environment factors such as government incentives, market trends, and consumers' needs and consequently, each venture capital firm's investment strategy and principles. It is not directly related to transnational networks. Therefore, only part of proposition 2 that the networks that Chinese New Argonaut venture capitalists have with US investors and communities provides them with knowledge about emerging technology trends, new business models and business developments, are confirmed. As a result, proposition 2 is partially supported.

Proposition 3 Deal Flow: Most of the sources of deal flow (83%) to New Argonaut venture capitalists come from local networks or *guanxi* such as venture capitalist and private equity peers, financial advisers, lawyers, entrepreneurs and relevant industry associations. They are not, therefore, linked to their transnational networks, except that six New Argonaut venture capitalists (17%) interviewed have strategic partnership or

joint-ventures with American venture capitalists. The New Argonauts do have business projects recommended to them by their American peers. Their cross-border networks including former colleagues in blue chip technology companies, venture capitalists or business angels they had raised funding from, also introduce business projects, mainly in the USA, to New Argonaut venture capital firms. Hence, there is weak support for proposition 3, which suggests that the networks Chinese New Argonaut venture capitalists have set up with US investors and business communities, and their frequent travel to and from the US, enable them to access a more geographically diverse deal flow.

Proposition 4 Deal Evaluation: Their previous technical background, entrepreneurial experience and good understanding of the Silicon Valley entrepreneurial eco-system has enabled most New Argonaut venture capitalists' (78% of the interviewees participating in this study) to evaluate business projects from unique angles and with a global perspective. Moreover, for twenty New Argonaut venture capitalists (56% of the interviewees participating in this study) who have partnerships with American venture capital firms, the connections between them and American venture capital industry can be important and may bring New Argonaut investors awareness of American industrial trends, cutting-edge high-tech products, new business models, and help them avoid investment failure if American peers have invested in similar hi-tech companies and received no return. Proposition 4 which suggests that Chinese New Argonaut venture capitalists utilise the networks that they have set up with US investors and business

communities especially in Silicon Valley in their evaluation of investment opportunities to avoid investing in bad projects is strongly confirmed.

Proposition 5 Co-investment: For foreign investors, investing in China contains higher uncertainty and risks such as unstable and inconsistent regulations, intellectual property theft, the different accounting rules from international accounting standards, limited exit channels, possible entrepreneurs' moral hazard, and the uniquely complicated Asian culture of *guanxi*. It can be costly in terms of time and money to enter the Chinese market without co-investing with local investors. To overcome these obstacles, foreign venture capital firms tend to syndicate with a venture capital firm led by a team of returnees because of risk sharing, their understanding of the US venture capital system, better culture and linguistic communication, their superior ability to undertake due diligence which reduces information asymmetry, and post-investment monitoring which reduce moral hazard issues of entrepreneurs. Twenty-four out of the 28 (86%) New Argonaut venture capital firms claim they co-invest business projects with foreign venture capital firms. As a result, proposition 5 which suggests that the networks that Chinese New Argonaut venture capitalists have set up with US investors and business communities enable them to bring US co-investors into their deals and to minimize agency costs, is strongly supported.

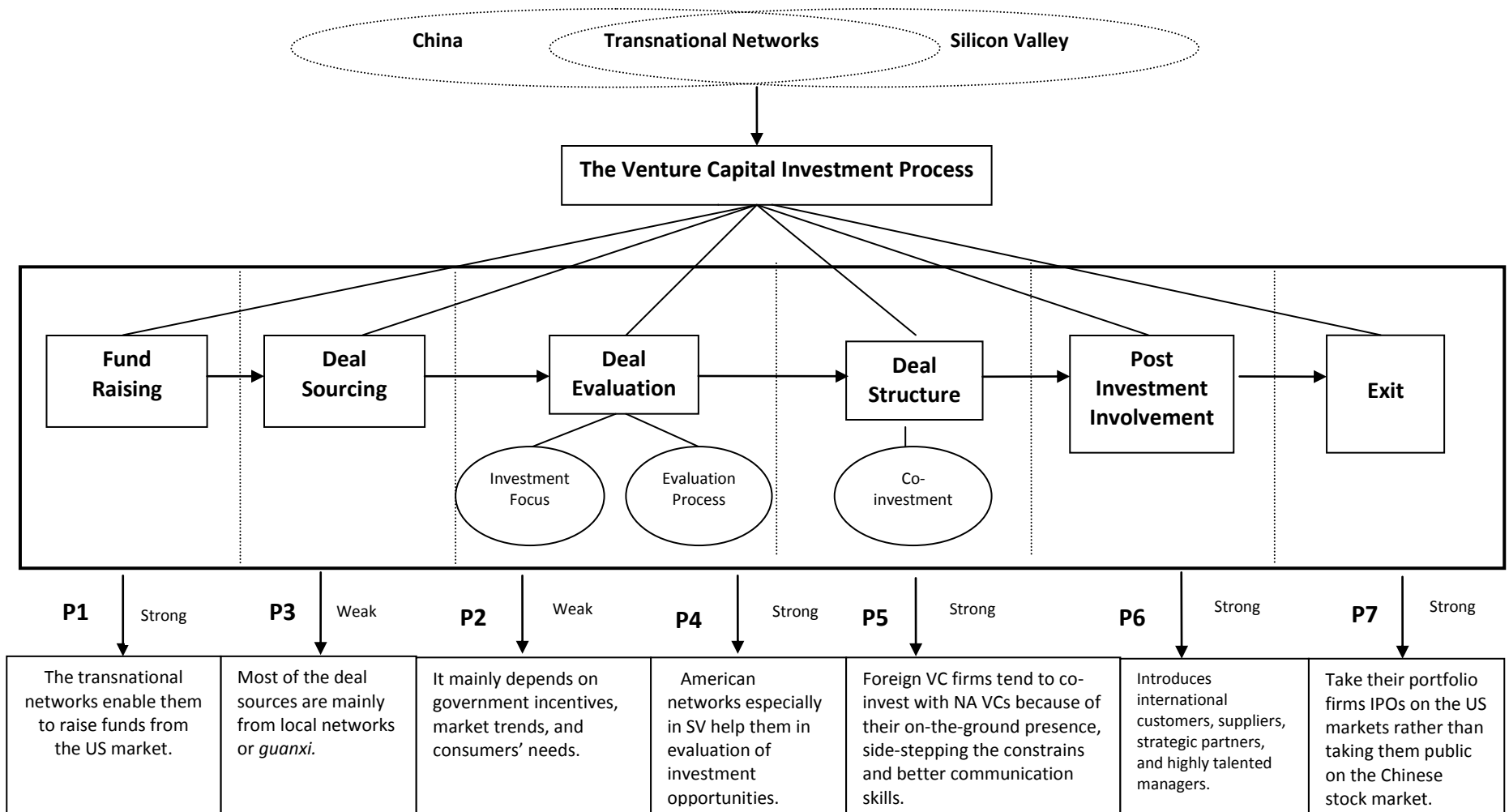
Proposition 6 Value Added: New Argonaut venture capitalists are actively involved in their portfolio companies. From the primary data, out of the 28 New Argonaut venture capital firms, 20 firms (71%) are actively involved in their portfolio companies for

value-adding services. They leverage their prior business experience as entrepreneurs, technical experts, consultants, lawyers, investment bankers or senior managers to provide Chinese nascent entrepreneurs with American advanced business concepts, and successful business models proven in the U.S. They also provide their portfolio companies with access to their extensive network of relationships such as customers, suppliers, subcontractors, entrepreneurs, technologists, corporate executives and strategic partners throughout the U.S. and Asia. Moreover, New Argonaut venture capitalists provide Chinese businesses with strategic guidance from business development planning, corporate governance, organization structure, to financial management or rebuilt accounting system in order to enhance their international competitiveness, and therefore accelerate success in this fast-paced global business environment. As a result, proposition 6, which suggests that networks that Chinese New Argonaut venture capitalists have set up with US investors and business communities, combined with their own technical and operational experience, enable them to provide value-added to their portfolio firms by creating relationships between them and international customers, suppliers, subcontractors and strategic partners, particularly in Silicon Valley, is strongly confirmed.

Proposition 7 Exit: Many early Chinese start-ups financed in dollars by American investors co-ordinating with Chinese teams were set up offshore, usually in the Cayman islands, allowing them to be listed on NASDAQ or NYSE. Moreover, New Argonaut venture capitalists may use their knowledge and understanding of the procedure of overseas capital markets from their previous own experience and transnational networks

to help portfolio companies exit through IPO mainly on the American equity markets. Based on the primary and secondary data, between 2005 and 2011, there were 32 (36%) Chinese New Argonaut venture-backed companies listed on NASDAQ, and 14 IPOs (16%) on the New York Stock Exchange. The Hong Kong Stock Exchange and China Growth Enterprise market garnered 27 (31%) and 14 (16%) listings respectively. 1 portfolio company (1%) was listed on the London AIM equity market. American stock exchanges including NASDAQ and NYSE are the main channel in supporting young Chinese hi-tech start-ups to exit, accounting for 52% (46) of all New Argonaut venture-backed IPOs. Therefore, proposition 7 which suggests that networks Chinese New Argonaut venture capitalists have set up with US investors and businesses enable them to take their portfolio companies to US markets for their IPOs rather than taking them on the Chinese stock market, is strongly supported.

Figure 9 Suggested Model of Venture Capital Investment Process Affected by Transnationalism



8.3.5 The Role of New Argonaut VCs in the Development of Venture Capital in China

The entrepreneurial experiences, technology and business knowledge, networks and strong transnational status of New Argonaut venture capitalists have enabled them to successfully establish venture capital funds in China, which in turn has made a significant contribution to Chinese economic and technology development. Firstly, they have been attractive partners for American venture capital firms wishing to invest in China, because New Argonaut venture capitalists have better access to local investment opportunities and superior ability to undertake due diligence and post-investment monitoring which reduces risks for the US investor. Secondly, they have been able to use these relationships with US venture capitalists and others in the USA to access resources to support the growth of their investee companies, enabling them to internationalize or to participate in global production networks. Thirdly, they have attracted foreign venture capital skills and finance to China. They are providing Chinese businesses with technological, marketing and organizational know-how and market connections to enhance their international competitiveness. Fourthly, some New Argonaut venture capitalists, who were successful entrepreneurs in Silicon Valley, utilize their entrepreneurial experience to help portfolio companies to exit specifically on overseas equity markets. So far, they have backed and facilitated the development of Technology, Media and Telecommunications sectors (TMT), new energy, Internet Technology (IT), health care and consumer service sectors. Successes such as Baidu (Chinese google) and Alibaba.com (c2c website), Focus

Media, (digital media advertising) have increased the competitiveness of the Chinese economy. Last but not least, although venture capital investments are highly concentrated in a few metropolitan cities such as Beijing, Shanghai, Guangzhou, Shenzhen, many of the New Argonaut venture capitalists are now paying attention to the second or third tier cities such as Chongqing, Suzhou or Nanchang etc, and so are actively facilitating regional economic development. The contribution of New Argonaut venture capitalists to China's economic transformation is therefore extremely significant. In particular, New Argonaut venture capitalists investing in early, growth stage hi-tech companies are playing a critical role in developing venture capital in China. This is playing an essential role in the innovation system and regional development, overcoming significant constraints that have limited economic development in China.

8.4 THE NEW ARGONAUT VENTURE CAPITALISTS' MODEL

Whereas Saxenian presented a profile of New Argonauts as being homogeneous, this study identified five distinctive types. The first type of New Argonaut venture capitalists are those with technical backgrounds and operational experience. They match those identified by Saxenian. They are the first generation of China-born, and America-trained talent. They obtained engineering degrees in both Chinese and American universities and then gained working experience in technology industries in Silicon Valley. These New Argonaut venture capitalists are successful entrepreneurs who used the wealth and networks that they accumulated to create venture capital funds in China. They have used their first-hand knowledge of Silicon Valley's entrepreneurial eco-system and technological and operational experience to

facilitate China's rapid economic development by supporting innovative entrepreneurs. By enhancing the entrepreneurial environment they make an equally significant contribution to the Chinese economy to that of Saxenian's New Argonauts.

However, the other types of New Argonaut venture capitalists differ from Saxenian's New Argonauts in several ways. First, unlike Saxenian's New Argonauts who graduated in engineering in the USA, the other types gained their Masters or PhD degrees in a wide range of subjects such as Computer Science, Finance and Economics, Biochemistry, and even English Literature. Some obtained an MBA degree at top business schools in the U.S. after their Masters or Doctoral studies. They then worked in a range of occupations including software engineering, engineering, investment banking, lawyer, and business consultancy. Moreover, the country to which they moved is not limited in the USA, but also includes the U.K., Australia, New Zealand, Canada, France and Japan. Thus, their working experience includes not just Silicon Valley but also Wall Street and cities such as London, Paris, and Hong Kong. Their career paths are therefore based on a wider range of choices than Saxenian's New Argonauts who are restricted to the information technology industry. They are equally as effective as the first type of New Argonauts investors or Saxenian's New Argonauts. They have financial, biochemistry and law backgrounds, they possess consulting, investing, and management experience, like the first type of New Argonauts, they understand the Silicon Valley entrepreneurial eco-system, and some of them are also embedded in social and professional networks in the U.S. and China. Their assets have still enabled them to overcome the

challenges encountered by both domestic and foreign venture capital firms in investing in China. In a nutshell, all types of New Argonaut venture capitalists have been critical players in the recent development of an effective venture capital industry in China.

8.5 RESEARCH CONTRIBUTIONS

This study makes a number of contributions to the existing body of research. First, it has extended the story of Saxenian's New Argonauts (2006) from simply that of returnee technology entrepreneurs to include others who have returned to become venture capitalists. The study therefore provides the first in-depth analysis of returnee venture capitalists in China. As such, it also makes an important contribution to the growing literature on the emergence and operation of the Chinese venture capital industry (e.g. Bruton & Ahlstrom, 2003; Dauterive & Fok, 2004; White et al., 2005; Liu et al., 2006; Ahlstrom et al., 2007; Pukthuanthong & Walker, 2007; Guo, 2008; Xiao & Ritchie, 2009). Second, the study has provided a more nuanced profile of New Argonauts by identifying different types of New Argonaut venture capitalists in terms of their educational backgrounds and previous working experience. Third, little attention has been paid to the transnational entrepreneurship in international business studies (e.g. Pores et al., 2002; Drori et al., 2009; Yeung, 2009), in particular, how transnational entrepreneurs transcend spaces and territories. New Argonaut venture capitalists enhance their ability to evaluate and add value to their portfolio firms by closely connecting with American venture capitalists and business communities. This study therefore, to some extent, provides insights of transnational venture capitalists for economic-geographical research. Fourth, venture

capital has become an international phenomenon. And there is a major research gap in terms of crossing of country borders by venture capital firms (Wright et al., 2005). This study reveals a new dimension to how venture capital is international, particularly in the developing economy. Finally, the study addresses the lower rates of brain circulation which is less prevalent than expected. This phenomenon was mainly caused by domestic economic factors in the developing economies. This study suggests how Chinese policy makers can lift these economic barriers and attract talented individuals back to the country and help the healthy growth of New Argonaut venture capital firms.

8.6 LIMITATIONS OF THE STUDY

This study has several limitations. First, it is very difficult for researchers conducting interviews with venture capitalists in China, because venture capitalist are very busy, meeting with the entrepreneurs, evaluating their business projects, and discussing their potential business projects and their current portfolio companies' latest information with their team members. It is not easy for them to find a convenient time for an interview. Indeed, some venture capitalists fly to different cities every week or to the U.S. quarterly and even when they promised to be interviewed and set up the appointment time, a few of them changed the appointment time constantly because of their hectic schedules. Furthermore, some venture capital firms want to keep low key or keep their investments confidential because of fierce competition with other venture capital firms. A few firms do not allow the investment managers to accept interviews. In addition to these problems, venture capitalists are unwilling to accept interviews especially in academic research conducted by the research

students. For most venture capitalists, as an agent, they tend to use limited fixed time to maximize their investment return; academic research cannot help them to increase or improve their profits, unless it provides international media exposure such as through Red Herring, Financial Times or business interviews by Chinese local TV channels, which can promote their firms domestically and internationally.

The second limitation may occur during the process of data translation. The interview questions were designed in English, and were amended by a native English speaker. They were then translated into Chinese⁴². A pilot study was undertaken with a Chinese traditional venture capitalist. However, during the translation of the transcription stage from Chinese to English, the original meanings of respondents might be lost, although a number of respondents amended their transcription of interviews in English. Another concern is about the samples in the case studies. The disadvantage of this approach is that all four cases are very well-known individuals in China who are media targets and have numerous business interests, meaning that they are very busy, creating access problems. This is compounded in China by the frequent need to establish a relationship with a potential respondent before being able to conduct an interview. It is therefore perhaps unsurprising that only two of them were interviewed. Thus, for the others the secondary data including each of the company's websites, on-line magazines (e.g. *Financial Times*, *Red Herring*, *Global Entrepreneurs etc.*) and videos of interviews of the respondents were searched. The fourth limitation is that some respondents for this study were mainly selected through

⁴² Because the interviews were conducted with returnee venture capitalists who are native Chinese speakers.

the snowballing method—interviewees were recommended by their friends or colleagues—which may cause sample bias.

8.7 IMPLICATIONS FOR THEORY

There are some important insights for theory. First, this result of the study reveals that the phenomenon of brain circulation and transnationalism in China is less prevalent than researchers suggested. The Saxenian theory of brain circulation emphasizes the two-way flow of transnational technical communities instead of the one-way flow. However, there is substantial evidence from this thesis that such mobility might be less than expected. Some of New Argonaut venture capitalists, mainly the founders or managing partners, travel back and forth between China and the United States on a regular basis, while a few, who are at relatively junior level such as junior analysts or investment managers in the venture capital firms, have weak cross-border transnational networks. The latter are less mobile than expected. As a result, their transnationalism might not be active as expected.

Second, this study also suggests that how agency theory is informed by the use of transnational networks in the venture capital context. Agency theory is closely associated with investing in high growth potential firms because its severe information asymmetry and entrepreneurs may have moral hazard by playing opportunistically. For example, investing in hi-tech start-ups typically involve new products targeted to non-existing markets developed by management teams with little or no prior history, exposing investors to significant information asymmetries (Sahlman, 1990). Moreover, entrepreneur may act in a manner that increases his/her

personal wealth or that is consistent with her personal goal, but jeopardizes the company's well-being, whereby the venture capitalist's money is not utilized as desired (De Clercq and Manigart, 2007). This study explores that Chinese New Argonaut venture capitalists are able to reduce information asymmetries and control agency costs through their transnational networks, pre-investment decision making process, co-investment with foreign venture capital firms, active post-investment oversights and value added activities. As a result, agency costs can be minimized by the effect of transnationalism on venture capital investment processes.

8.8 IMPLICATIONS FOR POLICY MAKERS

The findings produce important implications for policymakers and practitioners. Some American researchers including Richard Florida (2007), the author of the bestseller *The Rise of the Creative Class*, admits that openness to talented and creative people from around the world was the secret weapon of American economic competitiveness. The US currently relies heavily on the decisions of many foreign-born US-educated science and engineering graduates to remain in that country (Tung, 2008). To become the most innovative country, China needs to continue to attract back Chinese who are living elsewhere. To achieve that, it needs to bolster China's higher-education systems, nourish venture capital eco-system, and protect intellectual property rights and improve accounting practice. Because wherever talent goes, innovation, creativity, and economic growth are sure to follow.

- *Improve General Educational System*

Although China's spending on R&D has steadily increased for a decade and now amounts to 1.5 percent of gross domestic product, while the U.S. devotes 2.7 percent of its GDP to R&D, China still struggles in many areas of science and technology. No Chinese-born scientist has ever been awarded a Nobel Prize for research conducted in mainland China, although several have received one for work done in the West (The New York Times, 2010). The Chinese educational system still suffers from an emphasis on rote learning which stifles creativity (Financial Times, 2011). Intellectual debate is neither necessary nor appreciated among students who are being trained to follow rules and to adhere unquestioningly to authority. A survey conducted by the Chinese University of Political Science and Law in 2007 indicates that the content and the teaching methods of China's secondary and higher education were out of date and in "conflict with the cultivation of Creativity". Today's educational system implicitly encourages widespread copying, not just in exams but in everything from mobile phones to cancer research (Financial Times, 2011).

How can China cultivate creativity especially in science and technology disciplines at its university education? How can Chinese scientists win a Nobel Prize in the future? The backbone of the educational system in the innovation-driven economy is the quality and research of its secondary or higher education and the competence of its teachers (World Bank, 2010). First, there should be an aggressive effort to improve the quality of secondary and college education with the encouragement of critical and independent thinking of the students, especially to allow criticism from pupils to teachers and to authority. The essence of teaching is to provide the students

real knowledge rather than to pass the exams and obtain the certificates. Second, to improve higher standards in teaching and teacher education, we need to attract highly skilled overseas migrants, particularly those who have doctoral degrees in science and engineering, teaching in Chinese universities. Government can provide the subsidies for research centres and universities who hire these bright talents to increase their basic salaries and build high quality research facilities and invest aggressively in R&D. Third, it is essential to intensify international collaborations between Chinese researchers and scholars in foreign scientific centres and emerging knowledge communities. Fourth, universities and governments should provide talented researchers massive financial support in the form of graduate fellowships, teaching assistantships, research assistantships and other financial support for post-doctoral positions, which are the primary source of support for more than 75 percent of the foreign doctoral recipients at US universities (Ueyama et al., 2007). Policy makers should also reduce the bureaucracy of the procedure and increase the transparency of the systems for applying for research grants and recruitment. Fifth, in university and colleges, the science and engineering subjects and projects need to be encouraged to link with commercialization. For example, the £1 million Queen Elizabeth Engineering Prize was launched in Britain in 2011. The prize will be awarded biannually to an individual or team of up to three people who have made a groundbreaking advance in engineering, and will form a bridge between scientific discovery and commercial application (BBC, 2011). Although it is too early to predicate that the Queen Elizabeth Award will carry the same stature as the Nobel Prizes, who knows?

- *Nourish a Venture Capital Ecosystem in China*

China should devote its efforts to facilitate entrepreneurship policy, in which venture capital is an important part. The venture capital ecosystem in China has now become more sophisticated and more knowledgeable, which demands more experienced investment teams. However, there is a lack of high quality venture capital investors with knowledge of technology, management, marketing, financing and financial management. Consequently, policy makers may become more aware of the key role that New Argonaut venture capitalists play in connecting foreign venture capital firms, facilitating the globalization of their portfolio firms and transferring financial capital, and knowledge in the international venture capital market. Policy could pursue a number of directions. For example, New Argonauts should be allowed to have dual nationalities, so that they could travel easily without continually having to apply for visas. In addition to this, government needs to facilitate the tax incentive policy to enhance the prosperity of the venture capital industry. Moreover, policy makers must develop and guide the government venture capital funds with a more radical approach, in order to support regional innovation enterprises and venture capital firms. Last but not least, to attract more and more foreign venture capitalists to engage in the Chinese market, government should create a long-term, sustainable entrepreneurial environment, establish and regulate healthy stock markets, expand more exit channels and draw up consistent regulations favouring not only domestic investors, but also foreign venture capital firms.

- ***Protection for Intellectual Property***

To avoid “me-too” or “copy” products and encourage venture capitalists investing in early-stage innovative companies, policy makers should further improve the protection for intellectual property rights and punish IP theft. Laws and regulations on the protection of commercial secrets need to be issued. The Chinese government has promoted venture capital industry for years in order to stimulate investments in newly established companies and high-tech companies (Guo, 2008). This study shows that New Argonaut venture capitalists invest more in portfolio firms at early stages by focusing on the proprietary of the products. Hence, it is advisable that the policy-makers should build up a better institutional environment to improve the protection of the intellectual property rights and therefore encourage venture capital investing in R&D and technologically intensive firms.

- ***Improving Accounting Practice***

Unlike Western accounting standards, Chinese accounting standards are a profit and loss tool but more a focus on an inventory of assets available to a company. Similarly, the accounting standards for the calculation of intangible assets differs from that in Western countries. In February 2006, the Ministry of Finance has issued a “new Chinese Accounting Standard” which is substantially converged with International Financial Reporting Standards (IFRS)⁴³, but includes minor modifications reflecting China’s unique circumstances and economic situation. Despite the apparent convergence with internal standards, the practical application of

⁴³ Chinese Accounting Reform: Towards A Principles-based Global Regime.

China's accounting principles is often a complex and opaque process. For China to maintain its development as a significant player in foreign investment, Chinese regulators should continue with their policy of openness and proportionate regulation, and provide training sessions for accounting professionals, especially those who are used to applying rules under the old accounting system, to be able to make appropriate judgements and apply principle-based standards. Regulators need to ensure that new practicing members have not only passed their examinations but that they also have a minimum level of practical experience in a workplace environment. The transaction cost of conducting business due diligence will therefore help to ease the valuation of the portfolio firms and facilitate the foreign investment.

8.9 FUTURE RESEARCH

The study could be extended in various ways. China has the biggest economy after the United States and is playing a significant role in the world economy. The ability to understand China's venture capital and its support to entrepreneurial activities is significant. In the future greater effort should be made to explore the differences between New Argonaut and domestic venture capitalists who have never been abroad, particularly in terms of the range of the propositions raised in this research. General investment processes of domestic venture capitalists such as fund raising, investment focus, deal sourcing, deal evaluation, co-investment, value-added services provided to portfolio firms, and exit should be explored and compared, in order to see if the transnational networks of New Argonaut venture capitalists enable them to have a distinctive investment approach and style with their peers who have never been

abroad. Additionally, one of the criticisms of Saxenian's New Argonauts is that the research was carried out before 2006. Many cases are outdated and thus no longer relevant. Future research could follow these returnee entrepreneurs in India, Israel, and Taiwan and explore their entrepreneurial activities after returning to their home countries, in comparison with New Argonauts venture capitalists in China.

This also raises the intriguing question of whether the New Argonauts phenomenon is applicable in other countries and contexts (Storper, 2007). There is a growing recognition of the potential intellectual, economic and social contributions of Diasporas. Moreover, this is not confined to emerging economies (e.g. India, China) but also includes developed countries with high proportions of their population living overseas (e.g. Australia, Ireland, New Zealand, Scotland). So, could economically disadvantaged countries and regions in the developed world use their Diasporas in this way? For example, Scotland, Ireland and Wales have lost their competitiveness in terms of attracting conventional foreign direct investment, but indigenous-led economic development through technology commercialization and the promotion of entrepreneurship has been limited, not least by a diminishing supply of institutional sources of venture capital. All three countries have – to a greater or lesser extent – explicit policies for using their Diasporas as an economic resource (e.g. Global Scot and Fresh Talent in Scotland) although they do not specifically target them as inward entrepreneurs or investors. Clearly the characteristics of the migration processes and Diasporas of individual countries are very different. Russia and Brazil are also characterized by high out-migration rates but neither has developed an Argonaut class (Storper, 2007). Critical factors in the case of China, India, Taiwan and Israel,

the countries featured by Saxenian (2006), appear to be the reasons for migrating (education), the attraction of returning home, involvement in the technology centres of the USA and ongoing connectivity to these centres, human capital, and the strength of ethnic networks. Nevertheless, at a time when Diasporas are attracting the attention of politicians (e.g. Homecoming Scotland 2009) it might be appropriate for researchers to investigate the possibilities of creatively harnessing their power to stimulate economic development at home.

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APPENDIX A
INVITATION LETTERS FOR IN-DEPTH INTERVIEW

Dear _____

I am a full-time PhD student at the University of Strathclyde, Glasgow in U.K. I would like to invite you to participate in a research project about return migrants to China who become venture capitalists or business angels. I understand that you are in this category. I am interested in understanding the approach of such individuals to investing, and particularly how they make use of their overseas experience.

The interview will last for between 45 and 60 minutes. The information that you provide will only be used in my PhD thesis or future journal papers. Your personal information including your name, business and your investee companies will be anonymous and be protected.

I appreciate your support for my study, which will help me to learn more about the returnee investors. If you would like to participate the in-depth interview, could you please reply me by this email address or feel free to call me at _____ ? so that we can arrange a mutually convenient time and place to meet.

Looking forward to your reply

Jing Zhou

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APPENDIX B

IN-DEPTH INTERVIEW QUESTIONS

For New Argonauts VCs

A. Respondent profiles

A1. Please tell me bit about yourself

- Male-female
- Age: 25-34, 35-44, 45-54, 55-64, 65+
- University education (subjects studied, university, country) – bachelors degree, Masters, MBA, PhD
- Professional qualifications – what and where obtained
- Working experience

B. Study and Work

1. Why did you go overseas to study?
2. What were the reasons for you to stay and work in the US after finishing your education?
3. Could you please tell me about your overseas working experiences?
4. If you were involved in starting a business please explain reasons, what the business did, how successful, how did you exit, how as it financed?
5. When did you go back to China? And why?
6. Why did you make up your mind to change your career from entrepreneurs to venture capitalists?

C. About New Argonauts' VC firms

1. Please give me a brief history of the firm.
2. What is the legal form of your company?
3. does the firm have any affiliates? If so, who are they, where are they located and what is the relationship?
4. How many partners are in the company?

5. When did you join? In what role? Why were you hired? (i.e. what were you contributing to the company – knowledge, skills, contacts, credibility, etc)
6. How much amount of capital under management?
7. How many funds have you got under management?
8. Who are the investors in your funds? Have you invested any of your own money in the fund?
9. What types of investments does your fund make – size of investment, stage, sector, location, follow-on funding?
10. What are your fund's key investment criteria?
11. Is your firm an active (hands on) investor or a passive (hands off) investor?
12. Can you give me a breakdown of your portfolio investments?

D INVESTMENT PROCESS

1. How do you attract deal flow?
2. How do you evaluate the business opportunities (stages/criteria)?
3. What are the deal killers that would convince you to reject a deal?
4. What factors would encourage you to invest?
5. How do you do your due diligence?
6. Which investment stages do you typically invest in? Why?
7. What are your firm's preferred investment sectors? Why?
8. Does geography factor concern about you when you decide to invest, IF YES, why?
9. How did you structure your deals?
 - types of investment instruments
 - equity share
 - valuation
 - key terms and conditions
11. Do you ever invest as part of a syndicate?
 - If yes, how common
 - In what circumstances
 - Why
 - Do you have regular co-investors?

- Are you the lead investor or are you brought into deals?
12. What kinds of hand-on roles you played for your investee companies?
 13. How have you exited from investments?

E. How New Argonaut VCs use their transnational status in their investing?

1. Do you think that your transnational status enables you to have a distinctive investment approach and style compared with your peers who have never been abroad?
2. How important do you think your transnational status was in the decision to hire you?
3. How do you make use of your transnational status in investing:
 - attracting deal flow
 - due diligence
 - types of investments made
 - deal structuring
 - hands on involvement
 - attracting co-investors
 - exiting
4. Do you have connections into the US VC industry or angel community – if so please describe the nature of these connections and how you use them

F. Travel to USA

1. How many trips have you made to USA for business purposes in the past year?
2. How many trips to other countries for business purposes in the past year? Which countries
3. How many days have spent outside China in the past year? How many of these were spent in the USA?

APPENDIX C

RELATIONSHIPS BETWEEN CODE AND INTERVIEW RAW DATA IN NVIVO 8

1. Tree Nodes Sample of “Co-investment”

The screenshot shows the NVivo 8 interface with the 'Tree Nodes' view selected. The left sidebar shows a tree structure with 'Co-investors' selected. The main window displays a table of tree nodes and a text snippet for the selected node.

Name	Sources	Referen	Created On	C	Modified On	M
How NA VCs use their transnational status in their inv	0	0	14/10/2008 13:41	Z	14/10/2008 13:41	Z
Interview summary	1	1	14/10/2008 17:31	Z	14/10/2008 18:08	Z
Investment process	0	0	14/10/2008 13:41	Z	14/10/2008 13:41	Z
C	1 20		14/10/2008 14:19	Z	07/12/2009 11:53	Z
D	2 20		14/10/2008 14:16	Z	05/02/2010 14:00	Z
E	3 20		14/10/2008 14:16	Z	05/02/2010 14:00	Z

Co-investors
 <Internals\Alan Song> - \$ 1 reference coded [2.62% Coverage]
 Reference 1 - 2.62% Coverage
 With CDH Investment, we co-invested RandV ocm Inc., which is an outdoor media B2C company, we did two round fund investment. The first round took place in 2007, we invested about US\$10M. We own 15.8% of RandV.com Inc's shares. In 2008, we co-invest the second round of US \$20M.
 <Internals\Albert Wang> - \$ 1 reference coded [3.70% Coverage]
 Reference 1 - 3.70% Coverage

2. Extract of Code list

The screenshot shows the NVivo 8 interface with the 'Tree Nodes' view selected. The left sidebar shows a tree structure with 'Tree Nodes' selected. The main window displays a detailed table of tree nodes.

Name	Sources	Referen	Created On	Cre	Modified On	M
How NA VCs use their transnational status in their inv	0	0	14/10/2008 13:41	Z	14/10/2008 13:41	Z
C	2 22		14/10/2008 14:24	Z	07/12/2009 11:51	Z
H	2 28		14/10/2008 14:23	Z	10/03/2010 15:48	Z
H	1 19		14/10/2008 14:23	Z	10/03/2010 15:48	Z
II	3 33		14/10/2008 14:22	Z	10/03/2010 15:48	Z
Interview summary	1	1	14/10/2008 17:31	Z	14/10/2008 18:08	Z
I	3 57		14/10/2008 17:32	Z	05/02/2010 14:00	Z
in	3 36		14/10/2008 17:32	Z	05/02/2010 14:00	Z
P	3 32		14/10/2008 17:31	Z	07/12/2009 11:59	Z
Investment process	0	0	14/10/2008 13:41	Z	14/10/2008 13:41	Z
New Argonauts' VC firms	0	0	14/10/2008 13:41	Z	14/10/2008 13:41	Z
Respondent profiles	0	0	14/10/2008 13:14	Z	14/10/2008 13:14	Z
Study and Work	0	0	14/10/2008 13:40	Z	14/10/2008 13:40	Z
Travel to US	0	0	14/10/2008 13:42	Z	14/10/2008 14:10	Z

3. Relationships of Code with Interview Text

Tree Nodes Sample “Co-Invest” From This Study

<Internals\Alan Song> - § 1 reference coded [2.62% Coverage]

Reference 1 - 2.62% Coverage

¶66: With CDH Investment, we co-invested RandV.ocm Inc., which is an outdoor media B2C company, we did two round fund investment. The first round took place in 2007. we invested about US\$10M. We own 15.8% of RandV.com Inc’s shares. In 2008, we co-invest the second round of US \$20M.

<Internals\Jack Geng> - § 1 reference coded [3.70% Coverage]

Reference 1 - 3.70% Coverage

¶54: Yes, we sometimes invest as part of a syndicate. For example, Taizinai, one of the largest lactobacillus drink manufacturers in China, we led the consortium which included Morgan Staley and Goldman Sachs. We are the lead investor.

¶
<Internals\Albert Wang> - § 1 reference coded [1.69% Coverage]

Reference 1 - 1.69% Coverage

¶40: We are lead co-investors. SAIF together with NYSE, Goldman Sachs, and General Atlantic recently co-invested in Indian stock exchange, with each investing US\$125M. I think it is a great deal made,

¶41:

<Internals\Cong Ning> - § 1 reference coded [1.22% Coverage]

Reference 1 - 1.22% Coverage

¶49: A. We tend to be leader investor, but under different circumstances, we’d like to do co-invest with other local funds or foreign funds.

<Internals\Deng Feng> - § 1 reference coded [0.98% Coverage]

Reference 1 - 0.98% Coverage

¶61: A.Yes, NEA and Greylock Partners are our strategic partners, we have some strategic priori cooperation contract including China, America. NEA refers some American projects to us.

¶

<Internals\Duane Kuang> - § 1 reference coded [1.68% Coverage]

Reference 1 - 1.68% Coverage

¶48: Yes, we work closely with other leading VC firms in order to deliver the investor value that young Chinese companies require. For example, we co-invested Hang Zhou Yingfan Healthcare Co. with Min’s Cybernaut VC firm.