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Challenges of SMEs innovation and entrepreneurial financing

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Abstract

Purpose – Today, the financing mechanisms to support small-and medium-sized enterprises (SMEs) development have been a subject of great interest and a challenge to policy makers as SMEs are regarded as an important sector contributing to economic growth and stability. This paper is concerned with the bank financing policies to support SME development in China. The purpose of this paper is to examine the governmental financing policies and the innovation financing system of China. The discussions are focused on the bank financing policies to support SME development in China.

Design/methodology/approach – This study is a qualitative research with the use of case study methodology (Eisenhardt, 1989; Yin, 2003). The research is focused on the policy perspectives of bank financing to support SME development in the case of China, the world's fastest-growing economy. To explore the role of financial institutions and banks in SME financing in China, the research also derives evidence from a collection of documentary investigation. The research fieldwork and interviews were undertaken in Beijing and Shanghai, major financial centers in China, with the use of semi-structured questionnaire. The analyses are undertaken to answer the key questions of: What are the Chinese government's strategies to support the development of SMEs? To what extent the government policies in bank financing can support SMEs and promote the development of an innovative economy?

Findings – The empirical study has shown that despite the introduction of the 12th Five-Year National Economic and Social Development Plan to support SMEs development, China still needs to improve regulatory policies in support of innovative businesses which would help its transition to an innovation-driven economy. The study provides lessons and policy guidelines to improve the competitiveness of SMEs in China. The insights from this study can also be applied to other developing and emerging economies attempting to understand the role of financing mechanisms in building an innovative economy.

Originality/value – The study has addressed the policy challenges to support SME development in China, a major Asian emerging country and one of the fastest-growing economies in the world (with averaged growth rate of 10 percent per annum). The empirical study of policy challenges was undertaken in Beijing and Shanghai, major financial centers in China. The study offers insights which can be applied to other developing and emerging economies attempting to understand the role of SME financing policies and mechanisms in building an innovative economy.

Keywords Sustainable development, SMEs

Paper type Research paper

1. Introduction

China is one of the fastest-growing economies in the world (with averaged growth rate of 10 percent per annum). In 2014, China was placed in 23rd position according to the International Institute for Management Development world competitiveness ranking and 28th position by the World Economic Forum. After joining World Trade Organization (WTO), China has adopted trade liberalization policies and various government policies to drive its economy. Small-and medium-sized enterprises (SMEs) play a significant role in the economy of China as they are the thrust sector that account for 60 percent of total

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industrial outputs and 80 percent of jobs created in China. The Chinese government thus realizes the importance of building an innovative economy through enhancing SMEs' capabilities. In building an innovative economy, the Chinese government has introduced the 12th Five-Year National Economic and Social Development Plan to support SMEs development. This paper attempts to understand the challenge of financing innovative economy through SME development in China.

The paper is organized as follows. Section 2 reviews the theoretical framework on the banks, financial institutions and their role in innovation. It also reviews the literature on venture capital (VC) financing to support SME development. Section 3 describes the research design and methods. Section 4 discusses the analyses of findings with a focus on the bank financing policies to support SME development in China. Section 5 concludes the paper by drawing lessons and insights that can be used as policy guidelines to improve the competitiveness of SMEs.

2. Theoretical framework

SMEs are the economic sector making a significant contribution to economic growth and job creation. However, they often face significant difficulties in accessing the kinds of financing they need for growth (Pissarides, 1999; Hyytinen and Toivanen, 2005). Although the studies on traditional sources of finance for start-up are already voluminous (e.g. Moore, 1993; Gompers and Lerner, 1998, 1999, 2001; Mani, 2004), there is a gap of research linking the study of entrepreneurial financing to the aspect of public policies in developing countries. Therefore, this study attempts to fill a gap in existing research by exploring the bank financing and VC financing to support entrepreneurial activities. Table I lists the types of financing and sources of capital to support SMEs.

In filling the research gap, this study will make a contribution to the body of knowledge in SMEs innovation and entrepreneurial financing. Thus, the structure of the theoretical framework section will be divided into two parts:

(1) Banks, financial institutions and their role in innovation.

(2) VC financing to support SME development.

2.1 Banks, financial institutions and their role in innovation

Banks and financial institutions play an important role in terms of providing credits to support the economic growth. Bank financing is critical to the functioning of the economy since it is an important source of funding to support SMEs development. Nevertheless, banks and financial institutions are reluctant to provide credit lending to

Table I. Types of financing and sources of capital to support SMEs

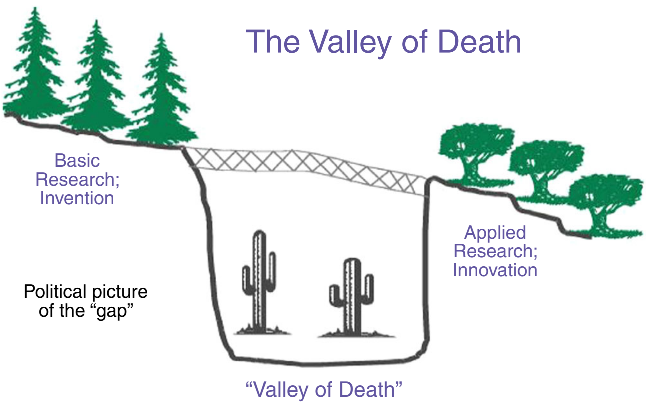
Investor	Goals
Family	Success, payback
Friends	Payback, friendship
Credit cards	Payment
Suppliers	Payment relationship
Business angels (private investors)	Payback, returns, control
Venture capital	Fast growth, multiple returns, ownership
Banks	Payback, collateral

Source: The author's design

SME sector due to the riskiness of early stage ventures in terms of insufficient assets, having no proven track record and low capitalization (Berger and Udell, 1998, 2006; Black and Gilson, 1998; Wonglimpiyarat, 2007; Menkhoff *et al.*, 2012; Fredriksson and Moro, 2014). As a result, they do not see this sector as a profitable business. In other words, they do not see worthwhile returns on SME investments or whether such investments would provide a potential pay-off.

Figure 1 portrays the valley of death (or the funding gap), the difficulties encountered by all SMEs in accessing the needed capital to grow their businesses. The valley of death refers to the period before a company can generate revenues, making it difficult to get the finance it needs to grow a business in the start-up period (Ehlers, 1998). Table II shows the target returns by investment stages (Bygrave *et al.*, 1999). It can be seen that the high level of risks in early stage investment requires the highest return (internal rate of return over 50 percent) to compensate the risks that are higher than those in other stages.

Looking from an economic development perspective, Schumpeter (1939, 1967) argues that finance and financial institutions are the mainstream of innovation system as well as crucial determinants of the entrepreneurial ability to develop the new economy. The entrepreneurial firms are seen as playing a crucial role to the economy in terms of creating jobs contributing to economic growth and stability. Realizing the high risk nature of SMEs, many governments have tried to bridge the valley of death and improve SME capability. They see the valley of death as a challenging task in terms of introducing policies to manage the financial risks that



Source: Ehlers (1998)

Figure 1. The valley of death faced by SMEs

Investee development phase	Expected return represented by internal rate of return (IRR) % per annum
Early stage (Seed/Start-up)	IRR > 50
Expansion and growth	40 > IRR > 35
Maturity stage (Bridge, Management buyout)	IRR > 30

Source: Bygrave *et al.* (1999)

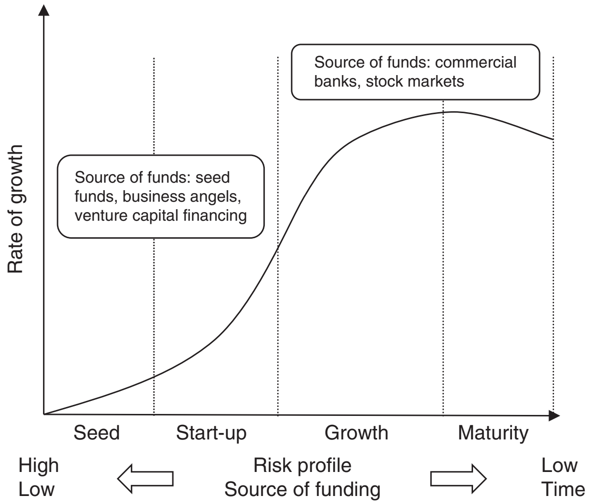
Table II. Target returns by investment stages

SMEs face with the aim to help SMEs cross the valley of death (bridge the financing gap). The establishment of specialized development banks/SME banks with special type of loan offerings for SMEs can be seen as part of the government policies to help alleviate SMEs' financial constraints (Mani, 2004; Hyytinen and Toivanen, 2005; de la Torre *et al.*, 2010).

In recent years, the issue of SME financing has received an increased attention as a way towards building an innovative economy. Many economists argue that despite the heavy concentration of research and development (R&D) expenditure in large firms, it is the small firms that account for most of the important inventions and innovations (Freeman and Soete, 1997). Taking into account the conventional models of innovative economies, Schumpeter's (1939) Mark 1 theory postulates that small firms predominate in the process of innovation. Arguably, the Mark 1 model stresses the ability of the entrepreneurial small firms to innovate (whereas the Mark 2 model is concerned with the technological innovation developments by large firms). It is argued that small firms play an important role in innovation and industrial development (Freeman and Soete, 1997; World Bank, 2010; Krishnaswamy *et al.*, 2014). Realizing the trend of knowledge-based economy (whereby the basis of competition is increasingly built upon research knowledge and innovation), many governments have developed strategies/policies to support SME financing with the aim in building an innovative economy (Lerner, 1999, 2002; Jeng and Wells, 2000; Mani, 2004).

2.2 VC financing to support SME development

Figure 2 shows the funding requirement along the life cycle of SME development. Given the high uncertainties and risks in an early stage of development, the source of finance for new ventures is rather limited. The source of capital to support early stage venture is mainly from seed funds, business angels, VC financing whereas commercial banks and stock markets play a significant role in providing finance in the growth and mature stages (commercial banks providing finance in the form of



Source: Wonglimpiyarat (2007)

Figure 2.
Funding requirement along the life cycle of SME development

loan capital or debt and stock markets providing finance in the form of equity capital) (Black and Gilson, 1998; Mani, 2004; Hyytinen and Toivanen, 2005; Giot and Schwienbacher, 2007; Wonglimpiyarat, 2007).

Taking into account start-up financing, VC provides an important source of business finance to support SME development. By definition, VC is a high risk, potentially high-return investment to support business creation and growth. It is a source of funds that typically finances new and rapidly growing companies through equity participation (Bygrave and Timmons, 1992; Gompers and Lerner, 1999, 2001). VC has characteristics that set it apart from debt financing alternatives and traditional capital markets (Gompers and Lerner, 1999, 2001). It is a high-risk financing investment whereby venture capitalists generally expect high returns in the form of capital gains and dividends (Dixon, 1990; Pandey and Jang, 1996; European Private Equity and Venture Capital Association, 2005). The concept of modern VC is defined by Megginson (2004) as a professionally managed pool of money raised for the purpose of making equity investments in growing private companies with a well defined exit strategy (Giot and Schwienbacher, 2007).

SMEs assume a major influence in the economic development, employment and creation of new innovations (Birch, 1979; Gallagher and Steward, 1986; Sahlman, 1990; Massa and Testa, 2008). However, SMEs generally face difficulties in getting access to finance since investors do not prefer making investments in SMEs due to their risky nature of business operation. Since very small proportion of monies seems to be allocated to early stage ventures, therefore, the provision of risk capital by VC firms may be the most suitable form of external finance. This form of investing brightens SMEs' prospects by relieving the capital constraints (Bygrave and Timmons, 1992; Gompers and Lerner, 1999, 2001; Wonglimpiyarat, 2007).

Currently, a number of developing countries have introduced VC as an economic development tool whereby the government of these countries takes an operational role in the development of VC industry (Lasserre and Schutte, 1995; Naqi and Hettihewa, 2007; Tsai *et al.*, 2009). The main focus of VC in these countries is similar, i.e., to provide seed capital and financing for technology and innovation development. Nevertheless, the structure of VC financing differs among countries due to different set of interacting institutions and structures of the national innovation system (Lundvall, 1992, 1993, 1998, 1999, 2003).

3. Research methodology

This study attempts to fill a gap of existing research of SME financing by linking the aspect of public policies in developing countries to entrepreneurial financing. In particular, the research explores the challenges of SMEs innovation and entrepreneurial financing in the country case of China, the world's fastest-growing economy. The research study uses the case study approach, a qualitative research (Eisenhardt, 1989; Yin, 2003), to analyze the impacts of the 12th Five-Year National Economic and Social Development Plan on the bank financing and VC financing for supporting entrepreneurial activities.

In exploring the role of financial institutions and banks in SME financing in China, the research also derives evidence from a collection of documentary investigation. The research fieldwork and interviews were undertaken in Beijing and Shanghai, major financial centers in China, with the use of semi-structured questionnaire. The conduct of fieldwork interviews in the financial sector of China was coordinated by the Bank of Thailand, the Securities and Exchange Commission and the Thai Chamber of

Commerce in China. The interviews were conducted with banks, financial institutions and government agencies as shown in Table III.

In carrying out fieldwork research, the study aims to elicit views on the government policies and strategies to support SMEs and innovative businesses, the backbone of the Chinese economy that can lead to improved national innovative capacity. The key questions guiding the research are:

RQ1. What are the Chinese government's strategies to support the development of SMEs?

RQ2. To what extent the government policies in bank financing can support SMEs and promote the development of an innovative economy?

In order to provide a cross-check on internal validity, interview data are supported by an examination of secondary data. The conduct and analysis of the case study have enabled the development of conclusions and recommendations for the research. The analyses provide lessons and insights which would be useful for other emerging economies to use the policy guidelines in supporting SME development.

4. Analyses of findings

4.1 The economy of China and government strategies to support SME development

China is the fastest-growing major economy in the world with an average gross domestic product (GDP) growth rate of 10 percent. The overview of economic and innovation performance of China is shown in Table IV. Currently, the Chinese government mainly uses the open door policy in attempts to remodel itself from an agriculture-based economy towards an innovation-driven economy. Taking into account the policies to support SME development, the Chinese government has launched various innovation policies to catch up with leading-edge countries after it joined the WTO in 2001. Specifically, the 12th Five-Year National Economic and Social Development Plan is a major government policy that places a specific emphasis on

	Name of institutions	Characteristics of institutions
1.	Bank of Beijing	Bank owned by the local government
2.	Huaxia Bank	Bank owned by the central government
3.	China Citic Bank	Bank owned by the central government
4.	United Overseas Bank or UOB	Foreign bank
5.	Bank of China	Bank owned by the central government and one of the Big Five
6.	Bank of Shanghai	Bank owned by the local government
7.	Bangkok Bank China Co., Ltd.	Foreign bank
8.	Siam Commercial Bank Public Company Limited	The bank is currently planning to open a representative office in China
9.	Thai Chamber of Commerce in China	An agency promoting economic relationships between Thailand and China
10.	Bank of Thailand	Bank of Thailand – the Department dealing with investment and trade relations with China
11.	The Securities and Exchange Commission	The Securities and Exchange Commission in Thailand with specific research department providing advice on China's financial and monetary policy

Source: The author's design

Table III.
List of institutions providing research interviews

Indicators	Year	Important figures
Population (million)	2014	1,393
Gross domestic product (GDP) (USD billion)	2014	1,253
GDP growth (%)	2014	7.4
IMD world competitiveness ranking	2014	23
WEF competitiveness ranking	2014	28
Knowledge Economy Index (KEI) Ranking	2012	84
KEI Index	2012	4.37
% of R&D expenditure to GDP (approximate)	2014	1.95
No. of patent applications		
Residents	2012	535,313
Non-residents	2012	117,464
Amount of venture capital (VC) investments (USD billion)	2013	3.5

Sources: The author's design, based on the World Competitiveness Scoreboard (various years) by International Institute for Management Development (IMD), World Economic Forum (WEF) Global Competitiveness Report, World Bank, United Nations Conference on Trade and Development (UNCTAD), OECD Main Science and Technology Indicators and Dow Jones Venture Source 2013

Table IV. Overview of economic and innovation performance of China

supporting SMEs in terms of creating an environment conducive to entrepreneurship and innovation for SMEs.

In China, SMEs are defined as follows according to the 12th Five-Year National Economic and Social Development Plan 2011-2015 by the Ministry of Industry and Information Technology:

(1) Small-sized enterprises: companies that employ fewer than 300 people and earn less than 20 million RMB Yuan in annual sales revenue.

(2) Medium-sized enterprises: companies that employ 300-1,000 people and have annual sales revenue of 20-400 million RMB Yuan.

In 2010, the number of registered SMEs in China is approximately 11 million, contributing to employment creation of more than 44 million people. Therefore, SMEs are important in driving China's economic growth that the government cannot afford to overlook. Table V gives an overview of indicators to support entrepreneurship in SMEs according to the Global Entrepreneurship Monitor Report 2013, a global report which provides an annual survey of entrepreneurial activities worldwide. The first column lists the indicators that influence entrepreneurial activities in various dimensions. The highlighted box shows the performance of China compared to the average performance of Asia Pacific and South Asian countries which include China. It can be seen that the performance of China in supporting entrepreneurship in SMEs is likely the same as the average performance in North America and the Asia Pacific and South Asia (except that China is relatively weak in entrepreneurship education with the score of 1.6 but performs better than other countries in terms of physical infrastructure with the score of 4.0). These scores reflect the government attempts to support entrepreneurial development in China. They also reflect the importance of entrepreneurship in building China's innovative economy.

Realizing the importance of SMEs in economic development as they constitute more than 90 percent of all firms in China, the Chinese government has placed importance on SME development to drive the national economy. Figure 3 depicts major institutions and players providing support to SMEs as well as high-growth innovative SMEs in China.

Table V. Entrepreneurship overview of China in various indicators

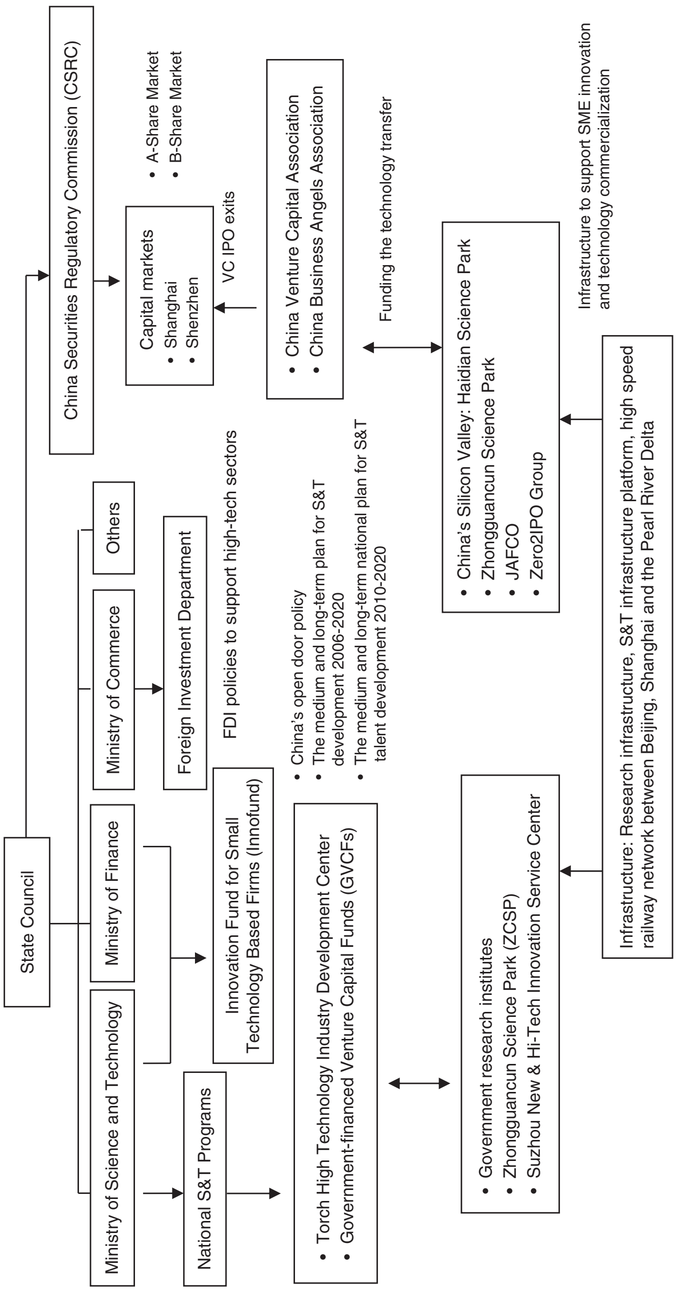
Indicators of entrepreneurship	Rating scores based on a five-point Likert scale North America (Average)	Europe (EU) (Average)	Asia Pacific and South Asia including China (Average)	China
Entrepreneurial finance	2.4	2.6	3.0	2.5
Government policy to support entrepreneurship	2.7	2.6	2.8	2.7
Government policy to support new SMEs	2.0	2.4	2.6	2.6
Government programs to support entrepreneurship	2.6	2.8	2.7	2.6
Entrepreneurship education at basic school	2.0	2.1	2.2	*1.6*
Entrepreneurship education at post-secondary levels	2.9	2.8	2.9	2.7
R&D transfer	2.3	2.5	2.6	2.5
Commercial and legal Infrastructure to support SMEs	3.1	3.2	3.1	2.6
Regulations related to market dynamics	3.1	3.1	3.6	3.9
Regulations related to market openness	2.6	2.6	2.7	2.6
Physical infrastructure	3.8	4.0	3.8	*4.0*
Cultural and social norms that encourage business activities	3.2	2.6	3.2	3.0

Source: The author's design, based on the Global Entrepreneurship Monitor (GEM) Report 2013

The government plays an important role in developing policies and strategies to support the transition to an innovation-driven economy. For example, the Decision on Developing High-Tech and Realizing Industrialization (CCCP) sets forth the tenth plan (2001-2005) to promote innovation commercialization. The Guideline for Developing National University Science Parks provides a plan to promote the development of university science parks. The government policy in encouraging R&D can be seen a result of adopting Deng Xiaoping's open door policy to encourage foreign investments and attract new technologies. The major policy of the Ministry of Science and Technology includes the guidelines on national medium-and long-term program for science and technology development during the period of 2006-2020.

China's Ministry of Science and Technology plays a significant role in the design and implementation of national innovation policies. The special economic zones and science parks were established to foster new technology development. In particular, the Torch program was developed to support the creation of industrial clusters. The national Science and Technology Industrial Parks (STIPs) were established to support high-technology enterprises. Up to now, there are 54 national STIPs established by the Torch program to promote the development of innovation clusters and advance upgrades in high technologies.

Currently, the government policy has placed a greater emphasis on strengthening clusters of special economics and high-technology zones as the government realizes their important role in offering infrastructure for implementing the innovation strategies. The government has also reduced the corporate income tax rate and value-added tax to promote high-technology enterprises. Recently, the



Source: The author's design

Figure 3.
Major institutions and players to support SMEs and high-growth innovative SMEs in China

Ministry of Science and Technology has proposed State Council of 2009 to strengthen the science, technology and innovation system.

Interestingly, innovation is one of the policy aspects (the Chinese dream) that President Xi Jinping emphasizes: patriotism (aiguo); innovation (chuangxin); inclusiveness (baorong) and; morality (houde). The financial policies under the political leadership of President Xi Jinping can be seen as a continuation of using an open door policy to improve financing mechanisms and provide financial funds to support SMEs. The Chinese government provides grants, loans and other incentives (such as tax incentives for R&D, low income tax rates for high-technology enterprises) to drive innovation and growth. The SME financing policies can be seen as a result of government intervention in the financial market to fill SME financing gap.

4.2 Challenge of the government policies in bank financing to support SMEs

Financing constraints of SMEs are one of the major difficulties faced by entrepreneurs in China. The central government attempts to improve SME access to finance by introducing the 12th Five-Year National Economic and Social Development Plan. In China, the Big Five banks providing a major source of credit for SMEs in China are Industrial and Commercial Bank of China, Agricultural Bank of China, China Construction Bank, Bank of China and Bank of Communications. Table VI shows the performance of the Big Five accounting for 47.3 percent of total market share.

As a result of the 12th Five-Year National Economic and Social Development Plan, the Beijing Municipal Government supports Chinese financial institutions in setting up SME credit departments. The policies of Beijing municipal government put greater emphasis in upgrading small scale financial institutions into commercial banks so as to facilitate SME access to finance. Table VII shows the granted credits in China. As a

Table VI. Performance of the Big Five (USD million)

Bank	Total assets		Operating income		Total loans		Growth rate per annum	
	2010	2011	2010	2011	2010	2011	2010	2011
Industrial and Commercial Bank of China	2,195,534	2,524,775	62,124	76,770	1,107,750	1,270,619	22.68	23.32
Agricultural Bank of China	1,686,363	1,904,988	47,676	61,950	781,078	880,728	22.23	20.26
China Construction Bank	2,003,562	1,763,510	52,771	64,778	901,472	1,031,842	22.45	22.36
Bank of China	1,706,340	1,929,864	45,158	53,534	903,387	1,011,931	18.68	18.10
Bank of Communications	644,632	752,231	17,004	20,711	364,915	417,904	20.08	20.49

Source: China Securities Regulatory Commission

Table VII. Credits granted in China (units in USD billion)

Credits granted to	2008		2009		2010		2011	
	USD	%	USD	%	USD	%	USD	%
Small enterprises	0.71	21	0.93	22	1.20	24	1.74	24.7
Medium enterprises	1.12	32	1.40	33	1.66	33	1.79	25.3
Large enterprises	1.61	47	1.90	45	2.16	43	3.53	50
Total	3.44	100	4.23	100	5.02	100	7.06	100

Source: China Monetary Policy Report result of the implementation of this credit policy, it can be seen that the total loan amounts granted to SMEs account for approximately USD3.53 billion (from total credits granted of USD7.06 billion in 2011). It is argued that the 12th Five-Year National Economic and Social Development Plan reflects the efforts of the Chinese government to help SMEs cross the valley of death (according to the study by Ehlers, 1998). Clearly, the SME financing policies play an important role in helping alleviate SMEs' financial constraints (in line with the studies by Mani, 2004; Hyytinen and Toivanen, 2005; de la Torre *et al.*, 2010).

In China, the majority of the banking sector is owned by the central government. The credit granting system of each bank therefore has to follow the prescription policy from the central government. In credit granting, most of the banks prefer to grant loans to large enterprises since granting credits to SME is more risky. Understanding the problems of SMEs, the Chinese government, through the People's Bank of China and the China Banking Regulatory Commission (CBRC), has encouraged banks to increase access to credits and supports to SMEs. The government would assess the performance of policy implementation or the effectiveness of banks' credit granting system from the non-performing loans (NPLs) rate. It is interesting to note that the proportion of NPLs to GDP in 2010 is 2 percent compared to 25 percent in 2000. The reduction in loan losses is a result of the government' s policy in taking steps to control NPLs, an attempt to build solid economic footing in China's banking system (World Bank, 2012).

Table VIII summarizes reflections from the interviews with regard to the government policy on SME financing and the extent of bank financing to support SMEs. Most banks state a consistent view that the introduction of the 12th Five-Year National Economic and Social Development Plan does have influence on the banks' lending policy in terms of increasing SME loans as the banks are under control by the government (via the CBRC). They view that the 12th Five-Year National Economic and Social Development Plan is an overarching strategic plan defined by the government. However, in practice the policy implementation differs across the banks depending on the policies of each bank and the extent of credit risks that each bank can bear (risk exposure).

At present, most SMEs depend on informal loans outside the banking system which bear relatively high interest rates (charging the high interest rates of 18-20 percent) and thus constrain the SMEs' ability to grow. Therefore, the Chinese government attempts to terminate this informal lending system so as to help SMEs. Interviewees stated that the introduction of the 12th Five-Year National Economic and Social Development Plan has not only increased SME lending but also placed emphasis on capital market financing to build an innovative economy since the 12th Five-Year Plan encourages the opening up of the capital markets for technology-based firms to improve the capability of the economy to innovate. The interviewees expressed their views that the introduction of the 12th Five-Year Plan has changed banks' credit direction from lending to heavy industries to new industries like information technology, renewable energy, biotechnology and other high-tech sectors.

According to the interviews with banks in China, one of the banks stated that: "[…] the 12th Five-Year Plan can be seen as the government's command that we have to follow by setting up SME special unit to provide SME financing. Although the policy is not mandatory, in practice we must comply with these directives. Otherwise, the future of our business relations with the government will be not easy […]". Most of the interviewees stated that as the 12th Five-Year Plan denotes the policy signals that policy makers attempt to favor SMEs, the banks have to comply with the policy. Nonetheless, by complying with the 12th Five-Year Plan, the banks expressed concerns

	Policies/strategies of SME financing	Enabling policies/ strategies	Description
1.	Government policies/ strategies to support SMEs	x	The policies from the central government not only influence the small banks having a high proportion of SME clients but also the Big Five commercial banks. The Big Five need to comply with the government policy by increasing SME lending portfolio despite their reluctance to lend to SMEs The government provides incentives for banks to increase SME financing. If the banks follow the government policy guidelines on SME lending, they would receive positive consideration and support in terms of getting approval on opening more branches Despite the government policies to support SMEs, they still face difficulties in accessing finance. Most SMEs turn to informal lending outside the banking system (most SMEs still rely on black market lending)
2.	Bank credit policies	x	Even though most banks view that the intellectual property (IP) assets such as patents, copyright, trademarks, trade secrets should play an increasing role as lending criteria for innovative businesses, this is not the case in practice. Almost all banks argue that the lending decisions still depend on the collateral value and the borrower's credit worthiness Foreign banks in China are constrained by the limit that they can give out credit loans. Consequently, foreign banks operating in China tend to focus on providing financial services to serve their own customers doing businesses in China (rather than serving the Chinese businesses) Due to the difficulties in valuing IP assets, they are not the preferred collateral (loan security) for banks. The valuation of these types of assets requires IP valuation experts to assess their actual economic value
3.	Bank financing programs to support SMEs	x	Banks assist SMEs to save on bank charges by waiving fees or charges related to SME transactions. Banks also help SME businesses in terms of lowering upfront fees, commitment fees to reduce SME financing costs Banks see that the policy from the central government has greatly influenced their decisions in setting up the SME Special Unit to provide SME financing, for example, HuaXia Bank's Dragon Boat Program to provide small business financing Banks are still conservative in providing loans or credits to SMEs to maintain lower loan to deposit ratios (75% loan to deposit ratio limit for all commercial banks according to China's Commercial Bank Law), for example, China Citic Bank, one of the banks established during China' reform said that the bank could allow SME loan losses by only 2-5%

(*continued*)

Table VIII.
Summary of interview results on the government policies of bank financing to support SME development in China

Policies/strategies of SME financing	Enabling policies/ strategies	Description
4. Policy aspects to support innovation	x	Although most banks implement the 12th Five-Year Plan to support SMEs by setting up specific units to increase the supply of SME financing, most of them do not operate VC investment units to support high-tech SMEs. At present, China's VC industry is not fully developed and still needs incentive programs to foster the VC industry Concerning credit lending, if the borrowers are technology-based firms in Beijing's Zhongguanchun Science Park, they would get financial support from the government in the form of fee refund. China has the formal business angel market but its business angel community is still small The government has launched the national strategy to promote Shanghai Free Trade Zone by providing tax incentives to encourage investments and trade. In promoting an innovative economy, the government also gives tax breaks as an incentive to importers and exporters in this zone

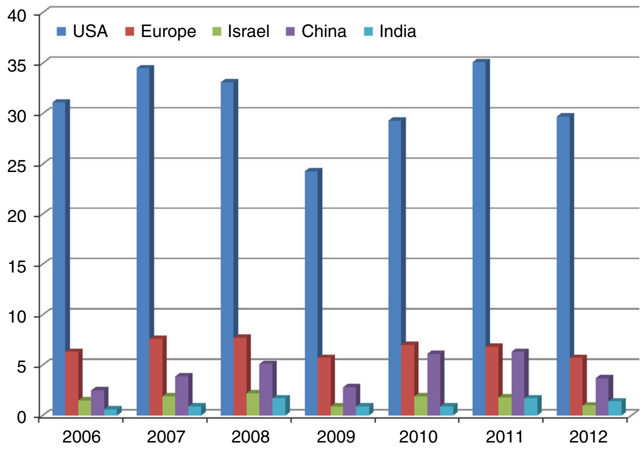
Note: x, category of policies/strategies as enabling policies/strategies
Source: The author's design (summarized from interview results)

Table VIII.

about the high credit risks of SME financing which would result in high incidents of NPLs. Many banks have emphasized the importance of credit risk management in terms of laying the procedures to limit loan losses to 2-5 percent of the SME lending portfolio. The banks stated that, they try to limit loan losses not to exceed 2 percent of the SME portfolio in the actual practice. Otherwise, they would be under scrutiny over their policies on SME lending/bank lending standards. The banks also stated that the introduction of the 12th Five-Year Plan seems problematic since the government expects that there should be no loan losses from SME lending.

Taking into account of VC financing, another important mechanism to support innovative SMEs, the VC industry in China is not well developed and limited in scale due to regulatory restrictions of fund-raising. The China Venture Capital Association was established in 2002 to promote government policies conducive to the development of VC industry. The Government-financed Venture Capital Funds was established in 1993 in Guangdong, Jiangsu, Zhejiang and Shanghai together with the formation of University-backed Venture Capital Funds to provide university incubating services and encourage the process of technology commercialization. At present, the VC industry is dominated by international VC funds. The international VCs have helped build the high-tech industries of internet, networking as can be seen from the successful enterprises like Lenovo and Huawei Technologies.

Figure 4 presents comparative VC investments in China and other countries during 2006-2012. It has shown that China's VC industry is not fully developed. The major obstacle to VC development in China is a lack of policies to induce VC investments, a lack of credibility and transparency in China's capital markets and legal system. Moreover, the industry also suffers from a lack of skilled professionals



Source: Dow Jones Venture Source 2013

Figure 4.
VC investments in China compared to other countries (units in USD million)

with experiences in VC management. The government has increasingly recognized such difficulties and tried to improve regulatory policies so as to support the growth of VC investments in China. For example, at present, China's Ministry of Commerce has issued regulations allowing foreign-invested VC firms to invest in China. The Ministry of Finance has also eased the regulations regarding the capital requirements of international VC firms – lowering the capital requirement by USD10 million as well as easing stringent regulations of foreign VC structure. Nevertheless, the venture capitalists still have difficulties in exiting their investments in the VC market. Currently, the development of VC industry in China is still at the initial development stage. In transitioning to an innovative economy, the country needs the policy supports in terms of VC financing, private equity funds, capital markets for technology-based firms.

Most of the VC investments are in the sectors of internet, clean technology, electronics and optoelectronic equipment, telecom and value-added services. The centers of VC industry are Beijing, Shanghai, Chengdu and Shenzhen. In the growing VC industry, Zero2IPO Capital is the major VC corporation among others (such as Accel Partners-Beijing, Redpoint Ventures-China, Sequoia Capital-Beijing, GSR Ventures-Beijing-China, Eastern Bell Venture Capital, Walden International-Shanghai-China, Warburg Pincus-Beijing-China, VantagePoint Venture Partners-Beijing-China, Vivo Ventures-Chengdu-China) targeting investments in high-potential an high-growth companies.

5. Conclusions

This paper explores the challenges of SMEs innovation and entrepreneurial financing in China. The empirical research is focused on the impacts of the 12th Five-Year National Economic and Social Development Plan, the main policy function after China joined the WTO, on SMEs development and entrepreneurial activities. The findings have shed light on the impacts of the 12th Five-Year Plan over the bank financing sector – its influence over the banks' policy in terms of increasing SME lending. In adopting the 12th Five-Year Plan, the results of this study have shown that banks tend to focus only on SME financing (bank loans) but not VC financing. However, the extent of credit lending differs among banks depending on each bank's credit policy.

At present, the government has emphasized the aspect of innovation strategy according to President Xi Jinping statement on the Chinese dream (focusing on patriotism, innovation, inclusiveness, morality). However, the VC policies, the financing mechanism that can contribute to the build-up of national innovative capacity, are still weak. The study has shown that the Chinese economy is driven by the government intervention policies. The analysis also points out the challenge of the Chinese government in improving regulatory policies to support innovative businesses. It is argued that building national innovative capacity is highly regarded as an important factor to strengthen China's position in the global competitive landscape. Thus, the VC financing should play an increasing role in supporting high-tech and innovative SMEs in the future since China's VC industry is not yet fully developed at present. For the long term policy perspective to increase and sustain national competitiveness, it is necessary that the government policies should encourage the private sector to provide more VC and business angel investments to support high-tech business start-ups and SMEs. Arguably, effective financing mechanisms would increasingly open up new investment opportunities to support the rise of China in the world economy.

The findings in this paper suggest important implications for practice in that for the developing countries with scarce resources and budgetary constraints, it is the government (not the private sector) that should play a major role in encouraging the provision of SME financing. However, the government financing should not crowd out private investments. The present study offers interesting avenue for future research in exploring the effectiveness of the government's policies to support SMEs' growth.

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