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Outward Foreign Direct Investment and Entrepreneurial Activity: The Case of China

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Abstract

As the Chinese strategic policy for international expansion is developing, China's outward foreign direct investment (OFDI) has increased dramatically in recent years. In 2004, China was the world's largest recipient of FDI (UNCTAD, 2004); now China ranks fifth in global OFDI flow, just after U.S., Germany, French, Hong Kong (China) (COFCOM, 2010). According to the general theory of FDI, built largely on the experience of industrialized country investors（Buckley & Clegg, et al, 2007), firms engaging in outward FDI should possesses monopolistic advantage (Hymer, 1960); alternatively, they should enjoy firm-specific or ownership-specific advantages (Dunning, 1958; Safarian1966). Dunning (1980, 1993, and 2001) used eclectic paradigm explain the importance of ownership during FDI, known as OLI-Model, to the motivations of FDI by foreign-market seeking FDI, efficiency-seeking FDI, resource-seeking FDI. Lall (1983) found out the reason for India's outward FDI is still due to its technological capability (advantage). All these traditional theories emphasize that firms should take advantage of their competitiveness in knowledge assets or material assets, so they can profit from investing in less developed countries. Unlike the traditional strategic assets-exploitation FDI model, emerging market economies can acquire knowledge and technology based on the reverse spillover effect of their outward FDI in advanced countries

(Cantwell, 1995; Tessce, 1992; Siotis, 1999). Since knowledge and technology, along with economic development will contribute to innovation, and since innovation implies entrepreneurial activity (GEM, 2010), we believe that China's outward FDI will also have an influence on Chinese entrepreneurship.

A large number of research studies concerning China's outward FDI have been motivated by its growth and the policy interest to Asian developing countries in a transitional period. Most of the literature is dynamically concerning the motivations and determinations of OFDI (Buckley, et al., 2007; Huang, 2011; Salidjanova, 2011); the effects of OFDI on exports, technology, industry structure, productivity of the country (Liu and Li, 2002). There is little evidence concerning the potential economic consequences, like the effect on entrepreneurship from OFDI for the home countries (Herzer, 2011). Some papers have studied the effect of FDI on the host county's entrepreneurship (Koen De Backer, 2003; Natilia, 2009; Meghana, 2006). However, they all examined FDI in host countries. Entrepreneurship is considered one of the most efficient and robust economic driving forces for economic transformation and development, especially in countries reforming or reconstructing their systems, fostering wealth creation and innovation (He, 2008; GEM, 2010; Scramm, 2010). Still, a macroeconomic study of the overall impact of outward FDI on the home country's entrepreneurial activities in a transitional period has not yet been conducted. Studies of international business dealing with OFDI from the transition economies are incomplete without considering its impact on home countries' entrepreneurship, technology transfer, new market development, and enterprise restructuring (Meghana, 2006). This paper attempts to extend the international business literature by first examining the relationship between OFDI and total entrepreneurial activities in the home country.

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THEORETICAL BACKGROUND AND RELATED LITERATURE
The Characteristics of China's OFDI

Compared to OFDI from developed countries, China's OFDI has its own characteristics. One of the striking characteristics is Chinese companies without obvious ownership advantages increasingly invest in developed countries to enhance their business strength. For example, Chinese ODI to EU reached 6 billion in 2010, 101% more than previous year; Chinese OFDI to U.S. was US$1.4billion, with a 44% growth rate (MOFCOM, 2010). Major developed economies account for 6 out of ten top host countries of Chinese OFDI, this value having reached more than US$ 2 billion, (MOFCOM, 2010).

Secondly, rather than simply establishing wholly owned subsidiaries abroad, Chinese firms are more likely to adopt M&A as a strategic entry mode choice. Indeed, Chinese cross-border mergers and acquisitions (M&As) in developed countries increased greatly with high profile attempts, accounting for 43% of China's total ODI. It reached US$29.7billion in 2010, a 54.7% increase from previous year (MOFCOM, 2010), demonstrating new and diversified industrial patterns (UNCTAD, 2010).

Thirdly, Chinese outward investment activities are often directed by the Chinese government, especially for "strategic and heavyweight" industries[1]. China is a transitional economy (IMF, 2000). During transition, the Chinese government must decrease its intervention in the market. However, as a new emerging market, China also faces fierce global competition, so the government protects or assists Chinese firms to go abroad through OFDI.

The fourth characteristic of Chinese OFDI is the rapid increase in the number of private enterprises engaging in OFDI, although state-owned enterprises (SOEs) still dominate Chinese OFDI. The share of state-owned enterprises (SOEs) was 70.5% of total China OFDI stock in 2010 (COFCOM, 2010). As the key OFDI projects players, SOEs can get more financial support, credit funds from the government and discounted bank loans. Through international expansion, Chinese firms gain access to technology, acquire and develop new knowledge, capability and new resources, build business relationships with foreign stakeholders, open new subsidiaries as a start-up, and also face heightened political and operational risks. Chinese companies without a sufficient competitive advantage compared to companies from developed countries can be found pursuing strategic asset-seeking and market-seeking

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[1] Strategic industries include coal, civil aviation, machinery, automobiles, IT, construction, Iron and steel, armaments, power generation and distribution, and shipping. From US-china Economic and Security Review commission, 2007 & 2009 Report to Congress

strategy in developed countries and resource-seeking strategies in less developed countries.

Outward direct foreign investment (OFDI) and entrepreneurial activity

Recent OFDI literature has covered the reverse productivity spillover effect of FDI through technology sourcing (Motta, 1999; Siotis, 1999; Driffield and Love, 2003). Companies invest abroad not only to exploit advantages they already possess, but also to acquire new technological knowledge (Fosfuri and Motta, 1999). The most important explanation for OFDI from developing countries is offered by the strategic asset-seeking motive (Dunning and Lundan, 2008) to created assets, like technology, intellectual property and strategic infrastructure (UNCTAD, 2011). Technological innovation and knowledge spillover which flow back to home country often provide business opportunities for entrepreneurial firms and innovators, and become a major source of entrepreneurship (Tirupati, 2008).

During the early stages of economic reform, Chinese OFDI has been directed by government in order to benefit from outside knowledge and experiment in international operations. More recently, Chinese OFDI is encouraged by the government to access advanced technology, immobile strategic assets, and other capabilities that are not available in China through green entry and acquisition (Deng, 2003, Buckley, et al, 2007). Chinese firms establish overseas subsidiaries or overseas R&D facilities to acquire new technology, knowledge, management skills and so forth. Acquired knowledge spillovers can be transferred back to the parent company, thus increasing developing countries' domestic productivity (Herzer, 2011; Driffield and Chiang, 2009; Kimura, 2006) and innovation. Meanwhile, productivity growth can increase consumption and encourage opportunity-improvement entrepreneurship. More importantly, multinationals from developing countries have a greater propensity to establish linkages with local firms (UNCTAD, 2006), which enable them to more deeply integrate into the host economies and learn more about entrepreneurial culture and management techniques. When the multinationals transfer these intangible assets across national boundaries to increase their own capabilities, they also help to enhance the knowledge of entrepreneurship domestically. In addition, local entrepreneurs have the opportunity to partner with international NEMs, and thus improve their own capabilities. The results in an increase in local entrepreneurial drive to develop enterprise (UNCTAD, 2011)

Horizontal OFDI is motivated by the desire to obtain market access or to avoid trade frictions. The Chinese government has been encouraging Chinese export trade-related OFDI in services since 1990s. Horizontal OFDI reduces home exports if the products from home and foreign country are substituted by

production from the invested plant in foreign countries. According to this viewpoint, horizontal OFDI would reduce the start-up in exports business. But Herzer (2011) point out that the majority of OFDI from developing countries is in services, therefore not exerting much influence on home-country exports in goods. On the contrary, horizontal OFDI can boost production of intermediate goods and services in home countries, and can encourage domestic firms' entry. Through the local firms becoming supply-chain players or service providers for the large MNCs, the entrepreneurship sector could be indirectly benefitted（GEM，2010. Besides, due to the Chinese FDI policy of "Bring in", home markets are subjected to competitive pressures from foreign FDI and imports. Horizontal OFDI can relieve domestic market competition and expand beyond limited opportunities of the home market (Beede, 2006). Domestic start-ups can operate more easily now that some firms have moved out to foreign countries.

Vertical or Efficiency-seeking OFDI is motivated by lower costs in the host country. Firms relocate their production process internationally to achieve the lowest cost. In the short run, shifting production from home to host countries for efficiency-seeking will reduce production, economic activity and plants in domestic market of parent company. (Herzer, 2011; Cuyvers, 2011). However, MNCs will become more efficient and competitive in the new production chain. In the long run, the loss of production from relocation will be eventually compensated as companies take advantage of different factor endowments. Moreover, unlike the developed countries seeking worldwide efficiency through OFDI, Chinese enterprise have little incentive to seek production efficiency abroad as long as China can generate an abundant supply of relatively low-cost labor, land and other inputs (Buckley et al, 2007). So, the negative influence of vertical ODI on entrepreneurial activity of home countries has its limits.

The Hypotheses:
Based on the literature, then, we form the following hypotheses:
Hypothesis 1: The development of entrepreneurship culture will have positive effect with entrepreneurial activity in China.
Hypothesis 2: The favorable Chinese institutional environment will enhance the positive effect on the entrepreneurial activity.
Hypothesis 3: Inward foreign direct investment (FDI) will have positive effect with entrepreneurial activity.
Hypothesis 4: Outward foreign direct investment (OFDI) will have positive effect on entrepreneurial activity.
Hypothesis 5: Un-employment will have a positive effect with entrepreneurial activity.

Theory development and conceptual framework

OFDI may be various aspects of the economy, including international entrepreneurship. In our study, we are interested in those substantive impacts of OFDI on entrepreneurial activity within the home country. With background analysis of the Chinese institutional environment, the evolution of Chinese economy, OFDI and entrepreneurial culture, all the proposed relationships regarding OFDI's influence on entrepreneurial activities are summarized and presented in Figure 3. Amoros (2010) stated emphatically that government and institutional quality are elements that should be present in models and theories proposing to explain entrepreneurship. So we will consider government policy and the institutional environment, entrepreneurial culture and unemployment as controlling variables in testing their relationship to entrepreneurial activities (self-employment as the basic form). And more importantly, we propose that OFDI will strongly influence the home country's entrepreneurial activities through the direct effect of reverse knowledge or technology spillover and by the mediated effect of economic growth.

DATA AND METHODOLOGY

The model and data

Our discussions suggest the following general log-linear model:

$$SE_{it} = f(ODI_{it}, X_{it})$$

The data are transformed into natural logarithms as we expect non-linearities in the relationships on the basis of theory and previous empirical work. Here, SE presents entrepreneurial activity measured by self-employment, and ODI presents Chinese outward foreign direct investment; X is the vector of control variables; i represent provinces of China; t represents the time of the data.

The data for this study were collected through provincial statistics from Chinese National Bureau of Statistics (Chinese Statistics Year Books, 2004-2010[2]). We use self-employment as the dependent variable measuring total entrepreneurial activity, since many researchers consider self-employment as an appropriate indicator of that activity (GEM, 2010); we use the OFDI stock as the independent variable from 2004 to 2009 to test our hypothesis; we also use

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[2] Because Tibet lacks many data and has small contribution to Chinese economy, so we drop it, and use other 30 Chinese provinces' data. The five autonomous minority ethnic regions and three municipalities directly under the control of the central government are including and considered as province.

the number of private companies to measure entrepreneurial culture, and standardize by each region's population (PCPP); we use the marketization index for China's provinces (MK) from 2004 to 2009 as a control variable to indicate the institutional and entrepreneurial environment in China. Besides, Inward foreign investment (FDI) and international trade (TRD) were included as control variables. Since the population of a province and its economic growth may influence its entrepreneurial activities, we standardize the data by dividing indicated variables by its population and economic situation (as measure by GDP per capita).

The resulting model is[3]:

$$SEPP_{it} = \beta_0 + \beta_1 ODIGDP_{it} + \beta_2 PCPP_{it} + \beta_3 UE_{it} + \beta_4 MK_{it} + \beta_5 FDIGDP_{it} + \beta_6 TRDGDP_{it} + \varepsilon_{it}$$

Data analysis and results

Bivariate correlation is initially used to examine the simple relationship between independent and dependent variables (Table 2). To check for multicollinearity, variance inflation factors (VIF) for all regression models are computed. In accordance with Neter et al. (1990), we conclude that we do not have a multicollinearity issue, since VIF for all variable is below 10. Self-employment has a strong positive correlation with OFDI, total foreign trade and Marketization. Self-employment is not correlated to FDI, and is negatively correlated to un-employment.

The model is estimated using fixed-effect and random-effect generalized least squares GLS regressions. The Hausman Test is used to test fixed and random effects; the random-effect regression is accepted. In Table 3, we first test H1-H5 using provincial data from 2000-2009 and self-employment as the dependent variable. Model 1 is the baseline model with control variables, entrepreneurial culture, unemployment and entrepreneurial environment showing strong positive effect on self-employment. In model 2, ODI is inserted, and it shows strong positive effect on self-employment (p<0.001). When controlling variables foreign direct investment (FDIGDP) and total foreign trade (TRDGDP) are inserted one by one in Model 4, along with OFDI, OFDI still shows strong positive effect on self-employment, but FDI and total foreign trade show negative, but not a statistically significant effect on self-employment (p>0.1). In model 5, all variables are included; entrepreneurial culture (PCPP)

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[3] Where: SEPP is the number of self-employed divided by regional population; PCPP is the number of private companies divided by regional population; ODIGDP is outward foreign direct investment divided by regional GDP; andFDIGDP is foreign direct investment divided by regional GDP; TRDGDP is the region's total international trade (import and export) divided by its GDP

and province size are all highly significant, providing support for H1, H2. Unemployment (UNEM) shows a partially significant effect on self-employment ($p<0.05$), providing partial support for H5. And, OFDI is significant and has the expected positive sign, lending support to H3. We also conduct a robustness check for the effect of OFDI on self-employment by testing our models using data of 2010; the results nearly the same as those reported above. In Table 4, we show the test results for coastal provinces and non-coastal provinces from 2004 to 2009. The coastal provinces which in general are considered more advanced in terms of opening-up and economic development, show strong positive relationship with self-employment. On the contrary, for non-coastal provinces, OFDI shows no obvious effect, although FDI shows strong negative impact on self-employment (($p<0.05$).

DISCUSSION AND IMPLICATIONS

Since Chinese OFDI is growing at a significantly pace, our research offers a new perspective in analyzing the factors influencing entrepreneurial activities within the context of international business. The results of this study confirm the importance of outward foreign direct investment in China while explaining self-employment's growth as a form of entrepreneurial activity during China's economic transitional period. Considering all the results together, we are led to six particularly interesting conclusions:

First, there does appear to be reasonable support for the hypothesis that Chinese outward foreign direct investment (OFDI) has a significant impact on entrepreneurial activity as measured by self-employment. OFDI's influence is felt even more strongly on the coast.

According to our results, if China expands it direct investment in other countries, entrepreneurial activities at home will also benefit. Possible explanations for the finding that, since nearly half of Chinese outward FDI takes place through mergers and acquisitions (M&A) with the primary motivation of acquiring strategic assets (UNCTAD, 2006), those acquired strategic assets, such as management capability, R&D capability, knowledge, and proprietary technologies (Barney, 1991;Teece et al, 1997) not only bestow Chinese firm's competitive advantage overseas (Amit & Schoemaker, 1993), but also have a reverse spillover effect on China (the home country) to cultivate entrepreneurship. OFDI has a strong reverse knowledge/technology spillover on the home country, which may contribute to domestic firm growth, R&D promotion, and the spatial distribution of industry (Siotis, 1999; Driffield, 2003). The reverse knowledge spillover from China's technology acquisitions is absorbed and leads to the growth of total factor productivity and innovation in the home market (Herzer, 2011) Since entrepreneurs disrupt market equilibrium by introducing new products, enticing consumers to want new things, GEM

(2010) points out that innovation and entrepreneurship are closely connected concepts and can be therefore considered a measure of entrepreneurial aspirations. As China's economic reform has focused on improving firm innovation and put these efforts as a significant dimension of the institutional transition from planned to market economy (Hitt et al., 2004), Chinese OFDI results in greater knowledge, productivity and innovation resulting in enhanced entrepreneurial activities. The result that Chinese OFDI has a greater significant effect on self-employment in the coastal provinces, also demonstrates that the OFDI effect is strong, since coastal province exhibit larger quantities of OFDI, can absorb more reverse spillover with more OFDI, and cause more dynamic technology, innovation and entrepreneurial behavior.

In addition, according to economic theory, self-employment emerges in accordance with two schools of thought: recession push and entrepreneurial pull (Hatala, 2005; GEM, 2010). If Chinese companies pursue horizontal or vertical OFDI, as we describe above, Chinese firms and plants will move to the host countries to avoid the export barriers or to be able to access needed resource, which lead to temporary joblessness domestically. Therefore, these two kinds of OFDI lead to the "push effect" self-employment for the jobless in short run. The other explanation for OFDI's effect on self-employment might lie in managerial knowledge upgrading during Chinese international expansion. Chinese OFDI is "home-base augmenting" FDI, instead of "home-base exploiting" FDI that accesses unique resources and captures externalities created locally (Kuemmerle, 1999). Through OFDI, China tries to acquire strategic assets, such as management, knowledge and technology (Peng, 2000). Since knowledge and management skills are important qualifications for start-ups, apart from environmental values and financial support, the further China engages in OFDI, the more experience, knowledge and management skills will be attained, thus assisting businesses engaging in OFDI to start new businesses more easily. The story and experience of Chinese firms seeking opportunities crossing national borders through direct investment, as an international business activity, will help to enhance the entrepreneurial spirit, in the form of greater drive for independence or the purpose of increasing personal income, status, recognition and challenge, back home.

Second, we haven't found that China's inward FDI is significantly and positively affecting self-employment as we hypothesized, as the knowledge spillover effect of inward FDI has been shown by some researchers (Buckley et al. 2002; Liu, 2002). One explanation could be in the competition effect of FDI (Barbosa, 2009). Foreign MNCs enjoy higher technology and market power in the product market; they enhance the product competition pressure on domestic firms, and force inefficient domestic firms to exit the market. Therefore, foreign MNCs will also crowd out the entry of local new firms. Although FDI has

positive "demand-side" effect, which requires the foreign firm's technology, which will create local industrial development, this effect is not large enough to compensate for the competition effect (Lin & Saggi, 2005). Indeed, according to Chinese industrial survey, technology transfer is very poor among JV partners in China (Guan etc. 2006). Another explanation may be that the entry of foreign firms in the labor market leads to a stronger rise in wages than in entrepreneurial income (Backer, 2003), which stimulate people to become employees instead of entrepreneurs. The import competition also has a similar effect on FDI, crowding out domestic entrepreneurs on both product and labor market. The analysis show China's trade has negative effect to entrepreneurial activity, but not statistically strong. It is worth noting that no strong evidence on the positive effects of inward foreign investment, as well as foreign trade on entrepreneurial activity, measure by self-employment.

Third, the institutional environment, which is generally considered to be an important factor during China's transition, consistently shows a strong effect on self-employment. It also indicates that entrepreneurs in developing countries, such as China, should possess the ability to overcome obstacles through learning in this transitional time and understand the nuances of government policy. This will allow firms to easily survive. Moreover, economic liberalization and marketization led to business environments that encourage innovative entrepreneurship (Dana, 1997). Chinese policymakers currently conduct economic reform in order to make the social market more market-oriented and direct Chinese OFDI through guidelines and regulation. Therefore, during this phase of economic development, government involvement is inescapable and even plays an important role. Spender (2004) gave another explanation: regulatory institutions even have negative association with self-employment, that is, when regulatory institutions are strong, individuals appear to be pushed away from self-employment. This may explain by the different types of regulatory and economic direction in different countries. Since policy makers can play to fostering domestic entrepreneurship, it is very important for them to undertake pro-active measures (Baliamoune-Lutz, 2010), including support for education and training and entrepreneurial ventures, especially for technology and innovation entrepreneurship. Since 1978, a number of pro-active policy measures were introduced to support private sector development in China, but more effective government policies are still needed to reduce the destructive entrepreneurship to avoid the rent-seeking, and develop local entrepreneurs' capability of absorbing the knowledge and technology from international partners. And the positive institutional environment, like policy stabilization, effectiveness and consistency of regulation and law ensure individuals feel secure and entrepreneurship can be encouraged.

Fourth, we find that entrepreneurial culture, which is allowed to flourish along with economic reform and development, the growth of Chinese private companies significantly influences self-employment, which coincides with Mueller and Thomas' (2001) conclusion, that a "supportive" national culture will increase a country's entrepreneurial potential. Over the time of economic reforms and development, Chinese private firms increased tremendously. Chinese societies and organizations have developed from a particularly collective culture to greatly value the successful entrepreneur and private companies, reflecting people's values, norms and shared increasing understanding of entrepreneurship. Moreover, entrepreneurial culture may be reinforced by perceptions like the degree of status society confers on entrepreneurs (GEM, 2010). The media about the successful entrepreneur, such as Mr. Liu Chuanzhi, the founder of Lenovo, and his stories leading Lenovo to acquired IBM in America, helps to markedly encourage and shape society's impression on entrepreneurship. In this view, the stories of Chinese entrepreneurs' successful investment overseas became entrepreneurial examples, inspiring millions of Chinese people, and encourage self-employment associated with the entrepreneurial pull.

Besides trying to extend international business theory by offering the opportunity to examine how a country's OFDI with distinctive institutions facilitate its entrepreneurial activities, these conclusions hold important implications for policymakers and researchers. This study is helpful for other emerging markets in transition understand the outward FDI strategies of China. And governments should encourage national (or regional) OFDI aimed at strategic-asset seeking, since it is a fast way to equip technology and knowledge, while its reverse spillover effect will contribute to other economic activities, such as domestic productivity, and domestic entrepreneurial activity. Our findings suggest that the Chinese government should promote high technology-seeking OFDI in coastal areas with developed economic level, in which positive effects of OFDI are much more significant than that in non-coastal areas. Moreover, results show that inward FDI and foreign trade might even crowd out home country's entrepreneurship, so it should not be simply assumed that developing international business (inward FDI, outward FDI and foreign trade) without considering their complicated effects and diversified economic consequences. In addition, entrepreneurial culture, serving as informal governance mechanism (GEM, 2010), can help policy makers to guide the entrepreneurial activities in long-run.

REFERENCES

Amit R. and P.J.H. Schoemaker. 1993. Strategic assets and organizational rent. *Strategic Management Journal*, 141, pp. 33–46

Backer, K.D. 2003. Does foreign direct investment crowd out domestic entrepreneuriashp? *Revies of Industrial Organization*, : 67- 84

Barbosa, N. & Eiriz, V. 2009. The role of inward foreign direct investiment on entrepreneruship. *Internatioanl Entrepreneurial Management,* 5: 319-339.

Baliamoune-Lutz M. 2011. Policy and institutional reform and entrepreneurship in developing countries. In Book "Naude W. 2011. *Entrepreneurship and economic development"*. Palgrave Macmillan.

Buckley P.J., Clegg J., Cross, A.R., Liu X., Voss H., Zheng P. 2007. The determinants of Chinese outward foreign direct investment. *Journal of International Business Studies*, 38(4): 499-518

Cuyvers, L. 2011.The effects of Belgian outward direct investment in European high-wage and low-wage countries on employment in Belgium. *International Journal of Manpower*, 32(no), 300-312.

Dana L.P., Churchill N.C., et al. 1987. Entrepreneurship and venture creation: an international comparison of five commonwealth nations. *Frontiers in entrepreneurship research*, Babson College, Wellesley (MA), pp. 573–583.

Driffield, N. and Chiang, M. 2009. The effects of off shoring to China: reallocation, employment and productivity in Taiwan. *International Journal of the Economics of Business*, 16(1), pp. 19–38.

Dunning, J.H. 1980. Toward an eclectic theory of international production: some empirical tests. *Journal of International Business Studies*, 11(1): 9-31.

Dunning, J. 1993. *Multinational Enterprises and the Global Economy*, Addison Wesley: Reading, MA.

Dunning, J. and Lundan, S.M. 2008. Multinational Enterprises and the Global Economy. *Edward Elgar*, Cheltenham.

Hitt, M. A., Ahlstrom, D., Dacin, M. T. et al. 2004. The institutional effects on strategic alliance partner selection transition economies: China vs Russia. *Organization Science*, 15(2): 173–185.

Hymer SH. 1976. *A Study of Direct Foreign Investment*. MIT Press: Cambridge, MA

He, X.D. 2008. The development of entrepreneurship and private enterprise in the People's Republic of China and its relevance to transitional economics. Journal of Developmental Entrepreneurship, 14(1), 39–58.

Herzer, D. 2011. The Long-run Relationship between Outward Foreign Direct Investment and Total Factor Productivity: Evidence for Developing Countries .*The Journal of Development Studies*, 47(5) 767

Kimura, F. and Kiyota, K. 2006. Exports, FDI and productivity: dynamic evidence from Japanese firms. *Review of World Economics*, 142(4), pp. 695–719.

Lall, Sanjaya & Mohammad, Sharif, 1983. "Technological effort and disembodied technology exports: An econometric analysis of inter-industry variations in India,"World Development, Elsevier, vol. 11(6), pages 527-535.

Liu, H and Li, K. 2002. Strategic implications of emerging Chinese Multinationals: The Haier case study. *European Management Journal*, 20(6),699-706.

MOFCOM (Ministry of Commerce, China). 2010. Statistical communiqué on China's overseas foreign direct investment.

Peng, M. W., & Heath, P. S. 1996. The growth of the firm in planned economics in transition: Institutions, organizations, and strategic choice. *The Academy of Management Executive*,14(1), 113-151.

OECD.1986, Self-Employment in OECD Countries, in *OECD Employment Outlook*, Paris: OECD.

Siotis, G., 1999. *Foreign Direct Investment Strategies and Firms' Capabilities*. Journal of Economics & Management Strategy, Wiley Blackwell, vol. 8(2), pages 251-270, 06.

Spencer, J. W. 2004. The relationship among national institutional structures, economic factors, and domestic entrepreneurial activity: a multicountry study, *Journal of Business Research*. 57(10). 1098-1107.

Teece, D., Pisano, G., & Shuen, S. 1997. Dynamic capabilities and strategic management. *Strategic Management Journal*, 18: 509–533

UNCTAD (United Nations Conference on Trade and Development). 2006. *World Investment Report*, 2006, UNCTAD, New York,

UNCTAD (United Nations Conference on Trade and Development). 2011. *World Investment Report*, 2011, UNCTAD, New York

Figure 1. Chinese outward direct investment flows during 1980-2010
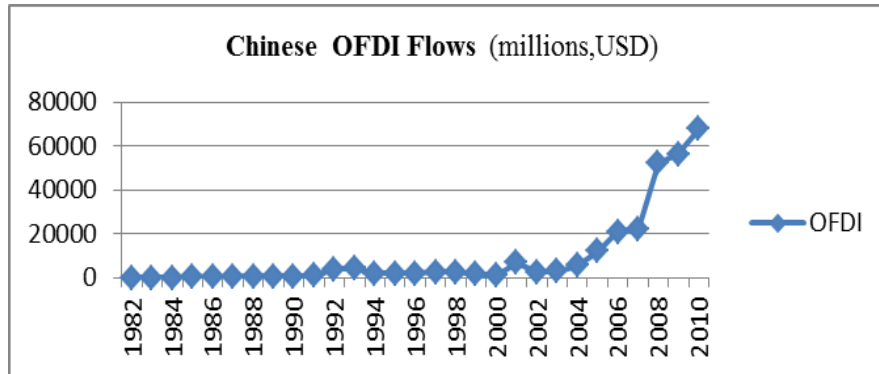
Source: Ministry of Commerce of China (2007)

Figure 2. The change of the index of entrepreneurial culture in China
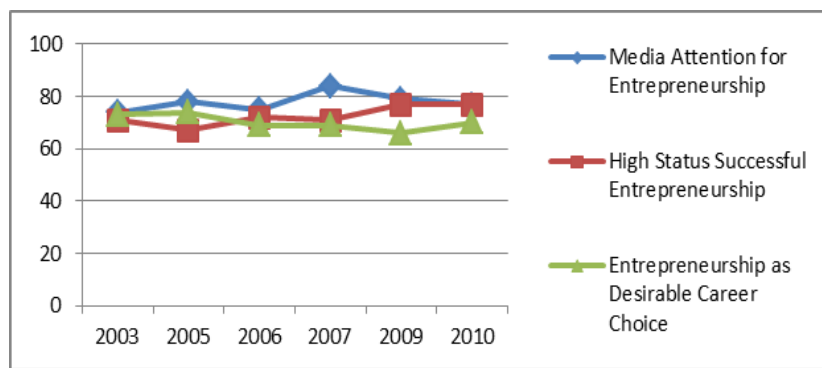
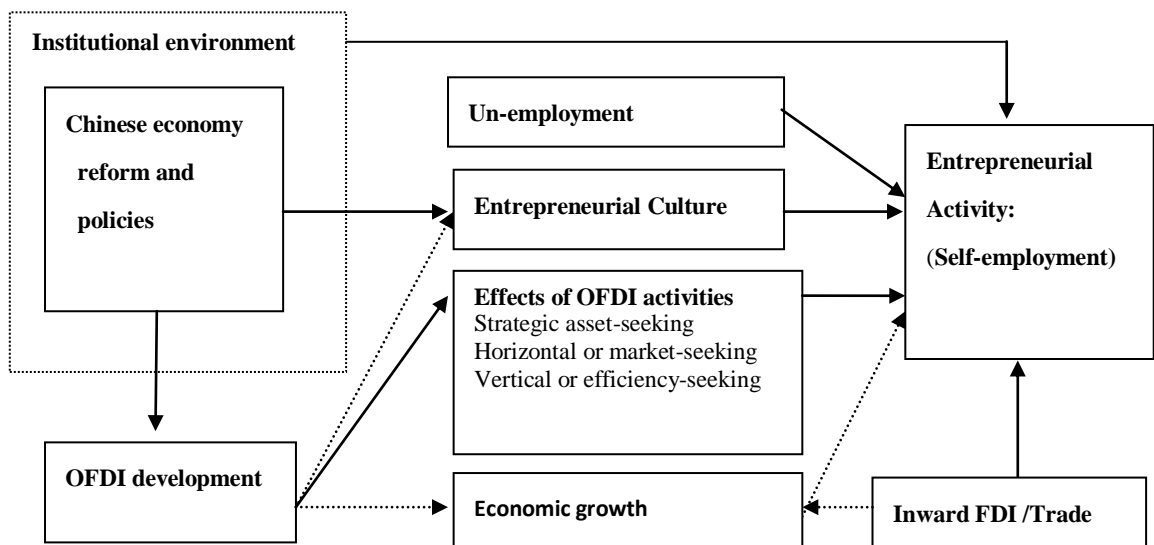Sources: GEM data, 2010

Figure 3. The conceptual framework of study

Table 1. Correlation Coefficient

	SEPP	PCPP	UNEM	ODIGDP	FDIGDP	TRDGDP	MK
SEPP	1						
PCPP	0.42***	1					
UNM	-0.4***	-0.33***	1				
ODIGDP	0.22**	0.43***	-0.26***	1			
FDIGDP	0.07	0.43***	-0.11	0.65***	1		
TRDGDP	0.42***	0.84***	-0.47***	0.36***	0.42***	1	
MK	0.43***	0.63***	-0.31***	0.26***	0.33***	0.72***	1

* Pearson Correlation, 2-tailed, *$p<0.05$, **$P<0.01$, ***$P<0.001$

Table2. Random effect of GLS for all provinces (2004-2009)

	(1) SEPP	(2) SEPP	(3) SEPP	(4) SEPP
PCPP	0.848***	0.524**	0.527**	0.580***
	(0.187)	(0.163)	(0.162)	(0.169)
UNEM	0.00190**	0.00134*	0.00144*	0.00144*
	(0.000638)	(0.000612)	(0.000610)	(0.000609)
MK	0.00201***	0.00198***	0.00197***	0.00194***
	(0.000411)	(0.000360)	(0.000358)	(0.000360)
ODIGDP		0.0883**	0.112***	0.107***
		(0.0284)	(0.0317)	(0.0319)
FDIGDP			-0.000790	-0.000749
			(0.000476)	(0.000476)
TRDGDP				-0.00226
				(0.00209)
_cons	0.0149***	-0.000727	-0.000851	-0.000255
	(0.00129)	(0.00370)	(0.00368)	(0.00374)
N	180	180	180	180

Standard errors in parentheses *$p < 0.05$, **$p < 0.01$, ***$p < 0.001$

Table3 Random effect GLS for coastal provinces and non-coastal provinces in China

SEPP	(1)2004-2009	
	Coastal provinces	**Non-coastal provinces**
PCPP	0.484*	3.049***
UNEM	0.00138	0.00138
MK	0.00153*	-0.000113
ODIGDP	0.102**	-0.0153
FDIGDP	-0.000316	-0.00576*
TRDGDP	0.000890	-0.0123
_cons	0.000629	0.00877*
N	66	114

Standard errors in parentheses, $^* p < 0.05$, $^{**} p < 0.01$, $^{***} p < 0.001$