Journal of the Asia Pacific Economy
Publication details, including instructions for authors and subscription information:
http://www.tandfonline.com/loi/rjap20

Guanxi and entrepreneurship in urban China

Michael Troilo [a] & Jun Zhang [b]

[a] International Business and Entrepreneurship Institute, Collins College of Business, The University of Tulsa, Tulsa, OK, USA

[b] China Center for Economic Studies, Fudan University, Shanghai, China

Available online: 29 Mar 2012

To cite this article: Michael Troilo & Jun Zhang (2012): Guanxi and entrepreneurship in urban China, Journal of the Asia Pacific Economy, 17:2, 315-331

To link to this article: http://dx.doi.org/10.1080/13547860.2012.668280

Journal of the Asia Pacific Economy
Vol. 17, No. 2, May 2012, 315–331

Guanxi and entrepreneurship in urban China

Michael Troilo[a]* and Jun Zhang[b]

[a]*International Business and Entrepreneurship Institute, Collins College of Business, The University of Tulsa, Tulsa, OK, USA;* [b]*China Center for Economic Studies, Fudan University, Shanghai, China*

We test for the relative importance of *guanxi* ('connections') as a catalyst for entrepreneurship in urban China using survey data from five cities for the period 1996–2001. We find that *guanxi* with the Chinese Communist Party (CPC) is negatively correlated with the likelihood of being either a sole proprietor or an entrepreneur with employees. Family *guanxi* has no effect for sole proprietors, but is positively correlated with the probability of being an entrepreneur with employees. These findings add to the literature on entrepreneurship in China by differentiating the effects of various types of *guanxi* on various forms of entrepreneurship.

Keywords: *guanxi*; entrepreneurship; urban China; family

JEL classifications: H00, O10, P2, P3, Z13

Introduction

Entrepreneurship merits study because of the profound changes it spurs in economic development. It is a major source of new jobs. It fosters industry evolution and creates growth. It catalyzes innovations. Entrepreneurship is and has been a prominent feature in many countries and hence in the global economy (Reynolds 2003).

Post-reform China in particular is benefiting from the activities of its entrepreneurs. The private sector now accounts for at least 30% of gross industrial output, compared to less than 5% in 1998 (Szamosszegi and Kyle, 2011). China is important to the global economy due to its sheer size and geographic location, but there are other factors justifying the study of entrepreneurship within its borders as well. First, as a transition economy, China offers a laboratory for examining the impacts of market-based policies on new firm formation. As state bureaucracies at the central, provincial and local levels open new industries to competition, the effects on firm creation and performance can be observed in real time.

Second, China is unique among other transitional countries regarding its political economy. Unlike the Eastern European nations, which underwent extensive political and economic reforms, China retained its political structure. The Chinese Communist Party (hereafter CPC) is the only viable political party; there is no competition for political power, unlike the situation in Eastern Europe where a panoply of newly created parties vies for seats in newly created parliaments. Furthermore, China took a much more gradual approach to privatization of its state-owned enterprises (SOEs) and market reforms than the other

*Corresponding author. Email: mike-troilo@utulsa.edu

ISSN: 1354-7860 print / 1469-9648 online

http://dx.doi.org/10.1080/13547860.2012.668280
http://www.tandfonline.com

socialist economies (Bai *et al*. 2000), rolling its policies out over two decades as opposed to several years.

The third factor is the phenomenon of *guanxi* for promoting business in China. *Guanxi*, loosely translated as 'connections', is of both practical and academic interest. There are a number of issues in the literature concerning the nature of *guanxi* and its impact on various economic outcomes. We do not propose to address all of these issues in this paper, though we do mention some of them in our literature review. We are interested in the specific economic impact of *guanxi* on entrepreneurial activity. As we will clarify in the next section, there are different types of both entrepreneurship and *guanxi* in China's current economic transformation process, and such empirical observation in China provides a good opportunity for us to closely examine the correlation between *guanxi* and business promotion. Therefore, our research question in this paper is: to what extent do different types of *guanxi* affect different types of entrepreneurship?

The current consensus in the literature concerning *guanxi* is that the circumstances surrounding *guanxi* must be understood in order to gauge its impact on a given outcome. We frame our paper in terms of context; different forms of *guanxi* may matter (or not) for different varieties of entrepreneurial endeavor. Regarding entrepreneurship, we differentiate between entrepreneurs who are sole proprietors and entrepreneurs who employ workers, i.e. small businesses.[1] Building on prior research, we differentiate between functional and familial forms of *guanxi* in our analysis. Most of the prior literature does not differentiate between sole proprietors and entrepreneurs with employees, so our main contribution is to make this distinction and to test the effects of *guanxi* on them. Furthermore, we account for the industry in which the entrepreneur operates, which is also a departure from previous studies.

The paper is organized as follows. First, we examine the relevant literature, with an emphasis on *guanxi* and why it matters for entrepreneurship. Next, we describe the data and the empirical strategy we employ to test our hypotheses. We then offer results. Discussion, including avenues for future research, concludes the paper.

Guanxi and entrepreneurship: varieties and literature review

Guanxi*: definitions and types*

The concept of *guanxi* has proven to be elusive in the literature. Bian (1994) notes three separate definitions. The first is an indirect relationship where two people have a third person in common, e.g. A and B both know C. The second refers to a direct contact or actual connection, e.g. A knows B. The third meaning connotes a strong, direct link, e.g. A is close friends with B. This last meaning implies that either A or B can call on the other for favors. For the purposes of this paper, we use the second definition, which is the broadest one and consequently the easiest to operationalize.

There is also a distinction made between *guanxi* (connections) and *guanxi xue*, which is the manipulation of connections (Yang 1994, Guthrie 1998). The former is mere existence, while the latter implies the reciprocity of favors inherent in a gift economy. Although this difference is both valid and theoretically important, it is difficult to measure, as prior scholars have noted (Guthrie 2002, Yang 2002). Most research in this realm relies upon either ethnographic studies or surveys. It is impossible to know the motivation of the gift giver when witnessing a gift exchange (mere affection or reciprocity) and people are reluctant to admit practicing *guanxi xue* in interviews or surveys, especially to outsiders. They fear that observers will think them backward and feudal, or perhaps even corrupt

(Yang 2002). For this reason, we make the assumption that the existence of *guanxi* implies its use in this paper.

There are also different types of *guanxi*. Jacobs *et al.* (2004) differentiate between the familial and the instrumental. The former has its basis in Confucian ethics of obligation and affection; e.g. the father guides his son and the son obeys the father. This *guanxi* emphasizes harmony and cooperation and is a web of extended family ties (Yang 1965, Fried 1969, Liang 1986). The second mode of *guanxi* is more functional; it is based on reciprocity of gifts and favors and involves a complex etiquette (Jacobs 1979, Hwang 1987, Yang 1994). The loss of utility to one party or a breach of etiquette is enough to sever the tie. These two types of *guanxi* may overlap, but are usually distinct. Wank (2002) characterizes *guanxi* according to degree of obligation. The highest level of obligation is to family members. The next highest level, which he calls '*guanxi* savings', are the ties fashioned by shared experiences before a person's career and based on emotional attachment (*ganqing*). These ties typically are friends and classmates. The weakest level he terms '*guanxi* investments'. These are connections forged for commercial reasons, such as work colleagues and business partners. Following Wank (2002) and Jacobs *et al.* (2004), we also differentiate between familial and instrumental *guanxi*, and also among levels of affection.

The Chinese Communist Party (CPC) connections and entrepreneurs

One of the major issues in studying entrepreneurship is simply defining it. One generally accepted definition is that entrepreneurship is an activity that involves the discovery, evaluation and exploitation of opportunities to introduce new goods and services, ways of organizing, markets, processes and raw materials through organizing efforts that previously had not existed (Venkataraman 1997, Shane and Venkataraman 2000). This definition is theoretically pleasing because it is broad enough to incorporate almost all conceivable aspects of entrepreneurship. As Shane (2003) notes, however, it is difficult to operationalize. For the purposes of this paper, we define an entrepreneur as 'one who owns, launches, manages, and assumes the risks of an economic venture' (Greve and Salaff 2003). This definition is consistent with prior literature, can be readily operationalized and is sufficiently broad to allow inclusion of what Shane (2003) terms the two main entrepreneurship activities: new firm formation and self-employment. In this paper, we consider both sole proprietors and entrepreneurs with employees in our empirical analysis, but conceptually both types are entrepreneurs, with the main distinction between them being one of degree rather than kind.

Entrepreneurs require information, capital, skills and labor to start business activities. While they hold some of these resources themselves, they often complement their resources by accessing their contacts (Aldrich and Zimmer 1986, Aldrich *et al*. 1991, Cooper *et al.* 1995). How they acquire these essential ingredients varies across different business environments. Resource acquisition can occur through various institutions, either formal or informal.

Institutions are humanly devised constraints that structure human interaction. They can either be formal, such as banking systems or rule of law, or informal, including norms of behavior and conventions (North 1990). Institutions matter for both new and ongoing businesses because they reduce uncertainty and lower transaction costs (Coase 1960, Williamson 1985, North 1990). *Guanxi* can serve these purposes in lieu of strong property rights (Nee 1992), and as a conduit for information and capital.

In the literature, it is widely believed that China's post-reform growth has been achieved without having effective legal protection of private property rights (Allen *et al.* 2005). According to Bai *et al*. (2006), 'protection of private property was not formally written into

China's constitution until March 2004'. Entrepreneurs in the non-state sector, therefore, faced risk of expropriation, as well as risk of discrimination vis-à-vis SOEs (Wei and Wang 1997, Brandt and Li 2003, Bai *et al*. 2004). It seems logical for entrepreneurs to cultivate *guanxi* as much as possible in China, in order to protect themselves and to seek more equitable treatment by the state.

Capital availability is a chronic need of entrepreneurs, particularly in developing nations. State support is often used to enable banking systems and equity markets to function in these countries (Leff 1979). These banking systems encourage entrepreneurial activity through loans; however, the drawback with state support is that those people with government connections will tend to be favored. One advantage for entrepreneurs in transition economies is membership in the Communist Party (Djankov *et al*. 2005, Chen *et al.* 2008).[2] Theoretically, Communist Party membership can alleviate scarcity of capital, since the government controls the banking system. It might also allow budding entrepreneurs to clear other barriers to entry such as bureaucratic red tape.

On the other hand, *guanxi* with the Communist Party might be a hindrance to new firm formation if there is a crackdown on graft. Yang (2002) notes that "'*guanxi xue*" is easily conflated with corruption and bribery, whose instances have increased in the reform period, have produced increasing resentment by ordinary people, and have become a target of severe campaigns by a central government anxious to preserve its legitimacy'. She buttresses her remark with a statistic of 3000 people executed in 2001 alone in nationwide anti-corruption campaigns in China. The targets of such campaigns are not only the small players; high-echelon CPC members and somewhat famous businesspeople are also punished as a warning to others. While the penalty for calling favors might not be as dramatic as death, clearly a directive from Beijing to clean up politics might act as a deterrent to entrepreneurs employing *guanxi* with the CPC.

Empirical studies of CPC *guanxi* are few. Djankov *et al*. (2006) surveyed a random sample of entrepreneurs and non-entrepreneurs across seven cities in China in 2004–2005: Beijing, Wuhan, Huangshi, Guangzhou, Zhongshan, Xi'an and Baoji. They found that an entrepreneur's mother or father being a CPC boss, director or member had no effect on the likelihood of entrepreneurial activity. The lone exception was that for entrepreneurs who started new firms to pursue opportunity (as opposed to becoming entrepreneurs out of economic necessity), the mother being a CPC boss was positive and significant. The relative dearth of impact of CPC *guanxi* is an interesting contrast with their findings in Russia, where the father being either a boss or member had a positive, significant effect in several models.

Bai *et al*. (2006) analyze the impact of membership in two different state organs on an entrepreneur's ability to access bank loans. They find that membership in the Chinese People's Congress, which is the highest-ranking legislative body, does make it easier for an entrepreneur to access loans. Membership in an adjunct body, the Chinese People's Political Consultative Congress (CPPCC), has no effect. They argue that these results are due not only to the fact that CPC members have access to scarce capital, but also to the fact that lenders know their investments are safe since the CPC members' property rights will be respected.

Wank (2002, 1996) conducted several years of ethnographic fieldwork in Xiamen, Fujian province, to study the impact of *guanxi* on entrepreneurship. He learned from his interviews with 100 firm owners that firms started with political cadre/non-cadre partners were less stable than those started via other *guanxi*, i.e. family, friends, classmates and former work colleagues. In his later fieldwork, he noticed a change: entrepreneurs were finding that *guanxi* with local officials was too costly in terms of time and also too risky given state policies to implement rule of law. In its place, entrepreneurs sought to employ high-ranking

CPC members as a signal of public reputation (*mingqi*). Furthermore, consideration of price, quality and service was driving business decisions much more than *guanxi*. Goodman (2004), in a study of 210 entrepreneurs in Shanxi province, reported that 39% were members of the CPC (compared to an average rate of approximately 5–10%). When membership of parents is considered, 63% of entrepreneurs either had parents who were members of the CPC or were members themselves.

Among studies of the impact of CPC *guanxi* on entrepreneurship, no clear consensus emerges. On one hand, *guanxi* could assist with access to capital and provide protection against expropriation of rents by the state; on the other hand, it could be inefficient and perhaps dangerous, as Yang's (2002) statistics show. Also, options for full-time employment for CPC members must be considered. Because China has taken a gradual approach to reform, there are still myriad opportunities for CPC members to obtain upper-echelon management positions in SOEs. Furthermore, membership in the CPC is increasingly being viewed as a reward for promising members of society, particularly college students. Given their high status, these people would likely 'think big' if they chose to become entrepreneurs at all.

For these reasons, we propose that *guanxi* with the CPC will be negatively correlated with being a sole proprietor relative to being either employed or being an entrepreneur with employees. These entrepreneurs are too small to be noticed by the authorities and are, in all likelihood, operating in the 'gray' market without much regard for business regulations. The capital required to engage in such entrepreneurship would likely be small and not require access to bank loans. Also, people with CPC ties are likely to have more lucrative options, given the current structure of China's economy. As noted above, CPC members tend to have higher social status than the average citizen.

For entrepreneurs with employees, the impact of CPC membership may be more ambiguous compared to the impact of CPC membership on being employed or on being a sole proprietor. On one hand, there is still the issue of opportunities in SOEs, which would tend to influence entrepreneurship negatively. Additionally, the phenomenon of high-tech entrepreneurship is relatively recent; only since 1999 has the CPC actively encouraged new firm formation in sectors like computer software and biotechnology (Naughton 2007). Entrepreneurs in less technology-sensitive industries may not need the type of protection CPC *guanxi* brings, since they have no intellectual property to safeguard. On the other hand, new firms employing people would be less likely to escape official notice than sole proprietors, particularly if the number of employees becomes substantial. Such businesses likely would need to register or face sanctions. Furthermore, the capital required for these businesses might necessitate access to banks. There is anecdotal evidence that CPC members do become entrepreneurs to build their own large businesses. This leads to the following hypotheses:

H1: CPC *guanxi* will be negatively correlated with the probability of being a sole proprietor relative to being employed.

H2a: CPC *guanxi* will be negatively correlated with the probability of being an entrepreneur with employees relative to being employed.

H2b: CPC *guanxi* will be positively correlated with the probability of being an entrepreneur with employees relative to being a sole proprietor.

Guanxi *with family, friends and acquaintances*

In the absence of access to the formal power structure and banks, entrepreneurs find other alternatives to satisfy their need for protection and capital (McMillan and Woodruff 2002). One of the primary means is a social network. Entrepreneurs construct a network composed

of social ties; they may try to increase information benefits through enlarging the network, changing their position within the network or both. These social networks are malleable and may be employed for different purposes (Granovetter 1973, 1985, Burt 1992, Greve and Salaff 2003).

Social ties, particularly family ties, have been found to be significant for entrepreneurial behavior in Confucian cultures, though most of this research has focused on connections among overseas Chinese as opposed to *guanxi* in mainland China (DeGlopper 1972, Redding 1980, 1990, Whitley 1995, Luo 1997, Chan 2000). Luo describes Taiwan as a 'network' economy and states that 'family' networks make small businesses possible; 'family' networks include not only blood relatives but also close friends (Hamilton 1989, Wong 1989, Hamilton and Kao 1990, Luo 1997, Chan 2000). These family networks are most important for providing capital, since the Taiwanese banking system is inefficient at personal lending due to cronyism and bureaucracy (Hamilton 1989, Wong 1989, Hamilton and Kao 1990, Luo 1997, Chan 2000). Lee and Tsang (2001), in their analysis of ethnic Chinese entrepreneurs in Singapore, find that more social capital, particularly greater amounts of information, skills and connections, has positive, significant impact on venture growth. They used as their dependent variables the growth of sales and the growth of profits for new ventures. In a dissenting paper, Chung (2005) studies 150 Taiwanese firm founders and cites *guanxi* as a necessary but insufficient condition for entrepreneurial activity. He finds personal demographics like gender and education to have a more significant impact on new firm creation.

Concerning China itself, the results are mixed. Peng (2004) finds that kinship ties have strong positive effects on both the number of private enterprises formed and the size of those enterprises as measured by employment. He argues that this effect is the result of family networks offering solidarity against predatory cadres as well as the pooling of resources due to enforceable trust. Unlike this paper, however, Peng's study focuses on rural enterprises; his data consists of 378 villages across 22 counties in 14 provinces in China.

Jacobs *et al*. (2004) interview approximately 200 entrepreneurs across a range of ownership structures in both rural and urban settings in Shanxi, Zhejiang and Jiangsu provinces, and reach conclusions contrary to Peng (2004) regarding family as a source of capital. They find that groups of individual investors accounted for nearly half of the start-ups (43.5%), while families only had 18%. Furthermore, when queried about where they would turn for help in the event of serious difficulties, entrepreneurs named banks as the first or second choice 36 times, compared with friends 11 times and family only one time. They argue that the family network in post-socialist China is too small to serve entrepreneurs' capital or labor needs adequately via *guanxi*. It is unclear from their study how large the firms are.

Hsu (2005) did an ethnographic study of 24 private business owners in Harbin, Heilongjiang province. She finds that the entrepreneurs there actually avoided going into business with family members. Only three of the 24 owners reported starting their business with a family member, only two employed their spouses and only one intended to pass the business to an heir. The rationales for these attitudes included the view that the state sector offered better opportunities and that business was a lowlier pursuit than graduate education. Although Hsu's study is small and confined to just one city in China, it does suggest that there could be regional differences in the use of *guanxi* with family and friends for starting new businesses.

Given the contradictory findings of prior literature, it is difficult to say what impact *guanxi* with family, friends and acquaintances will have on entrepreneurship in urban China. We surmise that for sole proprietors such *guanxi* will have no impact relative to being

employed. The reason is that the requirements for capital and protection for typical sole proprietorship activities, such as opening a fruit stand, are infinitesimal. For entrepreneurial ventures with employees, compared with being employed or being a sole proprietor, such *guanxi* will matter. For most of these entrepreneurs, the costs of obtaining bank loans will be too high given the modest size of their firms, yet the need for capital is still there. It must be satisfied from the entrepreneur's own wealth and, to the extent necessary, from family and friends. Even entrepreneurs with larger firms, i.e. more than 10 employees, would likely find the pooled capital from their family *guanxi* network to be a good starting point, but given their ambitions it may be too limited. In this case, they would probably seek bank loans as well as use family *guanxi*. *Guanxi* from family, friends and acquaintances therefore should have a positive effect on being an entrepreneur with employees relative to being either employed or a sole proprietor, for the simple reason that these entrepreneurs require the resources that family *guanxi* provides relatively more than the other two categories. We therefore propose the following hypotheses for testing:

H3: *Guanxi* with family, friends and acquaintances will not be significantly correlated with the probability of being a sole proprietor relative to being employed.

H4a: *Guanxi* with family, friends and acquaintances will be positively correlated with the probability of being an entrepreneur with employees relative to being employed.

H4b: *Guanxi* with family, friends and acquaintances will be positively correlated with the probability of being an entrepreneur with employees relative to being a sole proprietor.

Methodology

Data and variables

We focus on China's urban entrepreneurs in order to be consistent with prior literature on individual entrepreneurs in urban environments (Evans and Leighton 1989, Delmar and Davidsson 2000). China's first large-scale experience with entrepreneurship, after the 1979 market reforms, occurred in the countryside. Rural cooperatives formed township-village enterprises (TVEs) to capitalize upon new markets in produce and other consumer goods. It is difficult, if not impossible, to compare such collective action with the individual behaviors and traits so often studied in the entrepreneurship literature. Furthermore, by the mid-1990s market reforms, which had been enjoyed steadily through the 1980s by China's rural areas, were now firmly established in the cities as well.

Our data source is the China Urban Labor Survey (CULS). Scholars at the Institute for Population and Labor Economics at the Chinese Academy of Social Sciences, as well as provincial and municipal offices of the National Bureau of Statistics, compiled this comprehensive instrument in conjunction with American economists Giles and Park (2006). The survey covers a time period of six years, from 1996 to 2001, and was administered at the end of 2001 in five cities: Shanghai, Wuhan, Shenyang, Xi'an and Fuzhou. Each of these cities has over one million inhabitants, with Shanghai being the largest and Fuzhou the smallest. In addition to population, other criteria, such as regional variation, industry mix and wealth, were considered in selecting the cities. Both Fuzhou and Shanghai are relatively wealthy, coastal cities that have profited tremendously since the inception of economic reform in the late 1970s. In contrast, the other three cities are interior and have lagged in their economic development. The order of cities, from richest to poorest in terms of mean wages and per capita GDP, is: Shanghai, Fuzhou, Shenyang, Wuhan and Xi'an. In terms of location, Shenyang is in the northeast, Wuhan in central China, Xi'an in the northwest, Shanghai in the east and Fuzhou in the southeast (Giles and Park 2006).

A proportional population sampling approach is used within each city: an average of 15 registered urban households in each of 70 neighborhood clusters. Each household head was asked questions about the family, and then each family member above age 16 who was no longer in school was interviewed separately. Surveys were conducted in 3499 households (700 per city), with 8109 adults over age 16 completing the survey. At the time of the survey, 5787 adults were under mandatory retirement age and 4238 were currently employed. The survey non-response rate was 16.5% (Giles and Park 2006).

The CULS provides information on individuals' demographics and job characteristics in 2001 as well as individual calendar-based work histories with detailed questions about job changes for the period 1996–2001. Our primary foci are self-employment data and family and social ties; we also use personal attributes such as gender, age, marital status, education, etc. as control variables.

The dependent variable is an individual's entrepreneurial status at the end of 2001, where only those who are employed are considered. There are three possible outcomes: (1) Non-entrepreneur: employed by firm; (2) Sole proprietor; and (3) Entrepreneur with employees. We construct this variable using survey data on self-employment and number of employees; the survey defines a self-employed person as someone who is employed but not by a firm. The use of self-employment as a proxy for entrepreneurial behavior has a long history in the literature (Rees and Shah 1986, Evans and Leighton 1989, Bates 1995).

Table 1 displays the breakdown of entrepreneurial firms first by industry and then by city. For industry, the 'Restaurant' category includes all wholesale and retail food and beverage activity; because almost 48% of the total number of entrepreneurs is involved in this sector, we separated it from 'Services'. 'Other' is an amalgamation of segments such as mining, agriculture and defense that have few or no entrepreneurs. Not surprisingly, there are no sole proprietors in Manufacturing, while 23.2% of the larger firms are here. Shanghai lags behind all the cities in both categories of entrepreneurship, while Shenyang is the most robust overall.

For measuring the effects of CPC *guanxi*, we have three dummy variables. The first variable (CPC) indicates whether the respondent is a member of the Communist Party. The second (CPCMOM) and third (CPCDAD) indicate whether the mother and father are CPC members, respectively.

For measuring the effects of *guanxi* with family, friends and acquaintances, we have four separate variables that indicate the number of family, friends, classmates and colleagues contacted during 2000–2001 by the respondents. This question was only asked for one point in time, which conditioned our estimation strategy. Family is the total number of aunts and uncles, cousins, and nephews and nieces contacted during the last two years. There is no data for siblings, given China's one-child policy. Friends are the number of friends contacted. Classmates are the number of classmates from middle school, high school, technical school and university contacted. Usually a person educated beyond high school will have either technical school links or college links, but not both. Colleagues measure the number of work acquaintances contacted.

Besides industry and city dummies, we also include an array of control variables that are familiar from the entrepreneurship literature and may have a bearing on the likelihood of self-employment. These include age, gender, marital status, initial wealth, education, physical health and mental outlook.

Table 2 provides the descriptive statistics. We limited our analysis to employed individuals in the working-age population of 15 to 60 years. After eliminating observations with missing variables, the non-employed and those outside the age range, we have 3451 observations. Approximately 21% of the individuals in the sample are members of the CPC. In

Table 1. Allocation of entrepreneurial firms by industry and city.

	Industry: *n* (%)				
Firm size	Manufacturing	Restaurant	Services	Other	Total
Sole proprietor	0 (0.00%)	40 (40.00%)	23 (23.00%)	37 (37.00%)	100 (100.00%)
Entre. w/employees	69 (23.15%)	150 (50.34%)	48 (16.11%)	31 (10.40%)	298 (100.00%)
Total	69 (17.34%)	190 (47.74%)	71 (17.84%)	68 17.09%)	398 (100.00%)

	City: *n* (%)					
	Shanghai	Wuhan	Fuzhou	Xi'an	Shenyang	Total
Sole proprietor	5 (5.00%)	33 (33.00%)	21 (21.00%)	13 (13.00%)	28 (28.00%)	100 (100.00%)
Entre. w/employees	32 (10.74%)	60 (20.13%)	84 (28.19%)	41 (13.76%)	81 (27.18%)	298 (100.00%)
Total	37 (9.30%)	93 (23.37%)	105 (26.38%)	54 (13.57%)	109 927.39%0	398 (100.00%)

Table 2. Descriptive statistics.

Variable	Measure	Mean	Std. Dev.	Range	
				Min	Max
CPC		0.21	0.40		
CPCMOM		0.01	0.10		
CPCDAD		0.01	0.11		
Family		9.41	8.04	0	85
Friends		6.53	16.73	0	500
Classmates		7.46	14.26	0	230
Colleagues		11.99	26.26	0	700
Age	Years	39.02	9.68	17.08	60
Age2	Years	1616	744	292	3600
Male		0.58	0.49		
Married		0.83	0.37		
College		0.38	0.49		
Residence length	Years	34.03	12.74	0	60
House size	Square meters	46.98	27.50	6	400
Good health		0.55	0.50		
Satisfied		0.55	0.50		
Optimistic		0.63	0.49		
Manufacturing		0.27	0.44		
Restaurant		0.16	0.36		
Services		0.12	0.33		
Wuhan		0.21	0.33		
Shenyang		0.18	0.38		
Fuzhou		0.22	0.41		
Xi'an		0.18	0.39		
No. of Obs.			3451		

round figures, the individuals surveyed contacted nine family members, six friends, seven classmates and 12 colleagues over the past two years. The average person is just over 39 years of age, and 83% of the respondents are married. There is wide variance in house size (squared meters). College-educated people constitute 38% of the sample. These individuals have resided in a given city for a long time (35 years) and the responses to the psychological variables are about evenly divided, with nearly half the respondents reporting that they are in good health, satisfied and optimistic.

We also checked for outliers, particularly for the *guanxi* variables. Most of the people who are in the upper 5% of the distribution (e.g. contacted more than 100 friends) are employed by a firm. To the extent there is bias in our variables, it is conservative with respect to the impact of *guanxi* on entrepreneurial status.

Empirical testing

Given that we want to estimate the probability of entrepreneurial activity, and that our dependent variable has multiple outcomes, we use a multinomial logistic analysis. The response probability that $y = j$ for a given x for response possibilities 1 through J is:

$$\Pr(y = j \mid x) = \frac{\exp(x\beta_j)}{1 + \sum_{h=1}^{J} \exp(x\beta_h)}, \; j = 1 \ldots J \tag{1}$$

where x is a 1^*K vector with first-element unity, B_j is K^*1, and $j = 1 \ldots J$ (Woolridge 2002). Applying this model to our data, the regression equation is the following:

$$\begin{aligned}\Pr(Status) = {} & \alpha_1 + \alpha_2 CPC + \alpha_3 CPCMom + \alpha_4 CPCDad + \alpha_5 Family + \alpha_6 Friends \\ & + \alpha_7 Classmates + \alpha_8 Colleagues + \sum_{d=1}^{10} \alpha_9 Demo + \sum_{i=1}^{3} \alpha_{10} Industry \\ & + \sum_{c=1}^{4} \alpha_{11} City + \varepsilon \end{aligned} \tag{2}$$

where *Status* is the employment status, *d* are demographic controls, *i* are industry dummies and *c* are city dummies. The base case for employment status is Non-entrepreneur: employed by firm (*Status* = 0) in the first regression and Sole Proprietor in the second regression (*Status* = 1). Manufacturing is the base for the industry dummies and Shanghai is the base for the city dummies.

Note that though we are controlling for a number of factors that may affect the employment status of an individual, we cannot claim causality for significant results that we may obtain between our *guanxi* variables and entrepreneurship. This is the case because *guanxi* is unobservable. As we mentioned earlier in the paper, even qualitative analysis such as interviews cannot establish such causality. What we offer is a more careful estimation of the effects of different kinds of *guanxi* on different types of entrepreneurship, so that any significant correlations that we do obtain are more robust.

After running the regressions, we then calculate the marginal effects for the key explanatory variables, which is the partial derivative of Equation (1) for a given explanatory variable. The equation for marginal effects is:

$$\frac{\partial \Pr(y = j \mid x)}{\partial x_k} = \Pr(y = j \mid x) \left\{ \beta_{jk} - \frac{\left[\sum_{h=1}^{J} \beta_{hk} \exp(x\beta_h) \right]}{g(x, \beta)} \right\} \tag{3}$$

where B_{hk} is the kth element of B_h and $g(x, \beta) = 1 + \sum_{h=1}^{J} \exp(x\beta_h)$ (Woolridge 2002).

There are several issues with respect to the marginal effects of the multinomial logit. According to Greene (2000), the marginals may be evaluated at the sample means of the data, or they may be evaluated for each observation and then the sample average of the individual marginal effects is reported. Of these two methods, the latter is preferred; therefore, we use it to calculate the marginal effects. Greene also states that there should be no difference in the marginals using these alternatives if the sample is large. We did check by using the first method and we did find differences (not reported) in magnitude, but not in significance.

Another issue is that the signs and significance of the marginal effects may differ from the coefficients of the regression (Long 1997). Since Equation 3 combines all of the coefficients, the marginal effect of a given x on y need not have the same sign as the coefficient of x regressed on y. Given the nonlinearity of the model, as a given variable changes, the sign of its marginal can also change. Furthermore, a given x may have a significant effect on choosing $y = 1$ vs. $y = 2$, and again be significant for choosing $y = 1$ vs. $y = 3$, but have an insignificant marginal effect. This could be the case if x significantly increases the probability of choosing $y = 1$ vs. $y = 2$ but significantly decreases the

likelihood of choosing $y = 1$ vs. $y = 3$; the marginal effect of a change in x may not change the probability of choosing $y = 1$.

A final point about marginal effects versus coefficients is that the former are interpreted in an absolute fashion, while the latter are interpreted relative to some base. Discussion of marginal effects will not reference an omitted category, whereas discussion of the regression results will. This distinction is apparent from our hypotheses; we are testing the effects of *guanxi* on an outcome in comparison to alternative outcomes.

Before running our regressions, we check the correlation of the independent variables and control variables. Collinearity among the variables is not a concern, as the correlations are 0.368 or lower except for Age and Age2.

Results

Table 3 shows the results for the regression of entrepreneurial status. The basis of comparison for the first two columns is the non-entrepreneur who is employed by a firm, while for the third column it is the sole proprietor.

The first item of note is the CPC variable. It is negative and significant at the 1% level for both sole proprietors and entrepreneurs with employees in the first two columns, and positive and insignificant for entrepreneurs in the third column. These results support **H1** and **H2a**, but do not support **H2b**. We had predicted that CPC *guanxi* would be negatively

Table 3. Multinomial logit of entrepreneurial status: employed, sole proprietor or small business.

	Sole proprietor vs. employed by firm	Small business vs. employed by firm	Small business vs. sole proprietor	Marginal effect on sole proprietor	Marginal effect on small business
CPC	–1.590***	–1.078***	0.512	–0.037**	0.024
	(0.607)	(0.260)	(0.647)	(0.016)	(0.038)
CPCMOM	–0.080	0.370	0.450	–0.003	0.029
	(1.552)	(0.991)	(1.722)	(0.396)	(0.105)
CPCDAD	0.508	–0.442	–0.950	0.015	–0.059
	(1.075)	(0.802)	(1.242)	(0.027)	(0.076)
Family	–0.030	0.020**	0.050***	–0.001*	0.003***
	(0.018)	(0.008)	(0.019)	(0.000)	(0.001)
Friends	0.010	0.009***	–0.001	0.000	0.000
	(0.007)	(0.003)	(0.007)	(0.000)	(0.000)
Classmates	–0.003	–0.001	0.001	0.000	0.000
	(0.020)	(0.009)	(0.021)	(0.000)	(0.000)
Colleagues	–0.068***	–0.016**	0.052**	–0.002***	0.003**
	(0.021)	(0.007)	(0.022)	(0.001)	(0.001)
Constant	–10.558***	–6.208***	4.350		
	(2.481)	(1.229)	(2.650)		
Observations	3,451				
Pseudo R-squared	0.2354				

*Significant at 10%; **significant at 5%; ***significant at 1%.

Notes: Standard errors in parentheses. All regressions include demographic controls, industry dummies and city dummies. Marginal effects are calculated at each observation and reported as the sample average of the individual marginal effects; for dummy variables, the effect is the percentage change in probability when the variable changes from 0 to 1, holding all other variables constant; for continuous variables, the effect is the percentage change in probability given a one-unit increase in the variable.

correlated with the likelihood of being a sole proprietor or an entrepreneur relative to the likelihood of being employed by a firm, but we had also predicted that CPC *guanxi* would have a positive effect on being an entrepreneur with employees relative to being a sole proprietor.

The next variable of significance is Family. This variable is positive and significant for entrepreneurs when compared to both the employed and the sole proprietors, which is in line with both **H4a** and **H4b**, where we predicted that family *guanxi* would be more important for the entrepreneurs relative to the other categories. The Friends variable is positive and significant for entrepreneurs relative to those employed by a firm, but is insignificant for small businesses relative to sole proprietors. This result again supports **H4a**, but contradicts **H4b**. The results for Family, Friends and Classmates support **H3**, which hypothesized that family *guanxi* would have no effect for sole proprietors relative to salaried workers.

The last variable of significance is Colleagues. This variable is actually negative and significant for both sole proprietors and entrepreneurs relative to employees, but is positive and significant for entrepreneurs relative to sole proprietors. These results contradict **H3** and **H4a**, but support **H4b**. Taken as a whole, the results for all of the family *guanxi* variables support **H3**, **H4a** and **H4b**, albeit weakly.

We then examine the marginal effects, which indicate the impact of a unit change in the variable (or simply a change in the case of the dummy variable) on the probability of the dependent variable. Being a CPC member lowers the probability of being a sole proprietor by 3.7%. Contacting an additional family member decreases the probability of being a sole proprietor by 0.1%, but increases the probability of being a small business by 0.3%. Contacting an additional colleague lowers the likelihood of being a sole proprietor by 0.2%, but increases the likelihood of being a small business by 0.3%. Examining the ranges of the family *guanxi* variables in Table 3 gives a better sense of the impact of these changes; for example, the person who contacted the maximum number of family members (85) would be 8.5% less likely to be a sole proprietor, but 25.5% more likely to be an entrepreneur with employees.

Besides this analysis, we considered the possibility that CPC *guanxi* and *guanxi* with family, friends and acquaintances may work together to foster entrepreneurial activity. We introduced interactive terms between the CPC variables and the other *guanxi* variables to test this possibility. We did not find robust results with this interactive terms analysis (not shown).

Discussion and conclusion

The primary research question this paper addresses is: 'For what types of entrepreneurship does *guanxi* matter?' This question is germane because there is current debate about the relative importance of *guanxi* for various economic outcomes, including new firm formation. On one side are those who think *guanxi* is relatively unimportant (Guthrie 1998, Krug 2000, Jacobs *et al.* 2004, Hsu 2005), while there are those who maintain that *guanxi* is generally important (Bian 1994, Yang 1994, Luo 1997, Peng 2004). We defined *guanxi* broadly as 'connections' given our data, with the assumption that the existence of such connections implies the 'pulling' of those connections (*la guanxi*) if it is in the interests of the entrepreneur to do so. Consistent with prior literature, we distinguished between instrumental and familial *guanxi*. In a departure from earlier studies, however, we also distinguished among types of entrepreneurs; first between sole proprietors and entrepreneurs with employees, and then between micro-firms (those employing 10 people or less) and larger new firms (those employing more than 10 people).

Using the CULS data, which covers the cities of Shanghai, Wuhan, Shenyang, Xi'an and Fuzhou for the time period 1996–2001, we find that *guanxi* with the CPC is generally not important for entrepreneurial activity, while *guanxi* with family, friends and acquaintances is somewhat important for entrepreneurs who have employees. In particular, CPC *guanxi* is negatively and significantly correlated with the probability of being either a sole proprietor or an entrepreneur with employees relative to being an employee (Table 3), while it is positive and insignificant for entrepreneurs relative to sole proprietors. These findings make sense given what we know about China in transition: CPC membership is viewed as a status symbol for the best and brightest young people and these individuals have lucrative employment options in SOEs and MNCs. To the extent they would consider entrepreneurship, it would be to found a larger firm, but this effect is not substantial.

Having a father or mother in the CPC had no effect on the probability of being any type of entrepreneur. This last finding adds nuance to the work of Djankov *et al.* (2006), who also found no effect for having CPC parents on entrepreneurial activity, but who did not differentiate among sole proprietors, entrepreneurs with employees and entrepreneurs of larger firms. These findings also complement the work of Bai *et al.* (2006), who address the issue of CPC entrepreneurs accessing bank loans, but not the phenomenon of nascent entrepreneurship *per se*. They found that only membership at the highest level of the CPC made it less difficult for such entrepreneurs to access bank loans; membership at a lower level had no effect.

With regard to *guanxi* with family, friends and acquaintances, we find that it is relatively important for entrepreneurs with employees relative to both employees and to sole proprietors. The results of family *guanxi* for sole proprietors relative to salaried workers are more mixed: positive for contacting friends, and negative for contacting colleagues. These results are sensible when we consider the differing needs of sole proprietors and entrepreneurs of larger firms for capital and protection. Sole proprietors need very little to begin, so they are less reliant on connections than the entrepreneurs with employees. Owners of both micro-firms and larger firms could use *guanxi* at the start, with the stipulation that the former are probably too small to consider bank loans or to require 'official' protection. They may need family *guanxi* more than the entrepreneurs of larger firms, who may augment their capital from *guanxi* sources with bank loans and who are too big to escape the notice of the authorities.

Our results are in agreement with Peng (2004), who finds positive correlation for kinship ties with the number of new enterprises. The caveat is that his study focused on rural entrepreneurs; however, his results are generalizable since his data spans 14 provinces. In contrast, our results do not agree with those of Krug (2000), Jacobs *et al.* (2004) and Hsu (2005). They find that family *guanxi* is not significant for entrepreneurial activity; however, their studies are confined to 1–3 provinces and do not account for type of entrepreneurial activity or for the industry in which this activity occurs. If the majority of the subjects these scholars interviewed are sole proprietors, then there is some agreement with our findings.

The main contribution of this paper is to offer evidence for the relationship between different types of *guanxi* and different types of entrepreneurial activity. Most prior literature does not distinguish among different types of entrepreneurs, so when examining the impact of *guanxi* on entrepreneurship, an entrepreneur with 100 employees is treated the same as a sole proprietor. Our analysis addresses the salient question, 'In what contexts does *guanxi* matter?' by decomposing entrepreneurship into identifiable categories for testing. Furthermore, most of the studies in this vein are ethnographic. While this research is of unquestioned value in providing more depth than empirical work, it tends to suffer from lack of generalizable findings. The nature of these qualitative methods confines them to

one or two locations. This paper provides a sense of the average effect of *guanxi* in urban China.

There are several limitations in this study. The first and most important is that no causal mechanism can be identified with the current data. It is impossible to know from the number of family members contacted whether *guanxi* was in fact employed to increase a person's likelihood of being an entrepreneur. The data does not tell us the content of the contact, whether the person contacted could or would help set up a new business, and what assistance was rendered. Likewise, CPC membership alone does not reveal the level of involvement in the Party or if connections were used to start a business. To some extent, this is an issue endemic to studying *guanxi*, as noted at the outset of the paper; even interviews may not be reliable in determining if *guanxi* truly had an effect on a given outcome, as the subject might be reluctant to admit it. The fact remains, however, that no causality can be claimed; the results here are suggestive rather than conclusive.

A second major limitation is that the analyses are cross-sectional, again owing to the data. The results are valid for a point in time (the end of 2001), but cannot indicate what has been occurring with *guanxi* and entrepreneurship over time. Current literature has indicated that the nature of *guanxi* does seem to be changing, so a greater contribution could be made with a time series analysis of new firm formation and *guanxi*.

In spite of these limitations, we see a potential avenue for future research with our existing data by studying the effects of *guanxi* with different age categories and with different education levels on entrepreneurial activity. Although we did not find significance by interacting the CPC *guanxi* variables with the family *guanxi* variables, it is possible that the relationship of *guanxi* to entrepreneurship may have more to do with a given age cohort or educational attainment.

We conclude by noting that *guanxi* does matter for certain types of entrepreneurship, specifically familial ties for entrepreneurs with employees. The extent to which *guanxi* will continue to matter for various economic outcomes, including entrepreneurship, is an open question, and is a subject of ongoing research.

Notes

1. Owing to our data, we focus on the distinction between sole proprietors and entrepreneurs with employees, as opposed to individual enterprises (eight or less employees) vs. private enterprises (more than eight employees and privately owned).
2. Chen *et al.* (2008) offer a brief history of the growing acceptance of entrepreneurs by the CPC, culminating in Jiang Zemin's welcoming of entrepreneurs to Party membership in 2001.

References

Aldrich, H. and Zimmer, C., 1986. Entrepreneurship through social networks. *In*: D. Sexton and R. Smiler, eds. *The art and science of entrepreneurship*. New York: Ballinger Press, 3–23.

Aldrich, H., *et al.*, eds., 1991. The generic entrepreneur? Insights from a multinational research project. *In*: N.C. Churchill et al., eds. *Frontiers of entrepreneurship research 1991: proceedings of the 11th annual Babson College entrepreneurship research conference*. Babson Park, MA: Babson College.

Allen, F., Qian, J., and Qian, M.J., 2005. Law, finance and economic growth in China. *Journal of financial economics*, 77 (1), 57–116.

Bai, C.E., Lu, J.Y., and Tao, Z.J., 2006. Property rights protection and access to bank loans. *Economics of transition*, 14 (4), 611–628.

Bai, C.E., *et al.*, 2000. A multitask theory of state enterprise reform. *Journal of comparative economics*, 28 (4), 716–738.

Bai, C.E., *et al.*, 2004. *Commitment, incentives, and information: the case of anonymous banking*. Working paper. Beijing: Qinghua University.

Bates, T., 1995. Self-employment entry across industry groups. *Journal of business venturing*, 10 (2), 143–156.
Bian, Y.J., 1994. *Guanxi* and the allocation of urban jobs in China. *China quarterly*, 140, 971–999.
Brandt, L. and Li, H.B., 2003. Bank discrimination in transition economies: ideology, information, or incentives? *Journal of comparative economics*, 31 (3), 387–413.
Burt, R., 1992. *Structural holes: the social structure of competition*. Cambridge, MA: Harvard University Press.
Chan, K.-b., ed., 2000. *Chinese business networks: state, economy, and culture*. Copenhagen: NIAS Press.
Chen, Z., Lu, M., and He, J.Z., 2008. Power and political participation of entrepreneurs: evidence from Liuzhou, Guangxi, China. *Journal of the Asia Pacific economy*, 13 (3), 298–312.
Chung, C.N., 2005. Beyond Guanxi: network contingencies in Taiwanese business groups. *Organization studies*, 27 (4), 461–489.
Coase, R., 1960. The problem of social cost. *Journal of law and economics*, 3 (1), 1–44.
Cooper, A., Folta, T., and Woo, C., 1995. Entrepreneurial information search. *Journal of business venturing*, 10 (2), 107–120.
DeGlopper, D., 1972. Doing business in lukang. *In*: W.E. Willmott, ed. *Economic organization in Chinese society*. Palo Alto: Stanford University Press, 297–326.
Delmar, F. and Davidsson, P., 2000. Where do they come from? Prevalence and characteristics of nascent entrepreneurs. *Entrepreneurship and regional development*, 12 (1), 1–23.
Djankov, S., *et al.*, 2005. Who are Russia's entrepreneurs? *Journal of the European economic association*, 3 (2–3), 587–597.
Djankov, S., *et al.*, 2006. Who are China's entrepreneurs? *American economic review*, 96 (2), 348–352.
Evans, D. and Leighton, L., 1989. Some empirical aspects of entrepreneurship. *American economic review*, 79 (3), 519–535.
Fried, M., 1969. *Fabric of Chinese society: a study of the social life in a Chinese county seat*. New York: Octagon Press.
Giles, J. and Park, A., 2006. How has economic restructuring affected China's urban workers? *China quarterly*, 185, 61–95.
Goodman, D., 2004. Localism and entrepreneurship: history, identity, and solidarity as factors of production. *In*: B. Krug, ed. *China's rational entrepreneurs*. New York: RoutledgeCurzon Press, 139–165.
Granovetter, M., 1973. The strength of weak ties. *American journal of sociology*, 78 (6), 1360–1380.
Granovetter, M., 1985. Economic action and social structure: a theory of embeddedness. *American journal of sociology*, 91 (3), 481–510.
Greene, W., 2000. *Econometric analysis*. Upper Saddle River, NJ: Prentice Hall.
Greve, A. and Salaff, J., 2003. Social networks and entrepreneurship. *Entrepreneurship theory and practice*, 28 (1), 1–22.
Guthrie, D., 1998. The declining significance of *Guanxi* in China's economic transition. *China quarterly*, 154, 254–282.
Guthrie, D., 2002. Information asymmetries and the problem of perception: the significance of structural position in assessing the importance of *Guanxi* in China. *In*: G. Thomas, D. Guthrie, and D. Wank, eds. *Social connections in China: institutions, culture, and the changing nature of Guanxi*. Cambridge: Cambridge University Press, 37–55.
Hamilton, G., 1989. *Patterns of Asian capitalism: the cases of Taiwan and South Korea*. Working paper series 28. Davis, CA: Institute of Governmental Affairs, University of California.
Hamilton, G. and Kao, C.H., 1990. The institutional foundations of Chinese business: the family firm in Taiwan. *Comparative social research*, 12, 135–151.
Hsu, C., 2005. Capitalism without contracts v. capitalists without capitalism: comparing the influence of Chinese *Guanxi* and Russian *Blat* on marketization. *Communist and post-communist studies*, 38, 309–327.
Hwang, K.K., 1987. Face and favor: the Chinese power game. *American journal of sociology*, 92 (4), 944–974.
Jacobs, G., Belschak, F., and Krug, B., 2004. Social capital in China: the meaning of *Guanxi* in Chinese business. *In*: B. Krug, ed. *China's rational entrepreneurs*. New York: RoutledgeCurzon Press, 166–188.
Jacobs, J.B., 1979. A preliminary model of particularistic ties in Chinese political alliances: *Ganqing* and *Guanxi* in a rural Taiwanese township. *China quarterly*, 78, 237–273.

Krug, B., 2000. *Ties that bind: the emergence of entrepreneurs in China*. Working paper, ERIM report series. Rotterdam: Erasmus University.

Lee, D. and Tsang, E., 2001. The effects of entrepreneurial personality, background, and network activities on venture growth. *Journal of management studies*, 38 (4), 583–602.

Leff, N., 1979. Entrepreneurship and economic development: The problem revisited. *Journal of economic literature*, 17 (1), 46–64.

Liang, S., 1986. *The essential meanings of Chinese culture*. Hong Kong: Zheng Zhong Press.

Long, J.S., 1997. *Regression models for categorical and limited dependent variables*. Thousand Oaks, CA: Sage.

Luo, J.D., 1997. The significance of networks in the initiation of small businesses in Taiwan. *Sociological forum*, 12 (2), 297–317.

McMillan, J. and Woodruff, C., 2002. The central role of entrepreneurs in transition economies. *Journal of economic perspectives*, 16 (3), 153–170.

Naughton, B., 2007. *The Chinese economy: transitions and growth*. Cambridge, MA: MIT Press.

Nee, V., 1992. Organization dynamics of market transition: hybrid forms, property rights, and mixed economy in China. *Administrative science quarterly*, 37 (1), 1–27.

North, D., 1990. *Institutions, institutional change, and economic performance*. Cambridge, MA: Harvard University Press.

Peng, Y.S., 2004. Kinship networks and entrepreneurs in China's transitional economy. *American journal of sociology*, 109 (5), 1045–1074.

Pennings, J., 1982. Organizational birth frequencies: an empirical investigation. *Administrative science quarterly*, 27 (1), 120–144.

Redding, G., 1980. Cognition as an aspect of culture and its relation to management processes: an exploratory view of the Chinese case. *Journal of management studies*, 17 (2), 127–148.

Redding, G., 1990. *The spirit of Chinese capitalism*. New York: de Gruyter Press.

Rees, H. and Shah, A., 1986. An empirical analysis of self-employment in the U.K. *Journal of applied econometrics*, 1 (1), 95–108.

Reynolds, P., 2003. *Entrepreneurial advantage of nations: overview of 2002 global entrepreneurship monitor*. UN Workshop held on 29 Apr [online]. London: Global Entrepreneurship Research Association. Available from: http://www.gemconsortium.org [Accessed 20 September, 2005].

Shane, S., 2003. *A general theory of entrepreneurship*. Northampton: Elgar Press.

Shane, S. and Venkataraman, S., 2000. The promise of entrepreneurship as a field of research. *Academy of management review*, 26 (1), 13–17.

Szamosszegi, A. and Kyle, C., 2011. An analysis of state-owned enterprises and state capitalism in China. Report prepared for the U.S.-China Economic and Security Review Commission. Available from: http://www.uscc.gov/researchpapers/2011/10_26_11_CapitalTradeSOEStudy.pdf" [Accessed 7 March 2012].

Venkataraman, S., 1997. The distinctive domain of entrepreneurship research: an editor's perspective. *In*: J. Katz and R. Brockhaus, eds. *Advances in entrepreneurship, firm emergence and growth*. Greenwich, CT: JAI Press, 119–138.

Wank, D., 1996. The institutional process of market clientelism: *Guanxi* and private business in a South China city. *China quarterly*, 147, 820–838.

Wank, D., 2002. Business-state clientelism in China: decline or evolution? *In*: G. Thomas, D. Guthrie, and D. Wank, eds. *Social connections in China: institutions, culture, and the changing nature of Guanxi*. Cambridge: Cambridge University Press, 97–115.

Wei, S.J. and Wang, Z., 1997. The Siamese twins: do state-owned banks favor state-owned enterprises in China? *China economic review*, 8 (1), 19–29.

Whitley, R., 1995. Eastern Asian enterprise structure and the comparative analysis of forms of business organization. *In*: P.N. Ghauri and S.B. Prasad, eds. *International management*. London: Dryden Press, 191–212.

Williamson, O., 1985. *The economic institutions of capitalism*. New York: Free Press.

Wong, S.L., 1989. *Emigrant entrepreneurs: Shanghai industrialists in Hong Kong*. New York: Oxford University Press.

Woolridge, J., 2002. *Econometric analysis of cross section and panel data*. Cambridge, MA: MIT Press.

Yang, C.K., 1965. *Chinese communist society: the family and the village*. Cambridge, MA: MIT Press.

Yang, M., 1994. *Gifts, favors, and banquets*. New York: Cornell University Press.

Yang, M., 2002. The resilience of *Guanxi* and its new deployments: a critique of some new *Guanxi* scholarship. *China quarterly*, 170, 459–476.