

## **Who Are China's Entrepreneurs?**

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It has been increasingly recognized that entrepreneurship plays a crucial role in successful economies. The Schumpeterian approach to growth (Aghion and Howitt, 1997) advances the view that entrepreneurial dynamism is the key to innovation and growth. A growing body of policy work emphasizes the important role of entrepreneurs in economic development (World Bank, 2003). Yet, research on entrepreneurship in economics is rather limited.

There are three distinct perspectives on entrepreneurship in social sciences. The first perspective focuses on the role of economic, political, and legal institutions in fostering or restricting entrepreneurship. Institutional problems are seen in credit constraints that make it impossible to borrow and set up businesses; insecurity of property rights that provides insufficient incentives for entrepreneurs; and regulatory burdens that make setting up new enterprises difficult.

The second perspective focuses on the sociological variables shaping entrepreneurship. For example, sociologists study the role of values and social networks in promoting or discouraging entrepreneurial activities. Social networks may work through a variety of channels, such as family, friends, or ethnic groups.

The third perspective emphasizes individual characteristics of entrepreneurs. Psychologists have studied the traits associated with entrepreneurship – such as a personal need for achievement, belief in the effect of personal effort on outcomes, attitudes towards risk, and individual self-confidence.

Although there are studies on each perspective, little work looks at each of these factors taking the other into account. This is precisely what we do in this paper, using a new data set of Chinese entrepreneurs and a matching sample of non-entrepreneurs with similar age, gender and educational characteristics.

The survey covers both entrepreneurs and non-entrepreneurs in order to understand how they differ in individual characteristics, family background, social networks, values and beliefs, and perceptions of the institutional environment. The data further allow us to separate Chinese entrepreneurs into two groups, by necessity and by opportunity, and to

differentiate non-entrepreneurs in three groups, those who never thought to be entrepreneurs, those who thought but never became entrepreneurs, and those who became entrepreneurs but eventually failed. This is a richer data set than a previous survey in Russia (Djankov et al. 2005, 2006).

## **I. The Data**

The study was performed in the 2004-2005 academic year in Beijing and six other cities in three provinces in China: Wuhan and Huangshi in Hubei Province, Guangzhou and Zhongshan in Guangdong Province, and Xi'an and Baoji in Shaanxi Province.

We first surveyed a random sample of 414 entrepreneurs – 108 from Beijing and from 50 to 53 in each of the other cities in the fall of 2004. An entrepreneur is defined as the owner or co-owner of a business with five or more employees. We then surveyed 561 non-entrepreneurs in early 2005 using a similar survey instrument with the same breakdown across cities. 80% of the non-entrepreneur sample was chosen randomly conditional on matching the age, gender and educational attainment of entrepreneurs from the first survey, and 20% was chosen randomly without regard to demographic characteristics. We opted for this approach to ensure that broad demographic differences between entrepreneurs and non-entrepreneurs were not driving the results.

Finally, another survey was run among a random sample of 1,275 respondents asking nine questions about their personal characteristics, including whether or not they were an entrepreneur or self-employed. The share of entrepreneurs and self-employed ranged from as high as 25% in Beijing to as low as 11% in Guangzhou. These data allow us to determine the proportion of entrepreneurs across the sampling units. In all of the empirical analysis, the observations are weighted with weights equal to the inverse of the probability for a particular respondent (entrepreneur or non-entrepreneur) to get into our sample.

## **II. Comparing Entrepreneurs with Non-Entrepreneurs**

We compare entrepreneurs with non-entrepreneurs using conditional means controlling for age, gender, education and city dummies. All the main results from the comparison are robust to adding a control for the current wealth of the individual.

First, in terms of individual characteristics, we do not find important differences in

either cognitive scores or excellence in education, but find that entrepreneurs are more mobile, wealthier, and are more willing to accept a risk neutral gamble. When asked whether to accept 1) win \$10 with probability  $\frac{1}{2}$  and lose \$10 with probability  $\frac{1}{2}$  or 2) win \$20 with probability  $\frac{1}{2}$  and lose \$20 with probability  $\frac{1}{2}$ , 90% of entrepreneurs responded yes, compared to only 57% of non-entrepreneurs.

Second, in terms of family background, the parents of entrepreneurs do not have a higher education than non-entrepreneurs' but they were more likely to have been bosses or directors and were richer on average. Most importantly, entrepreneurs have nearly three times more entrepreneurs in their family (parents, aunts or uncles, siblings and cousins) than non-entrepreneurs. Respondents were asked to name five friends from their childhood and adolescence, and then to report how many of these five have become entrepreneurs. The difference in response for entrepreneurs and non-entrepreneurs is striking: among entrepreneurs the answer is 0.84 for childhood friends and 1.27 for adolescence friends, compared to 0.55 and 0.44 for non-entrepreneurs, respectively.

Third, entrepreneurs differ from non-entrepreneurs in motivation and greed. Respondents were asked whether they would retire if they received a windfall income of 5,000 times the annual GDP per capita of China (about \$5 million). Entrepreneurs were much less likely to respond positively than non-entrepreneurs. The main reason is that entrepreneurs want to earn more money: 70% of those who did not want to retire mentioned it as a motivation against 43% for non-entrepreneurs who would not retire for the same amount. While entrepreneurs do not perceive themselves happier (92% against 91%), they consider they are successful in life (64% against 43%).

Fourth, respondents were asked about values and beliefs. We do not see big differences with two important exceptions. Work is more important to entrepreneurs than to non-entrepreneurs (80% against 63%) and they value political freedom much more (73% against 28%). Entrepreneurs consider bribing more justifiable. Questions on trust did not deliver many different answers except for - perhaps not surprising - the result that entrepreneurs place more trust in other businessmen and their subordinates.

Finally, there is a striking difference between entrepreneurs and non-entrepreneurs on their perception of the institutional environment of doing business. Entrepreneurs perceive the business climate more favorably than non-entrepreneurs. For example, 10% of entrepreneurs

considered complicated tax rules and racket as problems, as compared to 28% and 43%, respectively, from non-entrepreneurs. Only 12% of entrepreneurs considered inflation and macroeconomic instability a problem, while 39% of non-entrepreneurs thought so. 15% of entrepreneurs blamed inefficient courts, as compared to 38% of non-entrepreneurs. While the shares of non-entrepreneurs blaming corruption and crime are 48% and 45%, respectively, the corresponding shares of entrepreneurs are only 17% and 9%. Similarly, 26% of non-entrepreneurs considered public infrastructure and public goods provision poor, while only 4% and 6% of entrepreneurs thought so. We also find that, controlling for city-level differences, entrepreneurs have a more positive perception for local government's attitude towards business than non-entrepreneurs, but the reverse is true when it comes to the central government.

### **III. Different Types of Entrepreneurs and Non-Entrepreneurs**

Our data set contains information on different types of entrepreneurs (by opportunity and by necessity) and non-entrepreneurs (never thought of becoming entrepreneurs, thought of becoming entrepreneurs, and failed as entrepreneurs). Thus, we can investigate in more detail the factors determining each type. We focus on the variables that can plausibly be considered exogenous to the determination of the types.

Consider the first three probit regressions in Table 1. In specification (1), the dependent variable equals 1 if the respondent is an entrepreneur and 0 otherwise. Specification (2) considers only entrepreneurs, where the dependent variable equals 1 if the enterprise experiences positive growth and 0 otherwise. In specification (3), data are restricted to those non-entrepreneurs who were never entrepreneurs, and the dependent value is 1 if the respondent thought of owning a business and 0 otherwise. In all three specifications, we find that having family members as entrepreneurs is positively associated with the dependent variable. Having friends entrepreneurs is also positively associated with the dependent variable in specifications (1) and (3). This is interesting because plausibly the friend entrepreneur variable is endogenous in specifications when we compare entrepreneurs to non-entrepreneurs, as entrepreneurs might first recall their entrepreneur friends. The positive coefficient of that variable in the regression for those non-entrepreneurs who thought about entrepreneurship is reassuring because their memory

is less likely to be biased. This evidence is suggestive of the importance of social networks in driving entrepreneurship; yet other unobserved characteristics may jointly determine career choices of entrepreneurs and their friends. We also find that risk-loving and greed come out significantly in determining entrepreneurship (specification (1)) and growth (specification (2)). In specification (3), while family and friends entrepreneurs remain significant, greed and risk-taking are not significant. This suggests that social environment has an effect on thinking about becoming an entrepreneur but risk-taking and greed is necessary to be one.

Specification (4) is a Multinomial Logit regression that divides all the respondents into three groups: entrepreneurs, non-entrepreneurs who were failed entrepreneurs, and non-entrepreneurs who were never entrepreneurs. Failed entrepreneurs (middle column in specification (4)), as compared to all others, have the highest shares of entrepreneurs in family and friends, which might be a reason for them to become entrepreneurs earlier. Interestingly, the failed entrepreneurs are also the shortest and least smart (worst scores on aptitude tests), but have best self-reported performance in school and perceive the government as least favorable to business. This might suggest the reasons why they failed.

Finally, we examine business owners who became entrepreneurs due to varying circumstances. Entrepreneurs by opportunity are those who became entrepreneurs when they saw a business opportunity. They are the entrepreneurs in the Schumpeterian sense. Entrepreneurs by necessity are those who became entrepreneurs primarily because they could not find other jobs. Specification (5) is a Multinomial Logit regression pooling these two types of entrepreneurs together with non-entrepreneurs who were never entrepreneurs. We find that entrepreneurs by necessity are in the middle between entrepreneurs by opportunity and non-entrepreneurs who were never entrepreneurs in terms of having entrepreneurs among friends and family members, risk attitude, and greed. But they are closer to entrepreneurs by opportunity than to the non-entrepreneurs who never were entrepreneurs.

#### **IV. Conclusions**

We find that controlling for institutional environment entrepreneurs in China are much more likely to have family members who are entrepreneurs as well as childhood

friends who became entrepreneurs, suggesting that social environment plays an important role in entrepreneurship. Entrepreneurs also differ strongly from non-entrepreneurs in their attitudes toward risks and their work-leisure preferences, echoing Schumpeter. Finally, failed entrepreneurs score the worst on aptitude tests, but have the best self-reported performance in school and perceive the business environment as least favorable.

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## ENDNOTES

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Table 1. Different Types of Entrepreneurs and Non-Entrepreneurs

	(1)	(2)	(3)	(4)			(5)		
<b>Specification:</b>	Probit	Probit	Probit	Multinomial Logit			Multinomial Logit		
<b>Dependent variable:</b>	E	E with positive sales growth	NE who thought of business	E	NE who failed as E	NE who never was E	E by opportunity	E by Necessity	NE who never was E
<b>Comparison group:</b>	All NE	Other E	Other NE	The other two groups			The other two groups		
<b>Report:</b>	dP(E)/dx	dP(.) / dx	dP(.) / dx	dP(.) / dx ( $\sum dP(.) / dx = 1$ )			dP(.) / dx ( $\sum dP(.) / dx = 1$ )		
Father had higher education	0.005 [0.020]	-0.221 [0.077]***	-0.003 [0.081]	0.005 [0.012]	0.015 [0.020]	-0.02 [0.017]	0.005 [0.010]	-0.004 [0.001]***	-0.001 [0.009]
Father was a boss or director	0.011 [0.022]	-0.011 [0.090]	0.006 [0.064]	0.007 [0.013]	0.009 [0.021]	-0.016 [0.022]	0.001 [0.006]	0.001 [0.004]	-0.002 [0.009]
Mother was a boss or director	0.081 [0.059]	-0.167 [0.138]	0.191 [0.151]	0.035 [0.025]	0.002 [0.060]	-0.037 [0.077]	0.025 [0.014]*	-0.007 a [0.005]	-0.019 [0.015]
Mother was a party member	-0.021 [0.012]*	-0.109 [0.156]	0.093 [0.069]	-0.023 [0.015]	0.011 [0.043]	0.012 [0.043]	-0.013 [0.012]	-0.003 [0.003]	0.015 [0.014]
Family members entrepreneurs	0.012 [0.007]*	0.088 [0.032]***	0.065 [0.018]***	0.011 [0.005]**	0.026 c [0.020]	-0.037 [0.024]	0.004 [0.004]	0.002 c [0.001]***	-0.006 [0.004]
Friends entrepreneurs (from the last place of study)	0.031 [0.010]***	-0.004 [0.020]	0.078 [0.023]***	0.028 [0.006]***	0.036 c [0.009]***	-0.064 [0.003]***	0.016 [0.005]***	0.004 a,c [0.002]**	-0.019 [0.007]***
Cognitive test score	0.004 [0.005]	-0.031 [0.038]	0.005 [0.013]	0.003 [0.003]	-0.002 [0.018]	-0.001 [0.020]	0.001 [0.001]	0.001 c [0.001]*	-0.003 [0.002]
Height	0.001 [0.000]**	0.008 [0.005]	0.003 [0.002]	0.001 [0.001]	-0.005 a,c [0.001]***	0.005 [0.002]**	0 [0.000]	0 [0.000]	-0.001 [0.000]
Risk-loving	0.078 [0.006]***	0.157 [0.120]	-0.005 [0.028]	0.075 [0.009]***	0.027 c [0.041]	-0.102 [0.049]**	0.046 [0.008]***	0.012 a,c [0.003]***	-0.057 [0.007]***
Top 10% in secondary school (self reported)	-0.007 [0.010]	0.118 [0.057]**	-0.018 [0.017]	0.001 [0.012]	0.092 a,c [0.037]**	-0.093 [0.044]**	-0.004 [0.005]	-0.001 c [0.003]	0.004 [0.008]
Greed	0.141 [0.027]***	0.134 [0.032]***	0.032 [0.047]	0.072 [0.011]***	0.008 a,c [0.024]	-0.08 [0.021]***	0.043 [0.009]***	0.015 a,c [0.003]***	-0.058 [0.011]***
Local population perceived favorable towards E	0.009 [0.008]	-0.03 [0.092]	0.015 [0.049]	0.009 [0.007]	0.004 [0.023]	-0.013 [0.025]	0.005 [0.007]	0.002 c [0.000]***	-0.007 [0.007]
Government perceived favorable towards E	0 [0.004]	0.035 [0.021]*	-0.014 [0.017]	-0.004 [0.002]*	-0.042 a,c [0.005]***	0.046 [0.003]***	0 [0.002]	0 [0.001]	-0.001 [0.002]
Observations	802	340	392		802			782	
Pseudo R-sqrd (R-sqrd)	0.38	0.12	0.2		0.35			0.35	

Notes: E—entrepreneur; NE—non-entrepreneur. Robust SEs corrected for clusters at city level in brackets. Asterisks denote significance of difference from 0 at 10, 5, and 1%; “a” and “c” in the middle column in each Multinomial Logit regression denote significant-at-5%-level difference from the same coefficients in the left and the right columns, respectively. All regressions include controls for gender, age, education with a quadratic term; regression (3) includes controls for employment size and industry dummies. The unreported controls are jointly significant at 1% level.