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 (Philippe Aghion and Peter 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 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 toward risk, and individual self-confidence.

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

The survey covers both entrepreneurs and nonentrepreneurs 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 nonentrepreneurs 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 dataset 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.

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In the fall of 2004, we surveyed a random sample of 414 entrepreneurs—108 from Beijing and between 50 and 53 in each of the other cities. An entrepreneur is defined as the owner or co-owner of a business with five or more employees. In early 2005, we surveyed 561 nonentrepreneurs using a similar survey instrument with the same breakdown across cities. Eighty percent of the nonentrepreneur sample was chosen randomly, conditional on matching the age, gender, and educational attainment of entrepreneurs from the first survey, and 20 percent was chosen randomly without regard to demographic characteristics. We opted for this approach to ensure that broad demographic differences between entrepreneurs and nonentrepreneurs 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 entrepreneurs or self-employed. The share of entrepreneurs and self-employed ranged from as high as 25 percent in Beijing to as low as 11 percent in Guangzhou. These data allow us to determine the proportion of entrepreneurs across the sampling units. Throughout the empirical analysis, the observations are weighted, with weights equal to the inverse of the probability of a particular respondent (entrepreneur or nonentrepreneur) getting into our sample.

II. Comparing Entrepreneurs with Nonentrepreneurs

We compare entrepreneurs with nonentrepreneurs 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 we do find that entrepreneurs are more mobile, wealthier, and more willing to accept a risk-neutral gamble. When asked whether they were willing to accept one of the two risk-neutral gambles: (a) win \$10 with probability ½ and lose \$10 with probability ½ or (b) win \$20 with probability ½ and lose \$20 with probability ½ , 90 percent of entrepreneurs responded yes, compared to only 57 percent of nonentrepreneurs.

Second, in terms of family background, the parents of entrepreneurs do not have a higher education than nonentrepreneurs but are more likely to have been bosses or directors and were wealthier on average. Most important, entrepreneurs have nearly three times more entrepreneurs in their family (parents, aunts or uncles, siblings, and cousins) than nonentrepreneurs. Respondents were asked to name five friends from their childhood and adolescence and to report how many of them have become entrepreneurs. The difference in the responses of entrepreneurs and nonentrepreneurs 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 nonentrepreneurs, respectively.

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

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 nonentrepreneurs (80 percent compared to 63 percent); and they value political freedom much more (73 percent compared to 28 percent). 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 nonentrepreneurs in their perception of the institutional environment of doing business. Entrepreneurs perceive the business

climate more favorably than nonentrepreneurs. For example, 10 percent of entrepreneurs considered complicated tax rules and rackets as problems, compared to 28 percent and 43 percent, respectively, of nonentrepreneurs. Only 12 percent of entrepreneurs considered inflation and macroeconomic instability a problem, while 39 percent of nonentrepreneurs thought so. Fifteen percent of entrepreneurs considered inefficient courts a problem, as compared to 38 percent of nonentrepreneurs. While shares of nonentrepreneurs who considered corruption and crime problems are 48 percent and 45 percent, respectively, the corresponding shares of entrepreneurs are only 17 percent and 9 percent. Similarly, 26 percent of nonentrepreneurs considered both public infrastructure and public goods provision to be poor, while only 4 percent and 6 percent of entrepreneurs thought so. We also find that, controlling for city-level differences, entrepreneurs have a more positive perception of local government's attitude toward business than nonentrepreneurs, but the reverse is true when it comes to the central government.

III. Different Types of Entrepreneurs and Nonentrepreneurs

Our dataset contains information on different types of entrepreneurs (by opportunity and by necessity) and of nonentrepreneurs (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 one if the respondent is an entrepreneur, and zero otherwise. Specification 2 considers only entrepreneurs, where the dependent variable equals one if the enterprise experiences positive growth, and zero otherwise. In specification 3, data are restricted to those nonentrepreneurs who were never entrepreneurs, and the dependent value is one if the respondent thought of owning a business, and zero otherwise. In all three specifications, we find that having family members as entrepreneurs is positively associated with the dependent variable. Having friends as 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 nonentrepreneurs, as entrepreneurs might first recall their entrepreneur friends. The positive coefficient of that variable in the regression for those nonentrepreneurs 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 love of risk and greed are significant in determining entrepreneurship (specification 1) and growth (specification 2). In specification 3, while family and friend 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 are necessary in order to be one.

Specification 4 is a multinomial logit regression that divides all the respondents into three groups: entrepreneurs, nonentrepreneurs who were failed entrepreneurs, and nonentrepreneurs who were never entrepreneurs. Failed entrepreneurs (middle column in specification 4) have the highest share of entrepreneurs as 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 the 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" became entrepreneurs when they saw a business opportunity. They are the entrepreneurs in the Schumpeterian sense. "Entrepreneurs by necessity" 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 nonentrepreneurs who were never entrepreneurs. We find that entrepreneurs by ne-

TABLE 1—DIFFERENT TYPES OF ENTREPRENEURS AND NONENTREPRENEURS

Specification	(1) Probit	(2) Probit	(3) Probit	(4) Multinomial logit			(5) Multinomial logit		
Dependent variable	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
Comparison group	All NE	Other E	NE who never thought of business	The other two groups			The other two groups		
Report	$dP(\mathrm{E})/dx$	$dP(\cdot)/dx$	$dP(\cdot)/dx$	$dP(\cdot)/dx$ ($\Sigma dP(\cdot)/dx = 1$)			$dP(\cdot)/dx$ ($\Sigma dP(\cdot)/dx = 1$)		
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 toward 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 toward 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—nonentrepreneur. Robust standard errors corrected for clusters at city level in brackets. Asterisks denote significance of difference from 0 at 10, 5, and 1 percent; "a" and "c" in the middle column in each multinomial logit regression denote significant-at-5-percent level difference from the same coefficients in the left and the right columns, respectively. All regressions include controls for gender, age, and education with a quadratic term; regression 3 includes controls for employment size and industry dummies. The unreported controls are jointly significant at 1-percent level.

cessity are in the middle between entrepreneurs by opportunity and nonentrepreneurs 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 nonentrepreneurs 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 the social environment plays an important role in entrepreneurship. Entrepreneurs also differ strongly from nonentrepreneurs 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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