

Who are Russia's entrepreneurs? ^{*,**}

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Abstract: Social scientists studying entrepreneurship have emphasized three distinct sets of variables: the institutional environment, sociological variables, and personal and psychological characteristics. We are conducting surveys in five large developing and transition economies to better understand entrepreneurship. In this short paper, using over 2,000 interviews from a pilot study in Russia, we find evidence that the three sets of variables matter: perceptions of the local institutional environment, social network effects and individual characteristics are all important in determining entrepreneurial behavior.

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1. Introduction

The Schumpeterian approach to economic growth (Aghion and Howitt, 1997) advances the view that entrepreneurial dynamism is the key to innovation and growth. However, entrepreneurship is an under-researched topic in the social sciences, and especially in economics. There is no single widely-accepted theory of entrepreneurship, and empirical research on the topic is surprisingly limited.

Social scientists have put forward three distinct conceptual perspectives on entrepreneurship. The first is the institutional perspective advocated by economists and some political scientists. This perspective focuses on the role of economic, political, and legal institutions in fostering or restricting entrepreneurship. Recent research has primarily emphasized the role of credit constraints for the poor (Banerjee and Newman, 1993) and the security of property rights (Johnson et al., 2002; McMillan and Woodruff, 2001; De Soto, 2000; Besley, 1995; Che and Qian, 1998, Djankov et al., 2002, Frye and Zhuravskaya, 2000, Roland and Verdier, 2003, Roland, 2000).

The second perspective focuses on the social variables shaping entrepreneurship. Sociologists have long emphasized the role of cultural values (Cochran, 1971) and social networks (Young, 1971) in promoting or discouraging entrepreneurial activities. Various dimensions of social networks may be salient, including relatives, friends, or communities.

The third perspective on entrepreneurship emphasizes the individual characteristics of entrepreneurs. Psychologists have studied the psychological traits associated with entrepreneurs – such as a personal need for achievement (McClelland, 1961), a belief in the effect of personal effort on outcomes (McGhee and Crandall, 1968; Lao, 1970), attitudes towards risk, and individual self-confidence (Liles, 1974). The distinctive personal characteristics of entrepreneurs are also a major theme of recent work by Lazear (2002), who surveyed Stanford University MBA graduates and found that those with a higher number of jobs and shorter job tenures before business school were most likely to become entrepreneurs afterwards. He concludes that individuals who become entrepreneurs have a special ability to acquire general skills, which they then apply to their own businesses.

Our goal is to study entrepreneurship from these three perspectives using a new data set that is being collected in five developing and transition countries: Russia, Brazil, China, India, and Nigeria. The samples include both entrepreneurs and non-entrepreneurs in order to understand how these groups differ in terms of their individual characteristics, skills, education, intellectual and personality traits, family background, social origins, social networks, values and beliefs, and in their perception of the institutional, social and economic environment businesses

face, and thus to make progress disentangling the roles these factors play in promoting entrepreneurship across a variety of settings.

This paper reports some initial findings from a pilot survey conducted in Russia in 2003-2004. We find that certain aspects of the institutional environment play an important role in determining the scope for entrepreneurship in Russia. We also find suggestive evidence that social network effects play a large role: individuals whose relatives and school friends are entrepreneurs are themselves more likely to be entrepreneurs. Finally, individual characteristics including educational background, performance on a test of cognitive ability, personal confidence, greed, and willingness to take risks are also important determinants of entrepreneurship, echoing the claims of Schumpeter and others. Therefore, all three perspectives appear empirically relevant in Russia.

2. The survey project and the Russia pilot

We chose five countries-- Russia, Brazil, China, India, and Nigeria--for the survey data collection for several reasons. First, these countries are among the largest emerging economies in the world and they are located in all major continents, and they are perceived by many as the world's major economic growth engines for the coming decades. Second, entrepreneurship is only emerging in transition economies (and in developing countries with socialist pasts, like India) so we are able to observe out of steady state phenomena and have a glimpse at the rise of entrepreneurship. Third, because these are large countries, we plan to exploit the substantial regional variation in institutions and culture within those countries to better understand the role of these factors. Identical questions are being asked across the different countries, and this will allow for cross-country comparisons, and hopefully allow us to draw broader conclusions for developing countries as a whole.

The Russia pilot study was conducted in 2003-2004. It was performed in Moscow and six other cities in three different regions of Russia, in an attempt to understand entrepreneurship in a range of settings: Nizhny Novgorod and Dzershinsk in the Nizhegorodskaya oblast; Perm and Chaykovskiy in the Permskaya oblast in the Urals, and Rostov on the Don and Taganrog in the Rostovskaya oblast, in the Southern Volga region. The ease of doing business is thought to vary across these regions (CEFIR, 2002).

Three surveys were conducted. We first surveyed a random sample of 400 entrepreneurs – 50 in each of the six regional cities and 100 from Moscow – during September and October 2003. An entrepreneur was defined as the owner or co-owner of a business with five or more employees. Entrepreneurs were identified and surveyed by a leading Russian survey firm. The universe of entrepreneurs was defined using official government statistics, and the survey firm

then selected the 400 respondents randomly using this sampling frame. Each entrepreneur survey lasted for 40 minutes on average.

During February and March 2004, an additional 440 non-entrepreneurs – 55 in each of the same size cities, and 110 in Moscow – were interviewed using a similar survey instrument, and this survey lasted an average of 35 minutes. The sampling frame was individuals listed in the local telephone book, and so the very poor or those who choose not to be listed may be systematically underrepresented. Using this sampling frame, the respondents were chosen randomly conditional on matching the age, gender and educational attainment of the entrepreneurs from the first survey. In other words, the proportion of men, women, and people at various ages and with different levels of educational attainment are nearly identical in these two surveys. In addition to the non-entrepreneurs “matched” on the demographic characteristics of entrepreneurs, 150 additional non-entrepreneurs were also surveyed without regard to demographic characteristics (12 in each of the six cities and 25 in Moscow).

Finally, the survey firm conducted a shorter survey among a random sample of 1200 respondents (with the same breakdown across cities) asking nine questions about personal characteristics, including whether or not the respondent is an entrepreneur. Once again these individuals were sampled from the telephone book. This data allows us to roughly estimate the proportion of entrepreneurs across the study sites, and we find considerable variation, with the proportion of entrepreneurs in Moscow at 8%, Nizhny Novgorod at 6%, Dzershinsk 13.3%, Perm 16%, Chaikovsky 11.3%, Rostov on Don 11.3% and finally Taganrog at 18%. Approximately XX% of entrepreneurs we found in this survey were women. Unfortunately, the limited number of cities and regions in the pilot study makes it difficult to generalize about the impact of regional institutional and cultural differences on entrepreneurship; this is a topic we will explore further in the larger study.

3. Who are Russia’s Entrepreneurs?

We first focus on the differences in means between the entrepreneurs and non-entrepreneurs, conditional on individual age, gender, education, and city.

[Table 1 here]

Over 90% of the respondents are Russian, and there is no statistically significant difference in ethnic composition between entrepreneurs and non-entrepreneurs. There is similarly no difference in religious beliefs between the two groups – though we were surprised in general to see a large majority of respondents in once strongly atheistic Russia declare themselves religious believers. Entrepreneurs scored significantly higher than non-entrepreneurs on a test of cognitive ability, focusing on short-term recall (a digit-span test, available from the authors upon request) which is consistent with a higher percentage of entrepreneurs declaring to have been in the top

10% of students in secondary school. As in Lazear (2002), we find that entrepreneurs have a higher number of distinct previous professional activities than non-entrepreneurs. Entrepreneurs have also moved more often. They also appear to have different personality characteristics with respect to risk: when asked whether they were willing to accept a risk-neutral gamble – win \$10 with 50% probability and lose \$10 with 50% probability – 77.3% of entrepreneurs responded positively versus 59.7% among non-entrepreneurs, suggesting that entrepreneurs are more risk-taking. Higher income and wealth levels among entrepreneurs may explain some of this difference.

Entrepreneurs are better off than non-entrepreneurs along a range of income and wealth proxies (Table 1, Panel B): they spend a smaller proportion of their income on food, are more likely to own a car and a computer (48% of non-entrepreneurs but only 5% of entrepreneurs own neither a car nor computer).

Regarding work-leisure substitution possibilities (Table 1, Panel C), responses to the question of whether the respondent would retire if they won 500 times Russian GDP per capita were also strikingly different for the two groups: 18% of entrepreneurs would choose to retire if they won 500 times average income, while the corresponding figure for non-entrepreneurs is much higher, at 47%, a difference of nearly 30%. When asked why they would not retire despite the hypothesized huge windfall, the key reasons were not only pecuniary: about 50% of entrepreneurs and 24% of non-entrepreneurs (among those who would not retire) only said it was because they wanted more money, while more than 80% of entrepreneurs and 70% of non-entrepreneurs claimed it was because they like their work and nearly 70% of entrepreneurs said it was because they considered their work to serve a useful purpose – much higher rates than for non-entrepreneurs, which is 50%.

Russian entrepreneurs and non-entrepreneurs also differ substantially in family background (Table 1, Panel D). The family members of entrepreneurs had more education, better jobs and were richer. Similarly, the parents of entrepreneurs were also significantly less likely to have been workers. Note that while fathers of entrepreneurs were more likely to have been a director or a boss (19% for entrepreneurs versus 11% for non-entrepreneurs), the opposite is true for mothers (only 2.5% versus 8%). A significantly higher proportion of entrepreneurs' fathers, at nearly 50%, were members of the Communist Party (against 35% for non-entrepreneurs), although the difference is not significant for mothers.

An even more striking difference concerns the social environment and social networks of the two groups. There were hardly any entrepreneurs among the grandparents of entrepreneurs (4.3%) and non entrepreneurs (3%), which is not surprising under the communist regime. Yet despite the fact that entrepreneurship was allowed to develop in Russia only since 1986, the

proportion of parents aunts and uncles running a business is much higher among entrepreneurs (42%) than among non-entrepreneurs (20%) and even higher among siblings and cousins (53% for entrepreneurs and 23.2% for non entrepreneurs). This is strongly suggestive of how in less than 20 years, family diffusion effects may play an important role in fostering entrepreneurship. Note that only 5% of the entrepreneurs in our sample inherited a family business, so family effects likely played a role through other channels. Another striking pattern relates to friends during childhood and adolescence. Respondents were first asked to name five friends from their childhood and adolescence, and then to report how many of these five have become entrepreneurs. The response is twice as high for entrepreneurs as for non-entrepreneurs (1.2 of 5 friends for entrepreneurs versus 0.6 friends for non-entrepreneurs).

Cultural differences also appear to play some role – but less than some would have expected. Entrepreneurs appear to have a stronger work ethic than non-entrepreneurs on average: nearly three quarters of entrepreneurs consider work to be an important value compared to slightly over half of non-entrepreneurs (Table 2). Intellectual achievement is also more important to entrepreneurs than to non-entrepreneurs, as are power and politics. However, in many other dimensions entrepreneurs and non-entrepreneurs share similar values, for instance in terms of the proportion of respondents believing that family, friends, leisure time, religion, service to others, financial security, health, and freedom are important.

[Table 2 here]

In terms of social norms regarding corruption and cheating, both paying and receiving bribes are considered more acceptable by entrepreneurs than non-entrepreneurs. It is unclear how to interpret this pattern in the data: while it could be interpreted to mean that Russian entrepreneurs on average have fewer scruples than non-entrepreneurs regarding corruption, it is also probably the case that many entrepreneurs are immersed in business environments where there frequently is corruption and have come to accept it as a part of doing business.

[Table 3 here]

There is also information regarding respondents' subjective perceptions of the attitude that the population as a whole have, and that different government officials have, towards entrepreneurs (Table 3). Subjective perceptions are important, since they may shape economic choices. In general, perhaps surprisingly, entrepreneurs and non-entrepreneurs appear to have remarkably similar perceptions in this dimension. In other dimensions, entrepreneurs and non-entrepreneurs differ, most notably in the unwillingness among entrepreneurs to use the courts to punish a government official who abuses her / his power, and a stronger belief among entrepreneurs that it is easy to find money to start an enterprise.

Finally, we test which of these variables remain significant in a multivariate regression. We focus on variables that can plausibly be considered exogenous to the decision to become an entrepreneur. (Note that observations in these regressions are re-weighted such that the sample of entrepreneurs receives weight corresponding to its proportion of the overall Russian population.)

[Table 4 here]

Higher levels of parent education are significantly positively associated with entrepreneurship in a probit specification (Table 4, regressions 1-3). Parent membership in the communist party is also positive and significant but less robust. Interestingly, having had a mother who worked as a boss or director has a negative effect on entrepreneurship in contrast to a positive effect for the father, although the precise reasons are unclear. Having entrepreneurs in the family and among adolescent friends is highly significant and robustly associated with entrepreneurship, although interpreting this as a causal effect is complicated by well-known identification problems. Making a causal claim about the effect of social interactions using cross-sectional survey data of this sort is problematic because of the likely omitted variables (for instance, external factors that influence various members of a social group), as discussed by Manski (1993) and others. However, note that more than one quarter of entrepreneurs in our survey sample also claim that friends who were entrepreneurs influenced their own choice to become an entrepreneur (not shown), providing further suggestive evidence on the important role of the social environment and social effects in the entrepreneurship decision.

The individual characteristics with strongest predictive power are the individual's score on the cognitive exam (testing recall) and "greed" (i.e. the unwillingness to stop working after a windfall gain of 500 times per capita GDP in order to earn more money), while risk-taking does not have a robust effect on becoming an entrepreneur. Note that height has a significantly negative effect, although the reasons for this are unclear.

Individual perceptions of the local business climate matter, despite the broadly similar mean values reported in Table 3. The perception of low corruption and a better perceived attitude of the population and government towards entrepreneurship increases the likelihood individuals are entrepreneurs.

We also used the number of years as an entrepreneur as the dependent variable as a robustness check (Table 4, regression 4). This variable is best interpreted as having an early start as an entrepreneur, right at the beginning of transition, or even before then in the shadow economy. The results are broadly similar for nearly all explanatory variables.

Taken together, the picture that emerges is complex: a whole set of factors appears relevant in determining entrepreneurship in Russia: perceptions of the local institutional environment, social network effects, as well as individual characteristics such as cognitive ability.

4. Conclusions

This pilot study is only a first step in the broader project. The current survey does not allow us, for example, to establish the precise channels through which social network effects influence the choice to become an entrepreneur, nor can we definitively claim that one set of factors trumps others in importance. We are currently refining the survey instrument in order to provide better answers to these questions. In the meantime, we hope to discover how responses in four other developing and transition economies compare to those we found in Russia.

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Table 1 : Differences between entrepreneurs and non-entrepreneurs

	Entrepreneurs (E)	Non- entrepreneurs (NE)	Standard error of difference	Significance of difference
Panel A: Individual characteristics				
Russian nationality, %	90.3	90.5	[1.4]	
Religious believer, %	60.0	55.8	[3.6]	
Married, %	74.0	63.2	[4.0]	***
Were you in the top 10% in secondary school? %	44.3	23.7	[3.3]	***
Cognitive ability test score	37	20	[2.6]	***
Number of previous professional activities	1.8	1.4	[0.2]	*
Number of localities lived	1.4	1.1	[0.1]	**
Plan to move, %	4.5	2.3	[2.0]	
Accept a risk-neutral gamble (+/- \$10 or \$20), %	77.3	59.7	[5.4]	***
Good or very good health (self-described), %	76.3	66.4	[3.1]	***
Panel B: Proxies for Income and wealth				
Spend more than half of income on food, %	12.3	46.9	[4.4]	***
Own a car, %	84.5	39.3	[4.3]	***
Own a computer, %	82.0	35.5	[9.3]	***
Panel C: Motivation, greed and happiness				
Would retire if won 500 times GDP per capita, %	18.0	47.0	[3.9]	***
Why not retire if earned 500 times GDP per capita (among those replying would not retire; several answers permitted)				
- I like what I do, %	81.9	70.2	[3.0]	***
- I want more money, %	49.2	24.2	[3.3]	***
- My work serves a useful social purpose, %	69.5	49.7	[4.3]	***
Very happy or quite happy in life, %	90.8	71.7	[3.9]	***
Panel D: Sociological characteristics				
Father had higher education, %	41.8	24.0	[3.4]	***
Father was a boss or director, %	19.0	11.4	[3.1]	**
Father was a communist party member, %	47.9	35.0	[1.9]	***
Mother had higher education, %	36.5	19.6	[4.2]	***
Mother was a boss or director, %	2.5	8.1	[1.6]	***
Mother was a member of the communist party, %	18.8	17.9	[3.7]	
Parent wealth when you were 16 was above average, %	51.6	41.0	[6.3]	*
Were your grandparents running a business? %	4.8	3.0	[1.3]	
Have your parents or aunts and uncles ever been running a business?	42.0	20.0	[3.4]	***
Have your siblings or cousins ever been running a business?	53.0	23.2	[7.4]	***
Number of 5 childhood friends who became entrepreneurs	1.2	0.6	[0.1]	***
How many of high school / university friends became entrepreneurs?	1.2	0.5	[0.1]	***

Notes: For non-entrepreneurs we report means conditional on non-entrepreneurs having the same distribution over town, age, gender, and education as entrepreneurs. Robust standard errors adjusted for clustering at the town level are in brackets. *, **, and *** respectively denote 10%, 5% and 1% significance levels.

Table 2: Comparing the values of entrepreneurs and non-entrepreneurs

	Entrepreneurs (E), %	Non- entrepreneurs (NE), %	Standard error of difference	Significance of difference
<i>The following is very important in life:</i>				
- Work	74.3	54.8	[3.9]	***
- Power	10.3	5.4	[2.4]	**
- Intellectual achievement	42.3	35.1	[3.6]	**
- Family	84.3	81.2	[2.1]	
- Service to others	20.8	19.5	[3.3]	
- Financial security	52.8	51.2	[4.3]	
- Friends	42.5	43.8	[4.0]	
Bribing a government official can be justified	53.3	39.3	[6.7]	**
Accepting a bribe can be justified	31.8	20.8	[3.9]	***

Notes: Same as in Table 1.

Table 3: Perceptions of the institutional environment

	E, %	NE, %	Standard error of difference	Significance of difference
People in your town are favorable towards entrepreneurs	66.0	65.0	[5.7]	
Local government is favorable towards entrepreneurs	48.0	50.1	[6.3]	
Regional government is favorable towards entrepreneurs	49.0	47.0	[7.6]	
Central government is favorable towards entrepreneurs	54.5	51.5	[6.8]	
Go to court if cheated by supplier or client	65.8	76.2	[4.2]	**
Go to court if government official abuses power	61.5	74.0	[3.1]	***
Private entrepreneurs pay bribes to avoid regulations	66.5	64.7	[3.5]	
Private entrepreneurs pay bribes to change rules	49.8	51.0	[6.2]	
It is relatively easy in town to find money to start business	21.0	13.2	[3.3]	**
Most people in town can be trusted	16.0	16.5	[4.0]	

Notes: Same as in Table 1.

Table 4. : Entrepreneurship and entrepreneurial experience

	Dependent variable (specification):			
	Entrepreneur indicator variable (probit)			Years as entrepreneur (OLS)
	(1)	(2)	(3)	(4)
Father had higher education	0.065 [0.015]***	0.059 [0.014]***	0.047 [0.009]***	-0.068 [0.106]
Father was a boss or director	0.056 [0.032]*	0.052 [0.026]**	0.054 [0.022]**	0.238 [0.153]
Father was a party member	0.014 [0.005]***	-0.002 [0.006]	0 [0.007]	-0.021 [0.065]
Mother had a higher education	0.133 [0.007]***	0.202 [0.018]***	0.204 [0.024]***	1.634 [0.252]***
Mother was a boss or director	-0.135 [0.002]***	-0.16 [0.004]***	-0.161 [0.005]***	-1.169 [0.108]***
Mother was a party member	0.061 [0.041]	0.06 [0.037]	0.098 [0.046]**	0.062 [0.175]
Members of family running a business	0.062 [0.002]***	0.05 [0.004]***	0.056 [0.005]***	0.139 [0.021]***
Childhood friends running a business	0.02 [0.006]***	0.022 [0.006]***	0.015 [0.009]	0.068 [0.122]
Adolescent friends running a business	0.038 [0.005]***	0.028 [0.008]***	0.029 [0.009]***	0.428 [0.034]***
Cognitive test score		0.006 [0.003]**	0.008 [0.003]**	-0.023 [0.031]
Height (cm)		-0.004 [0.000]***	-0.005 [0.001]***	-0.004 [0.006]
Risk-taking		0.01 [0.009]	0.007 [0.014]	0.139 [0.071]*
Greed		0.17 [0.021]***	0.179 [0.020]***	1.033 [0.144]***
Perceived favorable attitude of town population towards entrepreneurs			0.072 [0.024]***	0.709 [0.288]**
Perceived favorable attitude of government officials towards entrepreneurship			0.017 [0.007]**	0.102 [0.047]*
Perceived corruption			-0.032 [0.003]***	-0.228 [0.074]**
Number of observations	805	777	777	777

Notes: All regressions include town fixed effects and controls for the individual age, gender, years of attained education, and squared years of attained education. In regressions 1-3 the marginal effects are presented. Robust standard errors adjusted for clustering at the town level are in brackets. *, ** and *** respectively denote 10%, 5% and 1% significance levels.