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Institutions, Networks and Entrepreneurship Development in Russia: An Exploration

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ABSTRACT

Institutions, Networks and Entrepreneurship Development in Russia: An Exploration*

In this paper we explore the ways in which institutions and networks influence entrepreneurial development in Russia. By utilizing new Global Entrepreneurship Monitor (GEM) data collected in 2001, we investigate the effects of the weak institutional environment in Russia in terms of three dimensions: on the rate of productive entrepreneurial activity measured in terms of start-ups and existing business owners; on the characteristics of business owners; and on business financing. In addition, the analysis explores the effectiveness of Russia's informal networks for circumventing the weak institutional environment for business development. Our results indicate that Russia's business owners share many of the same characteristics as business owners in advanced western countries, though education is not associated with entrepreneurial activity. However, the main differences are in the sources of financing and the fact that relatively few individuals engage in productive entrepreneurial activity. Our results support the notion of the limited effectiveness of Russia's networks for supporting entrepreneurial activity in its weak institutional environment.

JEL Classification: J23, M13

Keywords: entrepreneurship, institutions, networks, Russia

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Summary

We explore the influences of the current institutional context in Russia on entrepreneurship development. A number of studies have indicated the hostile nature of the business environment in Russia though there is surprisingly little empirical evidence. We attempt to fill this knowledge gap by specifically testing three hypotheses regarding the nature and determinants of entrepreneurship in Russia.

Our first hypothesis stipulates that due to the high levels of corruption and weak rule of law, firm entry levels will be low. Our second explores the possible influence of human capital. We postulate that in the Russian context, human capital as well as skill will be positively associated with business entry. Our final hypothesis states that given the weaknesses in the Russian capital market, entrepreneurs will disproportionately rely on their own firms to finance their start-up activities.

Our analysis is based on the Global Entrepreneurship Monitor's (GEM) dataset collected in Russia in 2001. A total sample of 2012 adults was interviewed, of which 117 people responded that they are owner/managers of a new business and have been paying salaries for the past 42 months. In terms of start-ups, 105 people responded that they were involved in a business start-up i.e. that they had been actively involved in start-up activities over the past twelve months.

To test our first hypothesis, we compare data on business entry rates obtained from the Amadeus dataset for a five-year period (1998 to 2002) and the GEM dataset for 2001. Russia is found to have a very low level of business entry compared to Western countries. This finding provides support for our first hypothesis.

The results for hypothesis two are surprising since we find that university education is not significantly associated with business start-up. Similarly university education is not significantly associated with owner/managers of existing firms. However, skill in terms of white-collar 'occupational skills' is significantly associated with both start-ups and existing firm owner/managers.

In terms of our third hypothesis, our regression results provide strong support for the proposition that start-ups in Russia rely very strongly on self-financing. Additional analysis of the data also shows that outside financing plays only a minor role as a source of financing for Russian business start-ups.

Our regression results indicate that Russian nascent entrepreneurs as well as business owner/managers exhibit many of the same characteristics as their counterparts in advanced Western countries. Most notably, they are significantly more likely to be male and younger than the population as a whole. An additional and interesting result was the significance of entrepreneurial experience as measured in terms of current business ownership on new start-ups. Though this result can be interpreted in a number of different ways, given the weak institutional environment in Russia and hostile business climate, we suggest that this result provides an indication of the importance of network relationships for business development in weak institutional environments.

1. Introduction

In this paper, we explore the patterns of entrepreneurial development in Russia; a context where many of the preconditions for a workable free-market economy are lacking. Our approach builds on Baumol (1993, 2005) in highlighting the impact of economy wide incentives and institutional structures on entrepreneurial activity. By using data on entrepreneurship in Russia collected as a part of the Global Entrepreneurship Monitor (GEM), we investigate the ways the Russian context, with its institutional weaknesses and history of networks and 'blat', influence the characteristics of individuals embarking on entrepreneurial activities. This paper therefore supplements the relatively sparse existing empirical literature on entrepreneurship development within weak institutional environments (Johnson et al. 1999, 2000; McMillan and Woodruff 1999, 2000; Djankov et al. 2005, 2006).

Baumol (1993) described a variety of historical examples in which innovation was not used for productive entrepreneurial ends. His case of medieval China seems the most similar to modern day Russia; it did not present suitable incentives for productive entrepreneurship to develop and as a consequence, unproductive forms of entrepreneurship flourished. One reason for this was the absence of property rights; it was common for the Chinese monarch to claim possession of all property in his territories. The enforcement of property rights is also a major barrier for business development in Russia, with violations common and the business community often opting for informal resolution of conflicts rather than using formal institutions (Puffer and McCarthy 2001; Aidis and Adachi 2005) [2]. Baumol also highlights the role of corruption as a way of life for civil servants in medieval China, since their official salaries were too low to provide an adequate livelihood. Similarly, the pervasiveness of corruption in Russia is attributed to the low wages paid to most civil servants. Moreover, Russians have become accustomed to a corrupt and a malfunctioning legal environment[3]. The disintegration of the Soviet Union led to a political and economic vacuum that has facilitated the emergence of a 'grabbing hand' model of government intervention (see Shleifer and Vishny, 1999). This is characterized by corrupt behavior occurring in a disorganized way that leads to the personal enrichment of government officials to the detriment of the rule of law and private business development (Frye and Shleifer, 1997)

Medieval China was characterized by a negative view towards enterprise. As Baumol writes, private enterprise was 'not only frowned on, but may have been subjected to impediments deliberately imposed by the officials' (1990:902). Similarly, in Russia, comparable sentiments exist inherited from the Soviet period when entrepreneurs were equated to 'speculators' and deemed criminals for making a profit. The Soviet state was built on an ideology that stifled independent innovative culture and allowed for a punishment-oriented 'inspection culture' to develop[4]. The economy had been run bureaucratically and the

[2] However, when the government initiates such disputes as in the Yukos case, even the informal route for resolution becomes ineffective.

[3] There is some tradition of this: Even during the Soviet period, the prevailing mentality was one of how to get around the laws or enforce them for personal gain rather than a respect and understanding of the law as something that protects the rights of its citizens and (private) businesses. As Gelman notes: '*In the late Soviet period, informal ties penetrated all levels of government and served as a survival kit in the everyday life of Soviet citizens, Such ties defended ordinary people from the arbitrary state, but they also contributed to a vicious circle of cynicism, clientelism and corruption.*'(2004:4).

[4] Puffer and McCarthy further note that in Russia the environment has been traditionally hostile towards entrepreneurship even in the tsarist era, when modest entrepreneurial activity was conducted primarily by minority ethnic groups (2001:29).

concentration of reward on plan attainment suppressed the appetite for risk taking and instead bred habits of obedience and 'playing it safe' (Ellman, 1994).

Baumol would argue that neither country fulfils the preconditions set forth for the existence of a 'workable free-market economy' (2005). However, China has apparently been able to harness strong economic growth through productive entrepreneurial activity even within its inadequate institutional environment (Hsu, 2005) In contrast, it is often argued that Russia has not been able to develop high levels of productive entrepreneurship with the formal institutional environment being identified as the main barrier to entrepreneurship development within its new institutional environment (Djankov and Murrell, 2002), though there is surprisingly little empirical evidence. We attempt to fill this gap by specifying and testing hypotheses about the nature and determinants of entrepreneurship in Russia, using a new household survey focused on Russian entrepreneurship.

The remainder of this paper is structured as follows. In section three we present a brief literature review and develop our hypotheses. The data used to test our hypotheses are discussed in the fourth section and the results are presented in the fifth section. In section six we discuss some implications for future research. This paper concludes in section seven.

2. Hypotheses and Controls

In this section, we outline some of the most important factors that the literature has suggested will influence the extent of entrepreneurship development in Russia as a basis for our subsequent empirical work. In Baumol' s terms, the context for entrepreneurship of a growth and welfare-enhancing sort (i.e. productive entrepreneurs) is highly restrictive in Russia (Baumol 1990) while the incentive system is conducive to perverse or welfare reducing entrepreneurship, as evidenced by the high and rising level of corruption in Russia. We commence by considering the influence of institutions and networks. We go on to consider factor supply constraints, in particular financial ones, in the Russian context before discussing the personal characteristics of entrepreneurs. We derive hypotheses as the organizing framework for our empirical work, and discuss control variable suggested by the literature.

A considerable literature argues that weak institutions, notably the quality of the commercial code, the strength of legal enforcement, administrative barriers, extra-legal payments and lack of market-supporting institutions, represent a significant barrier to entrepreneurship (see e.g. McMillan and Woodruff (1999, 2002), Djankov *et al* (2004)). In a study comparing new firms in Poland, Slovakia, Romania, Russia and Ukraine, Johnson *et al*. (2000) establish that insecure property rights, in addition to weaknesses of macroeconomic stability and adequate financing, inhibit the development of the private sector. This was especially clear for Russia and Ukraine.

These institutions are especially problematic in Russia, where the system is marred with inconsistencies and many Soviet regulatory documents are still in force. As a consequence it is not always clear which regulations apply in a specific case, creating confusion for regulators and the regulated community alike (OECD 2005). In fact, 'No one really knows which laws and regulations are implemented and observed, although it is clear that many are not implemented at all, or only partially' (ibid.). It is not surprising that under the current situation, *'Russian entrepreneurs fear bureaucrats more than criminals'*[5]

[5] Based on a survey carried out by OPORA in 2001 (A Russian NGO representing small and medium sized enterprises). See also OPORA (2005).

(Smolchenko 2005). Law enforcement is also rather arbitrary: According to Radaev, over 80 percent of Russian entrepreneurs have suffered from broken contracts (2002). These factors can form further barriers to entry as potential entrepreneurs evaluate the situation and decide the business environment is too hostile for entry (Aidis and Adachi 2005). Furthermore, an earlier study by Johnson *et a*l. (1999) indicates that relational contracting, i.e. informally enforced through networks, plays a significant role in the transition environment especially in cases like Russia where the existing court systems are inadequate.

These studies highlight the importance of a stable rule of law in terms of enforcement of property rights and a functioning court system for private business development. Based on studies compiled by the World Bank, the situation in Russia remains poor in terms of final percentile rank though some improvement has taken place (Kauffman, *et al.* 2005). As shown in Table 1, indicators measuring voice and accountability, political stability and regulatory quality have all deteriorated since 1998; the percentile rank for government effectiveness, rule of law and control of corruption have improved but the rank remains strikingly low.

Table 1: Governance Indicators for Russia in 1998 and 2004 compared

Governance Indicator	Year	Percentile Rank (0 – 100)
Voice and Accountability	2004	25.7
	1998	41.4
Political Stability	2004	21.8
	1998	23.6
Government Effectiveness	2004	48.1
	1998	23.5
Regulatory Quality	2004	30.5
	1998	31.5
Rule of Law	2004	29.5
	1998	22.7
Control of Corruption	2004	29.1
	1998	25.7

Source: Kauffman *et al*. (2005) http://info.worldbank.org/governance/kkzz2004/sc_chart.asp
Key: Voice and Accountability measure political, civil and human rights; Political Stability measures the likelihood of violent treats to, or changes in, government including terrorism; Government Effectiveness measures the competence of the bureaucracy and the quality of public service delivery; Regulatory Quality measures the incidence of market-unfriendly policies; Rule of Law measures the quality of contract enforcement, the police, and the courts, as well as the likelihood of crime and violence; Control of Corruption measures the exercise of public power for private gain, including both petty and grand corruption and state capture.

The level of corruption is also high in Russia. Table 2 reports the results from the Corruption Perceptions Index compiled by Transparency International. We find that, compared to most advanced western countries, transition countries generally exhibit higher levels of corruption with the highest corruption levels occurring in the Commonwealth of Independent States (CIS). Russian entrepreneurs have also been found to be more corrupt than the population as a whole, perhaps because they are less able to rely on other networks (Djankov *et al*. 2005). Moreover, recent evidence suggests that corruption is actually on the increase in Russia. The Business Environment and Enterprise Performance Survey (BEEPS) conducted by the European Bank for Reconstruction and Development (EBRD) indicates that in 2005 more than 39 percent of the respondents in Russia agreed that they have to pay some irregular payments or gifts for activities related to customs, taxes, licenses, regulations and services frequently. The average percentage of corruption was under 21 percent and decreasing for transition countries as a whole.

Table 2: Corruption Perceptions index 2004 (out of 145)

CEEB Countries	Rank	CIS Countries	Rank
Bulgaria	54	Armenia	82
Czech R.	51	Azerbaijan	140
Estonia	31	Belarus	74
Hungary	42	Georgia	133
Latvia	57	Kazakhstan	122
Lithuania	44	Kyrgyzstan	122
Poland	67	Moldova	114
Romania	87	Russia	90
Slovak R.	57	Tajikistan	133
Slovenia	31	Turkmenistan	133
		Ukraine	122
		Uzbekistan	114

Key: Lower scores indicate lower levels of corruption.
Compared with Finland which ranks number 1; the UK which ranks 11th and Japan which ranks 24th.
Source: Transparency International (2005)

Our analysis of the evolving institutional context in Russia leads us to hypothesize that:

Hypothesis 1: Levels of entrepreneurial activity will be lower in Russia than in economies with better-developed market supporting institutions.

Human capital is an important aspect of successful entrepreneurship, though the empirical findings for developed economies about the impact of human capital measured in terms of education on entrepreneurship are mixed. Thus, Robinson and Sexton (1994) and Cooper and Dunkelberg (1987) find that the decision to become self-employed is influenced by education while the results of Delmar and Davidsson (2000) and Davidsson and Honig (2003) show a clear education effect for nascent entrepreneurs. However in a cross-country study, Uhlaner and Thurik (2005) find that a higher level of education is accompanied by lower rates of self-employment. Some country variations have also been noted. De Wit and van Winden (1989) and Blanchflower (2004) find that education is positively correlated with self-employment in the US but is negatively correlated in Europe. More recent evidence compiled by Parker (2005) suggests that on average, entrepreneurs tend to be more educated than non- entrepreneurs.

The transition countries including Russia fare relatively well in terms of formal measures of education. Literacy rates are high and educational standards are comparable to Western Europe (see Estrin et al., 2006). Also, Russia has a high proportion of students in 'hard' subjects - science, mathematics and engineering (see World Bank, 2005). Indeed the high levels of education are one of the main characteristics distinguishing Russia from most other emerging markets, which it resembles more closely in terms of institutional development. One might therefore expect that the relatively high proportion of educated people in the population, and especially those with advanced levels of technological training, would offset to some extent the unpromising institutional environment. There is some evidence already for this view: Barberis *et al* (1996), find that human capital was an important ingredient for successful new entry by small firms in Russia. Hence, we hypothesize:

Hypothesis 2: In Russia, the probability that an individual becomes an entrepreneur will be positively affected by their level of education and skill.

Financing and capital constraints are also a major issue for potential entrepreneurs. Evans and Jovanovic (1989) show that, due to capital constraints, there is a positive relationship between the probability of becoming self-employed and the assets of the entrepreneur. Using US data, Hurt and Lusardi (2004) identify a non-linear relationship between household wealth and the propensity to start a business, with a positive relationship found only for the households in the top 5 percent of the wealth distribution. Furthermore Grilo and Irigoyen (2006) report a negative effect of the perception of lack of finance on the probability of being self-employed, using European data for 2000, though Grilo and Thurik (2005) are unable to identify an effect for 2004. A number of studies have also established that lack of finance is a barrier for businesses in transition economies (Pissarides 1999, 2004; Pissarides *et al*. 2000; Kaganova 2002; Aidis 2003; Aidis and Sauka 2005; EBRD 2002, 2005) as well as specifically in Russia (Puffer and McCarthy 2001). Klapper *et al.* (2002) analyzed firm financing in 15 transition countries. Most were found to exhibit a relatively low level of outside financing. Firms in 6 of the 15 countries (including Russia) had total liability ratios of less than one (firms borrow less than $1 for every $2 invested in equity) which is low compared to the median leverage ratio of $1.73 for Western European firms. There was also almost no use of long-term debt that could indicate an underdeveloped banking sector, as well as poor collateral law and weak collateral registries. However, a significant and positive relationship was found between a business environment that promotes access to financing and the size of the SME sector.

Financial barriers may therefore constitute a barrier for both start-ups and business expansion in the Russian context. Ten years ago, it was possible to start-up a business with very little capital and most entrepreneurs could rely solely on their personal savings. However, the costs have increased because of competition and the need to enter at a higher level of sophistication (Aidis and Adachi 2005). Russian start-ups have been estimated to need at least $10 000 – 20 000 while *per capita* GDP in Russia in 2004 was $ 9 800[6]. External sources for start-up capital have been found to be rare,[7] and most bank funding is only available for short-term loans with high interest rates[8]. This places relatively greater significance to personally generated funds, and suggests that entrepreneurs will be from households with higher incomes.[9]

Hypothesis 3: Weaknesses in the Russian capital market will lead entrepreneurs to rely disproportionately on their own funds to finance their new firm ventures.

[6] According to the CIA World Factbook (http://www.cia.gov).

[7] According to a survey carried out by OPORA (A Russian NGO representing small and medium sized enterprises) only 15.9 percent of small businesses across Russia make use of bank loans (OPORA 2005; Smolchenko 2005).

[8] In the OPORA survey, among the reasons cited for failure to obtain a loan, more than 47 percent of the business owner respondents stated high interest rates as the main reason (OPORA 2005).

[9] Capital scarcity poses a problem not only for the establishment of businesses but also for their growth. Case studies suggest that engagement in trade often serves as initial capital accumulation that allows entrepreneur to branch off into a different business (Smallbone and Welter 2001). Portfolio entrepreneurship is another way for businesses to hedge against volatility of markets in transition. Smallbone and Welter (2001) find that entrepreneurs engaged in manufacturing and construction are more likely to have several enterprises then those operating in the services sector. They explain this phenomenon by higher volatility and unpredictability of the manufacturing and construction sectors, particularly in regard to financial flows.

While the institutional context may differ considerably, there seems no reason to hypothesize that most of the characteristics favoring entrepreneurial activity in other economies would be systematically different in the Russian context. We therefore control in our regression analysis for many of these, subject to the limitations of the dataset in providing suitable proxies.

Firstly, the literature notes the importance of individual factor supply characteristics. According to Reynolds *et al. (*2002) men are about twice as likely to be involved in entrepreneurial activities as women. Indeed, most research indicates that men have a higher probability of becoming entrepreneurs than women (Minniti *et al.* 2005; Verheul *et al.* 2006). Moreover, the likelihood of becoming self-employed varies with age. Relatively more business owners are in the 25 – 45 year old age category (Storey 1994; Reynolds *et al*. 1999) and relatively more nascent business owners are even younger, between 25 – 34 years of age (Delmar and Davidsson 2000).[10] We control for skill, age and gender in the regressions.

The literature has also analyzed the motives and personal characteristics of entrepreneurs. The critical distinction in terms of motivation is between needs-based and opportunity-driven entrepreneurship. The former induces people to set up a business to earn their living because alternative income sources (employment or social welfare) are scarce. Opportunity driven entrepreneurs follow more intrinsic motives such as to be independent, to implement an idea, a technology, or to make a contribution to society, and are more typical for developed countries. Smallbone and Welter (2001) observe a large proportion of start-ups in transition economies being needs based. We control for opportunity-based motivation in our empirical work.

According to the GEM 2005 Executive Report, the ratio of opportunity-driven to necessity-driven business owners is higher in high income countries than in middle income countries, though middle income countries tend to exhibit higher percentages of individuals starting businesses[11]. In terms of classification, Western European countries are included in the high income countries, while transition countries (such as Hungary and Latvia) as well as emerging economies such as Brazil and China are considered middle income countries. Though not included in the GEM study, Russia would be considered a middle income country. In terms of education, the GEM study finds that individuals with post-secondary education or graduate school experience are more involved in early-stage entrepreneurial activity or as established business owners in middle income countries than in high income countries. In general, individuals who are involved in any stage, regardless of country, tend to be more confident in their own skills and are less likely to let fear of failure prevent them from starting a new venture (GEM 2005).

The personal characteristics of entrepreneurs have been found to vary greatly across transition economies. According to Szelenyi (1988) entrepreneurs under socialism often came from families with previous entrepreneurial traditions, a phenomenon also identified by Webster (1992). Smallbone and Welter (2001) argue that family tradition was of particular importance in countries like Poland, which permitted the continuation of small-scale private activities throughout the communist era though of course, Russia lacked this tradition (Puffer

[10] The demographic structure of Russia, with a relatively low proportion of young people, may therefore be an additional obstacle to entrepreneurship.

[11] The 2005 GEM report is based on the results of 35 participating countries. According to their classification of participating countries the following are considered high income countries: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Japan, the Netherlands, New Zealand, Norway, Singapore, Spain, Sweden, Switzerland, UK and the US. The following countries were considered middle income countries: Argentina, Brazil, China, Chile, Croatia, Hungary, Jamaica, Latvia, Mexico, Slovenia, South Africa, Thailand and Venezuela (GEM 2005).

and McCarthy 2001)[12]. How do these entrepreneurs build their businesses in view of high uncertainty and a not very supportive institutional environment? Generally, they adopt strategies that allow them to circumvent burdensome institutions or create substitutes for missing ones. As McMillan and Woodruff (2002) argue, entrepreneurs in transition economies 'succeeded by self-help: they built for themselves substitutes for the missing institutions. Reputational incentives substituted for court enforcement of contracts. Trade credit (loans from firm to firm along the supply chain) substituted for bank credit. Reinvestment of profits substituted for outside equity'. Strategies documented in the literature include engagement in trade and diversification of activities as a means of capital accumulation and hedging against risks (Smallbone and Welter 2001) and using network-based transactions to substitute for missing or costly markets (Stark 1996; Batjargal 2003). The hostile conditions under which entrepreneurs operate suggests that business owners will also exhibit skepticism towards the national government in terms of their ability and/or willingness to support (or simply not interfere with) private business development, though they may have great confidence in their own abilities. We control for entrepreneurial confidence in our regressions.

Informal institutions based on networks can also positively affect entrepreneurial development. In the absence of functioning institutions, informal structures such as networks gain in importance and significance. As Smallbone and Welter (2001) have shown, informal networks can play a very important role for entrepreneurs in assisting them to mobilize resources and cope with the constraints of highly bureaucratic structures and officials that characterize the situation in countries such as Russia. However, not all networks are the same. Even in advanced Western countries where institutions are functioning, both strong and weak network ties have been found to be important in different ways (Granovetter 1973, 1995). Strong ties are characterized by frequent contact, high emotional intensity and intimacy, and reciprocal commitments between the parties involved. Weak ties are characterized by more superficial contact and are based on a relationship of trust. We return to this issue in the conclusions.

3. **Data**

This paper is based on data collected in Russia in 2001. A total sample of 2012 adults[13] was interviewed (face to face) in July in 2001 by the firm 'Memrb'[14] which was selected by the GEM[15] national team in Russia to conduct the survey. Additional specifications used for the Russia sample included quotas to balance results in terms of gender and municipalities. As shown in Table 3, because of the enormous diversity across regions in Russia, the sample was geographically focused and stratified.

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[12] Roberts and Zhou (2000) find that former Soviet countries saw different entrepreneurial strategies than advanced reformers such as Hungary. First, the former are more likely to start in trading and then diversify. Thus a 'generic businessman, always trading, maybe opening a restaurant one year, a taxi business the next, then maybe buying a meat-processing plant…' (ibid: 194). Second, entrepreneurs in former Soviet countries are more likely to pursue entrepreneurial careers as a part-time occupation while being employed elsewhere. Finally, while Central European firms mostly operate in the official economy, Russian entrepreneurs conduct a significant proportion of their business in the second economy.

[13] The adult population was defined as individuals over 18 years of age.

[14] Membr has since then become a part of the firm Synovate.

[15] The standard procedures for GEM surveys were followed. See http://www.gemconsortium.org for further description.

Table 3: Geographical stratification of the sample

City	Number of respondents	Percentage
Moscow	202	10.04
St. Petersburg	200	9.94
Chelyabinsk	200	9.94
Krasnodar	200	9.94
Novosibirsk	201	9.99
Omsk	204	10.14
Tver	200	9.94
Volgograd	203	10.09
Ekaterinburg	200	9.94
Samara	202	10.04
Total	2012	100

In Table 4, we report the mean values and standard deviations for all the main independent variables employed in our empirical work. The dataset contains 2012 observations, and there are a number of possible definitions of entrepreneurial activity. The most general is when the respondent describes himself or herself as trying to start a new business, and this classification contains 129 respondents. However, of these, 24 have not been active in the proposed new business in the past twelve months and only 61 respondents are claiming to have actually started a new business.[16] Entrepreneurial activity can also be measured in terms of the total number of business owner-managers. In the Russia sample, 117 people responded that they are owners/managers of a new business and have been paying salaries for the past 42 months. In our empirical work, we focus on the differences in characteristics between the entire sample and two measures of entrepreneurial activity: individuals engaged actively in start-up and respondents who are currently business owner-managers.

As Table 4 indicates, the sample was balanced in terms of gender with an almost equal number of male and female respondents. However, higher percentages of male respondents were engaged in entrepreneurial activity than female respondents. Of those individuals involved in start-up activities, more than 38 percent were motivated by the desire to 'exploit business opportunities'. A much higher percentage of business owners (59 percent) were motivated by the desire to 'exploit business opportunities'. In terms of financing, more than 30 percent of those individuals involved in start-up activities were self-financed.

Close to 40 percent of the total sample were 'young', aged 18 to 34 years. More than half of the individuals involved in start-up activities were 'young' individuals and approximately 45 percent were business owners. In terms of education, less than 14 percent of the total sample had completed university education while more than 20 percent of the individuals engaged in entrepreneurial activities were highly educated.

Moreover, the average monthly household income levels were found to be lower for the sample as a whole than for individuals engaged in business start-ups or for business owners. The average monthly income for individuals engaged in entrepreneurial activities

[16] The start-up definition used here is where the respondent agreed that over the past twelve months they have engaged in activities to start a new business, such as looking for equipment or a location, organizing a start-up team, working on a business plan, beginning to save money, or any other activity that would help launch a business.

was in the range of $ 137 – 169 while for the total sample, it was approximately $ 103 – 136. Lower levels of blue-collar workers were engaged in entrepreneurial activity either in start-ups (13 percent) or as business owners (10 percent) than were found in the sample as a whole (25 percent).

The survey also collected information about the respondent's optimism with regards to improvements to their family's financial situation in the next 12 months as well as improvements to Russia's financial situation in the next 12 months. In both cases, entrepreneurial individuals (those engaged in start-up activities or business owners) were more optimistic than the sample as a whole especially in terms of their family's financial situation.

Since the sample was geographically stratified it is interesting to note that there was a higher proportion of entrepreneurial activity taking place in Moscow (in terms of start-ups and business owners) and in Ekaterinburg (in terms of start-ups) than in the other eight regions.

In terms of size, close to three fourths of the existing business owners were micro-firms employing less than 10 employees and over 50 percent of which had less than four employees, though less than 10 percent of the business owners were effectively self-employed i.e. had no employees at all.

Table 4: General characteristics of the total sample and individuals engaged in entrepreneurial activity: start-ups and business owners

Characteristics	Description	Total Sample N= 2012	Entrepreneurial Activity	
			Start-ups N= 105	Business Owners N= 117
		Mean SD	Mean SD	Mean SD
Male	1 = Male, zero otherwise.	0.498 (0.500)	0.686 (0.466)	0.498 (0.500)
Business owner	1 = Respondent currently owns/manages a business, zero otherwise.	0.058 (0.234)	0.495 (0.502)	
Opportunity – Motivation start-up	1 = Exploit new business opportunity as reason to start-up a new business, zero otherwise.	0.024 (0.152)	0.381 (0.488)	
Opportunity – Motivation existing business	1 = Exploit business opportunity as the reason for the existing business.	0.388 (0.193)		0.388 (0.193)
Self-financed	1 = Start-up is self-financed, zero otherwise.	0.017 (0.131)	0.324 (0.470)	0.017 (0.130)
Young age	1 = Respondent aged 18 – 34 yrs., zero otherwise.	0.393 (0.488)	0.533 (0.501)	0.649 (0.475)
University edu.	1 = Respondent completed university education, zero otherwise.	0.136 (0.342)	0.209 (0.409)	0.136 (0.342)
HH income*	Categorical variable: Monthly household income (in roubles): 1 = < 2 000 RUB (< $ 68) 2 = 2 001 – 3 000 RUB ($ 69 – 102) 3 = 3 001 – 4 000 RUB ($ 103 – 136) 4 = 4 001 – 5 000 RUB ($ 137 – 169) 5 = 5 001 – 6 000 RUB ($ 170 – 203) 6 = 6 001 – 7 000 RUB ($ 204 – 237) 7 = 7 001 – 8 000 RUB ($ 238 – 271) 8 = > 8 000 RUB (> $ 272)	3.056 (1.972)	4.495 (2.583)	4.056 (1.972)
Blue collar worker	1 = Unskilled or skilled worker, zero otherwise.	0.247 (0.431)	0.133 (0.342)	0.247 (0.431)
Family optimism	1 = Family financial situation will improve in the next 12 months, zero otherwise.	0.32 (0.467)	0.609 (0.490)	0.321 (0.467)
Country optimism	1 = Country financial situation will improve in the next 12 months, zero otherwise.	0.292 (0.455)	0.352 (0.480)	0.292 (0.455)
Moscow	1 = Respondent lives in Moscow, zero otherwise.	0.100 (0.300)	0.180 (0.387)	0.100 (0.300)

Ekaterinburg	1 = Respondent lives in Ekaterinburg, zero otherwise.	0.099 (0.299)	0.162 (0.370)	0.099 (0.299)
Employees	Continuous variable indicating the number of employees.			26.180 (103.32)

Standard deviation is given in parenthesis. * = lower response levels were obtained for hhincome: total sample (N = 1787) Start-ups (N = 91) Business Owners (N= 101).

4. Empirical Findings

In this section, we test the three hypotheses developed from the second section. We first address Hypothesis 1, using information about the rate of formation of new firms in Russia and levels of entrepreneurial activity. We are unable to test this hypothesis directly with our dataset, because there it is a cross section sample and as such there is no variation in the institutional environment. However, we assemble data to suggest that entrepreneurship rates are low in Russia, which, given the information about the institutional environment in section 3, is consistent with our hypothesis. We test the remaining hypotheses directly using probit regressions to explore the differences in characteristics between individuals undertaking various forms of entrepreneurial activity.

4.1 Rates of Entrepreneurship in Russia

In Table 5, we report data on entry of new firms and entrepreneurial activity in Russia 1998-2002. After a catastrophic period of macro-economic performance immediately subsequent to transition from communism, the Russian economy had begun to recover during the mid-1990s, only to suffer a major slump following the financial crisis in 1998 (EBRD, 2002). However, the devaluation at that time, and subsequent increases in the price of oil and other raw materials inaugurated a long period of relatively fast growth in Russia, from 1999, which has been maintained until this day. The macro-economic environment was therefore relatively benign for new firm creation during most of this period, including in 2001, which was the date of the GEM survey.

The upper part of the table uses data from the Amadeus dataset (see also Klapper *et al.* 2004). This dataset is largely restricted to firms with more than 50 employees, and therefore focuses on entry into the middle size firm category, rather than the creation of small firms. However, the dataset has the advantage that it contains the year of registration of firms, and hence provides a record of the formal entry rate into this size class and above. The second part of the table provides information from the GEM dataset in terms of different types of self-reported entrepreneurial activity.

Interestingly, both datasets tell a very similar story. According to Amadeus, entry rates in Russia during this period of relatively fast growth were extremely low by international standards. The literature suggests that entry rates in Western Europe and North America are more typically in the 5-15 percent range, and for developing and some transition economies possibly somewhat higher (see Cable and Schwalbach, 1991; Klapper *et al.*, *2004*). The Amadeus data indicate that entry rates in Russia are consistently amongst the lowest recorded internationally. Though the GEM sample suggests that a slightly higher proportion of individuals in Russia are interested in trying to create a firm (though the levels

remain low by international standards), the number of people actually creating an active firm represents only 2.2 percent of the sample. This is somewhat higher than indicated by the Amadeus dataset, but of course contains all firms of any size, rather than only middle sized and large ones. Taken together, the figures in Table 5 provide *a priori* evidence consistent with Hypothesis 1, though additional data would be required for a formal test of relationship between institutions and entrepreneurship.

Table 5: Entry Rates of New Firms in Russia

Amadeus Dataset	**1998**	**1999**	**2000**	**2001**	**2002**
Entry rate % (new registrations as % firm numbers)	2.0	1.1	0.8	0.6	0.8
No. Of firms in sample	5226	972	8442	18,374	10,407

GEM Dataset: Alternative measures of Entrepreneurship	***2001 (% sample)***
Start-up - respondents trying to start new business	5.57
Start-up - active in past year	5.2
Nascent firm – active in starting business but not yet paying wages	3.0
New firm – owner/manager of new firm paying wages for three months	2.2

4.2 Testing the remaining hypotheses

We test the remaining hypotheses by exploring the differences in characteristics between the individuals involved in either active start-ups or having created new firms and those of the population as a whole. We estimate equations of the form:

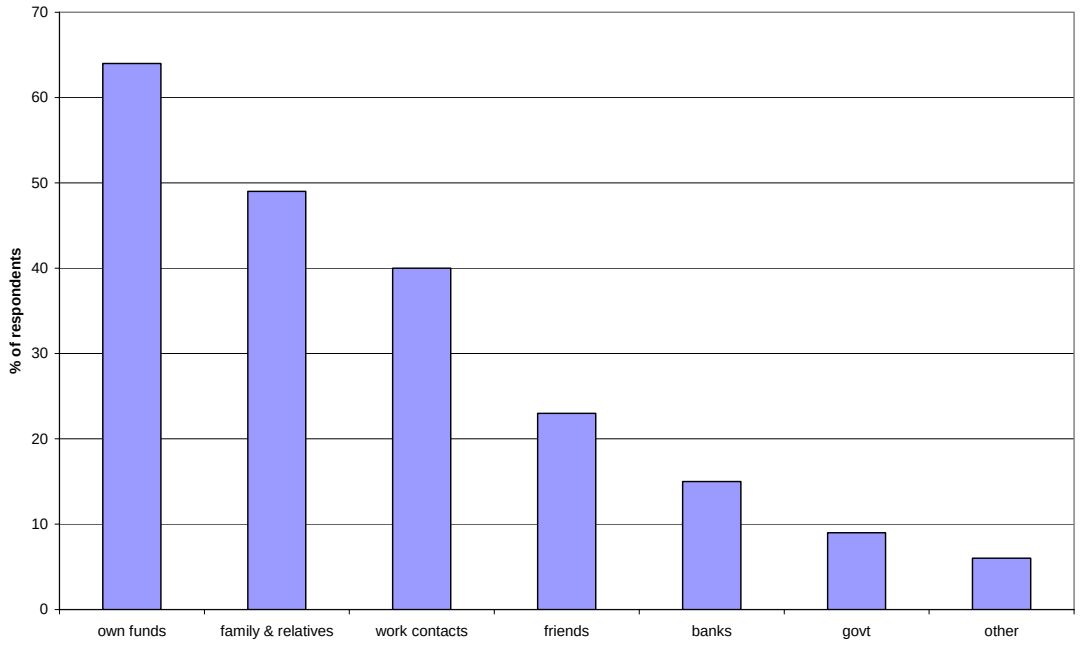
The probability of being an entrepreneur/business owner =f (Personal characteristics, Financial characteristics, Personal attitudes, Russia context variables).

Since the dependent variable is probabilistic, we use probit estimation methods. The dataset contains a large number of variables concerning personal characteristics, many of them already used in the literature discussed in section 3. We therefore use indicators of

gender, age, human capital including educational attainment (university level), skill experience (blue-collar vs. white-collar work experience) and previous entrepreneurial experience (for active start-ups).

The Russian business environment relies disproportionately on networks and informal contacts, and this is likely to affect entrepreneurial activity particularly through the sources of funding for setting up new firms. In Figure 1, we report the distribution of expected sources of finance for new start-ups in Russia. Respondents are allowed to complete more than one category. The figures suggest that external sources of funding play little or no role in entrepreneurship in Russia. Less than 15 percent of start-ups foresee using banks and less than 10 percent expect any access to government support. Instead, the majority of respondents expect to rely on their own funds, while the prevalence of networks is indicated by the high proportion of 'work contacts' and 'friends' who are viewed as sources of financial capital.

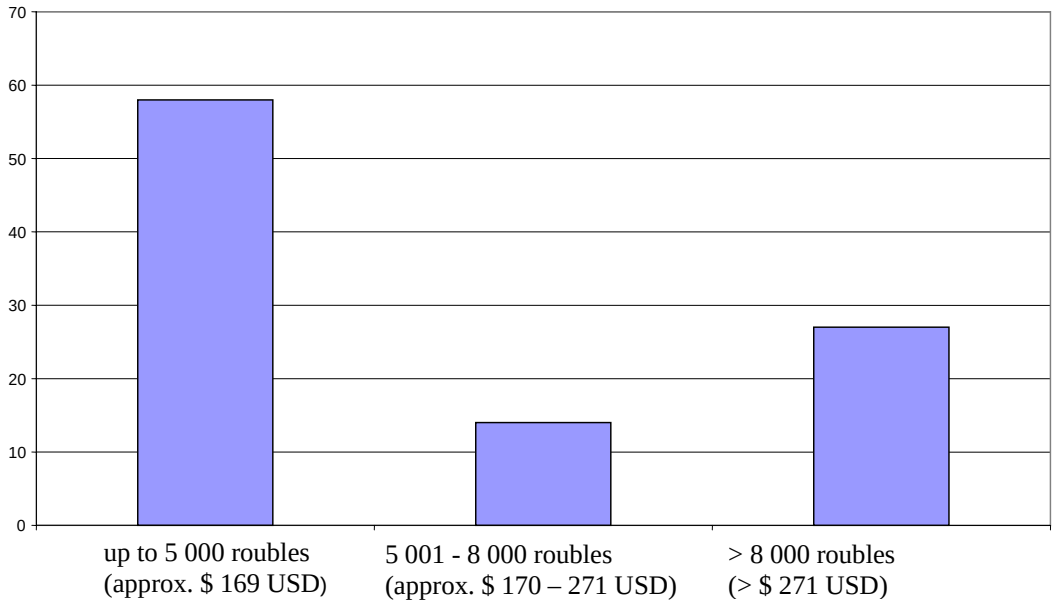
Figure 1: Sources of funding



Note: Since respondents could give more than one answer, percentages add up to over 100 percent.

In the regressions, we control for financial constraints in Hypothesis 3 by including a dummy variable for those who rely on their own funds to support their entrepreneurial activity. We would expect individuals who intend to rely more on their own funds to be better off (there is a small positive correlation with household income) and perhaps also more highly motivated to succeed, and therefore predict a positive relationship with entrepreneurial activity. We also control for household income directly, with the expectation of a positive effect. In Figure 2 the distribution of monthly incomes in Russia (from our sample) is shown. The absolute values are surprisingly low and the majority of households in our sample earned less in each month than $170 per capita, which would suggest that the capital available from own resources to finance entrepreneurial activity was very limited.

Figure 2: Monthly Household income for startups (Percentage of respondents)



Note: GDP per capita in Russia in 2001: $ 2 123 USD (EBRD 2005)

Our data set also contains information about the attitudes of the respondents to their own situation, and to Russia's future. We use these to include in the regressions two indicators of 'optimism', one related to the respondent's view of his or her own situation ('financial situation will improve in the next twelve months') and the other to the business environment ('Russia's financial situation will improve in the next twelve months').

Finally, the regressions contain several variables of specific interest in the Russian context. One concerns the motivation of the respondent in creating a new firm. To explore whether willingness to undertake entrepreneurial activity is affected by motivation, we distinguish between individuals seeking to exploit a business opportunity, and those undertaking entrepreneurial activity out of need. It has also been noted that entrepreneurs in Russia often already have entrepreneurial experience, which may be of particular significance in the Russian business environment because of the need for networks. However, these variables must be omitted from the business owner regressions because experience and current ownership are highly collinear. Finally Russia is very diverse regionally and though the sampling procedure concentrated on a few oblasts only, we control further for regional heterogeneity by including regional dummy variables. (In practice only the controls two big cities - Moscow and Ekaterinburg - were ever statistically significant).

The two dependent variables measure different aspects of entrepreneurial activity in terms of start-ups, business-owners and expected job growth. These variables are described in table 6.

Table 6: Dependent variables measuring entrepreneurial activity

Variables	Description	Mean	Standard Deviation	N
Start-up	1 = the respondent has been active in starting a new business in the past year, zero otherwise.	0.052	0.222	2012
Business Owner	1 = the respondent is currently an owner/manager of a business, zero otherwise.	0.058	0.234	2012

In this dataset, there were no means by which to control for the possible endogeneity of household income and income from entrepreneurial activities, therefore, we ran additional estimations omitting household income and this did not effect the significance of our main results. In addition, we re-estimated our two equations omitting the variables for location (dummy variable for Moscow and Ekaterinburg). Here only one effect is noted: the control variable measuring personal optimism became slightly significant.

4.3 Regression Results

The findings of our probit regressions, for 'active start-ups' and 'created new firms', are reported in Table 7. Because of missing values, the regressions use 1787 observations[17], and are highly significant with the chi-square indicating significance of the equations at the 99 percent level and the pseudo R Square for the active start-up equation exceeding 56 percent (the fit is not so high for the new firm equation, but as we see from Table 4, there are fewer respondents in this category and the fit is still reasonable for cross section regressions).

Both regressions confirm important elements of our of Hypothesis 2. Our estimations show that individuals who are engaged in active start-ups as well as those who have created a new firm are significantly associated with white-collar occupations. However, perhaps surprisingly given the relatively high levels of education in Russia and the strong scientific educational base, university education does not significantly influence the probability of an individual becoming an entrepreneur. This may reflect the character of Russian higher education, being focused to science rather than entrepreneurship or management, or that the opportunities for entrepreneurship in these early years of transition have not been in areas where individuals can exploit their knowledge and skills[18].

Table 7 also confirms the predicted role (hypothesis 3) of financial constraints. We find that, after controlling for labor supply factors, individuals who have higher household income are more likely to wish to be, and to become, entrepreneurs.

In terms of the control variables, our results indicate that similarly to Western countries, respondents engaged in active start-ups and in running new firms are significantly more likely to be male and young (though people considering entrepreneurial activity are

[17] The missing variables are attributed to lack for responses for the variable measuring household income. When we omit this variable from the estimation model, we obtain 2012 observations. However the signs and statistical significance of the remaining variables are not affected by the omission and changing sample size.

[18] Different types of entrepreneurship emerge due to different levels of market demand as transition progresses. In the earlier stages of transition, replicative entrepreneurship such as trade and basic services based on imitating business activities already in existence in other countries tends to be pervasive. However in later transition stages, innovative entrepreneurship (such as knowledge based entrepreneurial activities in high tech sectors) gains importance due to increased market opportunities based on changing patterns of market demand (Aidis 2005), providing more opportunities for highly educated individuals to apply their knowledge and skills to entrepreneurial activity as a result.

younger than those undertaking it already), Respondents engaged actively in start-up activity are not different to the remainder of the population with respect to personal optimism, or attitudes towards the Russian business environment. However, for respondents who have actually managed to create a new firm, we identify a positive impact from personal optimism. These results are in line with the findings of Puffer and McCarthy (2001) in Russia and the preliminary findings of Djankov *et al.* 2006 as well as the general findings of the relationship between optimism and the propensity to become an entrepreneur (Parker 2006). However, a positive attitude to the future of Russia as a whole is still not significantly associated with entrepreneurial activity. This suggests that in the adverse Russian environment, personal optimism plays a positive role in converting aspirations to reality for entrepreneurs. However, entrepreneurs do not have any systematically different perception about the future business prospects of Russia to the rest of the population.

We find the expected positive and significant impacts in the start-up equation from the entrepreneurial experience variable (currently owner of business) and from opportunity rather than needs motivation. The former may be an additional indicator of the role of networks and informal contacts in the Russian context. Finally, the regional dummy variables are significant in the start-up equation, but not in the new firm one, suggesting that local conditions may be influential in persuading individuals to consider becoming an entrepreneur, but are not in actual decision to create a new firm.

Table 7: Determinants of Entrepreneurship in Russia (Probit)

Independent Variables	**'Active Start-up'**	**'Created New Firm'**
Male	0.28* (0.16)	0.39*** (0.11)
Currently owner of business (experience)	1.70*** (0.18)	-
Exploiting new business opportunity	1.72*** (0.31)	-
Self-financed	3.18*** (0.62)	0.90*** (0.261)
Young (18 - 44)[a] (18 – 34)[b]	[b]0.44*** (0.16)	[a] 0.48*** (0.14)
University educated	0.02 (0.20)	0.04 (0.15)
Household income	0.09*** (0.04)	0.16*** (0.03)
Blue collar	-0.50** (0.24)	-0.71*** (0.17)
Personally optimistic	0.11 (0.17)	0.29** (0.12)
Optimistic about Russia	0.04 (0.17)	-0.15 (0.13)
Moscow	0.39* (0.21)	-0.01 (0.17)
Ekaterinberg	0.60*** (0.21)	-0.17 (0.21)
N	1787	1787
Pseudo R^2	0.5600	0.1845
Chi^2	402.76	134.84

*, **, *** denotes significance at 10%, 5% and 1% level respectively.
Figures in parentheses are standard errors.

5. Implications and Future Directions: The importance of weak networks in weak institutional environments

In the literature based on advanced western countries, networks assist entrepreneurs in accessing the resources needed for business formation (Aldrich *et al* 1987). Johannisson even postulates that the 'birth of a new venture' is the 'institutionalization of a part of the entrepreneur's personal network into a venture' (2000:37). Networks have been found not only to be important for access to resources (such as information, finance and labor) but also networks have been found to greatly enhance the entrepreneur's opportunity recognition capabilities (Hills *et al* 1997). Ardichvili *et al* (2003) identify social networks as an antecedent for entrepreneurial alertness which constitutes a necessary condition for opportunity recognition. Some scholars have argued that a cohesive or densely embedded network provides a competitive advantage for entrepreneurs (Coleman 1988, 1990; Walker et al 1997; Ahuja 2000). While other scholars have identified that sparsely connected networks full of 'structural holes' provide the competitive advantage (Burt 1992). For example, Singh *et al* (1999) have found that the size and number of weak ties in an entrepreneur's social network were positively related to the number of new venture ideas and opportunities recognized. Moreover, network entrepreneurs were found to identify significantly more opportunities than solo entrepreneurs.

In the Russian context people have had, as a matter of survival, to develop networked strategies, in form of 'blat', as a way to obtain scarce resources within the malfunctioning Soviet regime. In more recent years, however, blat has not been able to evolve into a substitute for the weak and malfunctioning institutional environment. To the contrary, blat has devolved into a sophisticated form of corruption available only to the elite (Hsu 2005). The reason for blat's shift from providing access to scarce resources for the masses (under Soviet rule) to becoming a tool effective only for the elite (in the Russian Federation) is attributed to two main factors. Firstly, blat was never rooted in a moral system: even during the Soviet regime, it was seen as 'antisocial' and as a way of 'cheating the system', thus carrying amoral connotations (Ledeneva 1998). This resulted in 'blat' being easily manipulated towards opportunistic activities focused exclusively on personal gain (Hsu 2005). Secondly, since blat functions best in the Russian context by utilizing strong ties, those individuals closest to individuals with power i.e. the elite, are arguably able to benefit much more greatly than less well-connected individuals. Thus blat networks functioning in the new Russian free-market context have supported personal and group benefits based on strong ties with disproportionate gain for elite groups. This has serious implications for entrepreneurship development in Russia since they suggest that given the current strong-tie based network system, only the individuals in the inner circle of the elite can successfully utilize 'blat' resources for business formation.

Studies in Russia have found evidence to support the importance of networks for business performance. To test the importance of social capital, Batjargal (2003) uses a social embeddedness approach to examine the impact of entrepreneurs' social capital on their firm's performance in Russia. Based on interviews conducted in 1995 and 1999, he finds that relational embeddedness (the quality of personal relations on economic actions) and resource embeddedness (networks allowing access and use of resources) have direct positive impacts on firm performance whereas structural embeddedness (the structure of the overall network of relations) has no direct impacts on performance (as measured by revenue and profit margin). Similarly, case study material provides further support for the notion in Russia that having the right network connections facilitates business success (Kets de Vries and Florent-Treacy 2003) whereas not having access to networks may make private businesses more

vulnerable to rent-seeking officials (Glasser, 2004; Djankov *et al.*, 2006) find additional evidence in their large-scale comparative study of entrepreneurs in Russia and China, which indicates that social networks (combined with individual characteristics) play a fundamental role in explaining entrepreneurship in both contexts. They have identified for example that having a father in Russia who was a communist party member increases the likelihood to become an entrepreneur. Even though the communist party has lost much of its authority, the informal networks it established remain powerful. Moreover, Aidis and Adachi (2005) note that in Russia's weak institutional environment, networks between enterprises and officials are paramount for business survival and growth. New businesses without such connections are in most cases destined to fail.

Surprisingly little work has been done on the influence of networks for business entry in the Russian context. Given the existing context of weak institutions, poor regulatory enforcement, high levels of corruption and the lack of rule of law, the role of networks would seem of even greater importance at the start-up phase for business development. The existing literature (from advanced western countries) highlights the importance of networks especially weak ties for opportunity recognition and for obtaining access to resources needed to start-up a business. Furthermore, existing studies show that though strong ties constitute a base of trust that can provide comfort in the face of uncertainty (Krackhardt (1992), strong ties cannot be a bridge to new and dissimilar information as weak ties can provide (Granovetter 1975)[19].

The above discussion as well as our empirical results indicates the need for developing a new direction for research in contexts such as Russia where the institutional environment is weak and poorly enforced. Specifically our results indicating the low levels of business entry combined with the current research findings suggesting that Russian networks are over reliant on strong ties seems to point to the critical importance of weak ties for business formation. Further research is needed to explore the relationship of weak ties and business formation in weak institutional environments.

6. Conclusions

Our results suggest that the negative environment for business, and especially entrepreneurial activity, in Russia has led to low levels of entrepreneurship. However, drawing on a sample that allows us to compare the characteristics of entrepreneurs in Russia with those of the rest of the population, we find that the relatively few brave souls who undertake some form of entrepreneurial activity in Russia are not so different in many ways from their counterparts in more business friendly environments. They are disproportionately young and male though not necessarily university educated. University education as a form of human capital was not found to be significantly associated with new start-ups yet entrepreneurship experience as well as white-collar occupational experience was significantly associated with new start-ups. This effect may be more important in the transition context such as Russia than in advanced western countries since 'entrepreneurial' skills were never taught (directly or indirectly) in the centrally planned system. Our results seem to indicate that 'learning by doing' has proved to be an important form of human capital in the transition context of Russia.

[19] As Puffer and McCarthy have noted, 'commitment and trust among network members in Eastern European business networks are typically low, the ties extremely weak, the network knowledge poor and participants few' (2001: 32).

Another important issue is financial constraints. Financial constraints prove to be important in explaining entrepreneurship, in the sense that entrepreneurs are more likely to be self-financed and to come from better paid households. However it should be noted that even in these cases, income levels are quite low and given the lack of external funding possibilities may lead to higher levels of business exit due simply to problems related to undercapitalization. Those that manage to create new firms are also personally more optimistic, which perhaps helps them through the adverse conditions facing those who aspire to be entrepreneurs.

Though not tested directly, the lack of effective and extensive networks seem to play a further role in inhibiting entrepreneurship development in Russia. Through proxies such as sources of financing, household income and entrepreneurial experiences, our results indicate that Russian entrepreneurs make use of their networks as informal funding sources in an environment with limited formal funding possibilities. However given the inherited tradition of 'blat' probably implies that most Russians have a smaller circle of networks, even informal external funding remains limited. Therefore it would seem that only individuals with more direct access to higher levels of financial resources such as measured by household income could effectively engage in entrepreneurial activity. Finally, the high proportion of business owners engaged in start-up activities further provides evidence to the argument that those with access to an established network such as an existing business owner would be more inclined to start another business than individuals who do not have this resource to draw on.

This paper contributes to the existing literature by further exploring the influence of weak institutions and weak network structures on entrepreneurial development. Our results indicate that in the case of Russia, this combination is especially detrimental for entrepreneurial start-ups and development. Further research in this area is needed to pin down more carefully the relationship between institutional development and levels of entrepreneurial activity and how additional factors such as the presence and strength of informal networks may act as substitutes for dysfunctional institutions. Additional empirical work in transition countries and emerging economies on the effects of different levels of institutional development and types of network relations specifically focused on business entry using a comparative approach could also provide further insights into this important relationship.

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