

Family Interactions in the Making of Entrepreneurs in Latvia

Olga Rastrigina *

olga@biceps.org

Baltic International Centre for Economic Policy Studies, Latvia

Draft: September 2008

Abstract

This paper examines relationship between entrepreneurial behaviour of parents and their children. Two hypotheses explaining the nature of this relationship are tested. First hypothesis states that observed relation is due to children's access to financial capital of parents; the second attributes relationship to the effect of unobserved external factors influencing entrepreneurial behaviour of the whole family. A post-Soviet economy provides a special setting in which these hypotheses can be tested. Regression analysis shows that a substantial part of the 'parental effect' can be explained by financial transfers from parents to children. However, estimation with instrumental variables provides no evidence on the existence of unobserved factors.

* This research was supported by a grant from the CERGE-EI Foundation under a program of the Global Development Network. All opinions expressed are those of the author and have not been endorsed by CERGE-EI or the GDN.

1. Introduction

Numerous studies on micro-determinants of entrepreneurship show that individuals whose parents were either self-employed or business owners are more likely to become entrepreneurs than those from families without such entrepreneurial experience (see, for example, Djankov et al 2005, Laferre 2001, Dunn and Holtz-Eakin 2000, Dombrovsky and Welter 2006). However, the nature of the causal relationship between entrepreneurship of parents and their children is far from clear and poses numerous questions to social scientists.

There are many theories consistent with the observed intergenerational link between parent-entrepreneurs and children-entrepreneurs. On the one hand, sociologists argue that entrepreneurship in the family offers positive role models in general (e.g., Shapero & Sokol, 1982) as well as transferring knowledge, skills, self-confidence and also positive attitudes towards entrepreneurship. On the other hand, from an economic point of view, the relationship can be explained by factors like access to capital and education, residence in a certain area, and other factors that affect entrepreneurial behaviour of all family members. Testing between alternative hypothesis is problematic, because of lack of appropriate data and identification problem (or the so called 'reflection problem') described by Manski (1993, 1995, 2000) in his well-known studies on social interactions.

There is a vast amount of literature in the field of entrepreneurship on the determinants of entrepreneurial behaviour (see, for example, Aldrich and Kim, 2006 for a survey of this literature). However, until recently economists have

shown relatively little interest in the subject.² Given growing perception of the importance of entrepreneurship for the functioning of economies, there has been steady increase in the number of studies addressing these issues. Using a rich dataset from Sweden Gianneti and Simonov (2004) found that *social norms* and *cultural values* are important factors in explaining the level of entrepreneurship. Djankov et al (2005) embarked on an ambitious study of the determinants of entrepreneurship in five of the largest developing economies of Russia, China, Brazil, India, and Nigeria. In their first study of entrepreneurship in Russia, they found that the most important factors affecting whether an individual is an entrepreneur are having entrepreneurs among family members and childhood friends.

There were only several papers that explore the extent of intergenerational inheritance of entrepreneurship in Latvia. Dombrovsky and Welter (2006) used Latvian Global Entrepreneurship Monitor data from 2005 to study the determinants of entrepreneurship. They found that family background is a very important factor influencing the probability of entering in entrepreneurship in Latvia. However, a drawback of their study was lack of proper controls for family wealth. Grilo and Thurik (2006) used Flash Eurobarometer Survey 2004 that covered about 8000 respondents in 25 EU countries and US to study the determinants of latent and actual entrepreneurship. They found that self-employed parents significantly increase the probability of self-employment with the effect being the same in developed EU countries and in new member states with a

² There are some notable exceptions such as Evans and Leighton (1989).

communist past. Titma and Roots (2006) explored a more generally defined intergenerational social mobility in Latvia, Estonia, Belarus, Russia and Ukraine.

This paper is an attempt to gather evidence in support of (or against) two hypotheses explaining the existence of strong relation between parental entrepreneurship and entrepreneurial activity of children in Latvia.

- (1) The first hypothesis is that the observed relation can be due to **children's access to financial capital of parents.**

If successful entrepreneurship of parents generates substantial income, then children (having access to this income) are less likely to be financially constrained and therefore are more likely to start up a business. Narrow financing options are recognized to be among major factors hampering development of new enterprises in Latvia. Moreover, informal investors, i.e. relatives, friends, colleagues, are primary providers of start-up capital for nascent businesses (GEM 2006 Latvia report).

- (2) The second hypothesis is that the observed link may be not a casual relationship but reflect the existence of **external factors influencing propensity to enter entrepreneurship of parents and their children in the same way** (e.g. place of residence, possession of social connections, specific knowledge on business opportunities, etc.).

A post-communist economy provides a special setting in which this hypothesis can be tested. The change in the regime allows to model entrepreneurial experience of older generation using different set of explanatory variables than those determining occupational decision of younger individuals. Parental characteristics in the end of Soviet time period (occupations, education, industry, membership in communist party) are used to instrument parental decision to engage in entrepreneurship in the post-Soviet period and, therefore, estimate the true value of ‘family effect’ controlling for unobserved external factors.

The aim of this paper is to contribute to the literature on the determinants of entrepreneurship in post communist countries and to shed light on the causal mechanism underlining family interactions in the making of entrepreneurs in Latvia. Regression analysis suggests that financial transfers from parents to their children can explain at least one fourth of the strong association between parent-entrepreneurs and children-entrepreneurs. However, no evidence is found in support of existence of unobserved exogenous factors influencing the entrepreneurial behaviour of all family members in the same way.

The rest of the paper proceeds as follows. The next section describes the main source of data used in the analysis. Section three shows some descriptive results. The fourth section presents the methodology. Section five outlines the results and the last section gives some conclusions.

2. Data

The research is based on the data collected for the Global Entrepreneurship Monitor³ (GEM) survey in Latvia in 2007. GEM is a major international research project aimed at describing and analyzing entrepreneurial process across a wide range of countries. GEM started as a partnership between the London Business School (UK) and Babson College (US). The research involves a consortium of national teams from each of the countries involved in the study. Initiated in 1999 with 10 countries, it expanded to 43 countries in 2007 with Latvia one of participants.

GEM survey screens the adult age population of a country for participating in entrepreneurial activity as well as gathers data on basic demographic characteristics of entrepreneurs, their businesses, and non-entrepreneurs. In 2007 the standard GEM questionnaire in Latvia was complemented with a set of questions on individual demographic characteristics and skills related to entrepreneurial ability, parental background⁴, one's financial situation and access to capital through family links.

A representative sample of 2000 randomly selected adults (18-64 years old) was surveyed in Latvia during May - June 2007. The face-to-face survey was conducted by a professional survey firm "Latvijas Fakti". Multi-stage stratified random sampling procedure was used. Stratification by region (Riga, Vidzeme, Kurzeme, Zemgale, Latgale), district (26 administrative districts) and type of settlement (cities, centers of districts, towns, villages) ensured representativeness of all social-demographic groups in the sample. The response rate depending on the location was 76-81%. Observations were weighted by age, gender, ethnicity, geographical region and settlement type. Thus, GEM findings can be reliably generalized to the whole population of Latvia.

³ See <http://www.gemconsortium.org> for the details on GEM project and its methodology. An extensive description of the GEM methodology may also be found in Reynolds et al (2005).

⁴ The questions about parental background and experiences are similar to those used by Djankov et al. (2005) in their study of entrepreneurship in Russia, China, Brazil, India, and Nigeria.

GEM 2007 is the main data source used in the analysis of this article because it is unique in terms of information it contains. However, in the next section several other data sources are utilized: Global Entrepreneurship Monitor survey for Latvia in 2005 and 2006, and the 1st wave of Panel Study of Entrepreneurial Dynamics in Latvia in 2006/2007. These data sources also provide some information on entrepreneurial experience of individuals and their parents

3. Descriptive results

Many studies in different countries have documented a strong correlation between the entrepreneurial activity of parents and children in the family. For example, Kim et al. (2006) found that about half of self-employed people in US report self-employed parents. Fairlie and Robb (2003) report that 52% of all business owners in US had at least one self-employed member in the family prior to starting a business. Latvia is not an exception. Based on GEM 2007 data I calculate that 17.3% of all entrepreneurs (including nascent entrepreneurs) have parents who at some point were also involved in entrepreneurship. On the contrast, only 7.6% of non-entrepreneurs have or had parent-entrepreneurs⁵. Other data sources for Latvia that contain information on entrepreneurial experience of children and their parents give similar estimates (see Table 1).

⁵ In comparison to similar estimates for developed European countries or US the percentage of entrepreneurs who report having parent-entrepreneurs is low. This may arise from the fact that entrepreneurship in Latvia became legal only after 1990. Therefore parents were exposed to entrepreneurship only small part of their lives.

Table 1: Share of respondents with parent-entrepreneurs, by occupation of respondent

Occupation of respondent	Data Source			
	GEM 2005	GEM 2006	GEM 2007	PSED (2006/2007)
Entrepreneur ^a	18.3%	16.7%	17.3%	16.8%
Non-entrepreneur	7.8%	6.1%	7.6%	-

Note: In all cases the difference between entrepreneurs and non-entrepreneurs is significant at 1% significance level

^a *In GEM data 'entrepreneurs' include both nascent and actual entrepreneurs, in PSED only nascent entrepreneurs were surveyed.*

Source: Global Entrepreneurship Monitor in Latvia 2005, 2006, 2007 and Panel Study of Entrepreneurial Dynamics in Latvia, own calculations.

Transmission of entrepreneurship from parents to their children may come in different ways: from transferring entrepreneurial knowledge and skills to offering valuable experience of working in parents' business. Finally, parents may leave an operating business to children as heritage. GEM 2007 survey in Latvia suggests that 36% of those who have parent-entrepreneurs also had worked in their parents' business full- or part-time. About 10% of those with parent-entrepreneurs inherited parental business. Table 2 below gives a quantitative assessment of relative importance of these experiences for entrepreneurs and non-entrepreneurs.

Table 2: Share of respondents who are linked to parents' business or financial capital, by occupation of respondent

Occupation of respondent	Respondent ...		
	..worked in parents' business	..inherited parent's business	..received money from parents during the last 5 years ^b
Entrepreneur	9.6%	4.6%	21.9%
Non-entrepreneur	2.5%	0.5%	11.0%

Note: In all cases the difference between entrepreneurs and non-entrepreneurs is significant at 1% significance level

^b *Only large amounts of money are considered here, i.e. more than 1000 LVL (~1425 EUR).*

Source: Global Entrepreneurship Monitor in Latvia 2007, own calculations.

Clearly, entrepreneurs have been more exposed to working in family business than non-entrepreneurs. The difference is even more pronounced for inheritance of parental business. It also appears that transmission of financial capital from parents to children takes place more often among entrepreneurs than among non-entrepreneurs. While only about 5% of entrepreneurs inherited business from parents and roughly 10% had an experience of working in parental business, more than 20% of them in one way or another received financial capital from the parents. This parental money partly could have been used for establishing own business or investing in it. Broadly, this result implies that transmission of financial capital from parent-entrepreneurs to children-entrepreneurs may be of the same (or even higher) importance as the transmission of entrepreneurial knowledge and practices.

3. Methodology

Linear probability model and probit regressions are used to estimate the impact of different factors on the probability that a person is an entrepreneur. The dependent variable is a binary variable that equals 1 if a person is nascent or actual entrepreneur⁶ and zero otherwise. Explanatory variables include personal demographic characteristics, skills related to entrepreneurial ability, parental entrepreneurial experience and controls for access to capital through parents. Description of the variables used in regression analysis can be found in APPENDIX 2.

⁶ Entrepreneurship is defined in accordance with GEM methodology. See Appendix 1 for more details.

Main regression equation has the following form:

$$y_1 = 1[\alpha y_2 + \beta y_3 + \mathbf{x}\boldsymbol{\gamma} + u_1 > 0] \quad , \quad [1]$$

where $1[.]$ is an indicator function, which takes on the value 1 if the event in brackets is true and 0 otherwise;

$y_1=1$ if respondent is entrepreneur, 0 otherwise;

$y_2=1$ if one of the parents is (or was) an entrepreneur, 0 otherwise;

$y_3=1$ if respondent received large sums of money from parents, 0 otherwise;

$\mathbf{x}=(x_1 \dots x_n)$ – is a vector of other explanatory variables⁷;

u_1 is an error term, assumed to be independent of y_2 , y_3 and \mathbf{x} , and standard normally distributed.

There are two parameters in the regression analysis that I will focused on.

(1) The first parameter (α) is the coefficient on the binary variable y_2 that describes whether parents of respondent are (or were) involved in entrepreneurial activity. The effect of this variable shows the strength of the intergenerational link between parent-entrepreneurs and children-entrepreneurs. (2) The second focus parameter (β) is the coefficient on the binary explanatory variable y_3 that equals one if respondent received a big sum of money (more than 1000 LVL ~ 1425 EUR⁸) from parents during the last 5 years in a form of a credit, present, financial help, inheritance or other. By including this variable I try to control for existence of financial transfers from parents to children.

⁷ Other explanatory variables include: age, age squared, gender, highest level of education, field of education, and fluency in Latvian language.

⁸ The respective threshold of 1000 LVL was chosen because this amount (at least in retrospective) is likely to be a satisfactory amount to co-finance a small start-up. GEM 2005 data for Latvia showed that 44% of start-ups were established with the mean cost of 2000 LVL (~2900 EUR).

First, I will estimate equation [1] omitting explanatory variable y_3 (this is a standard regression equation estimated in many studies on determinants of entrepreneurship). I am interested in the value of parameter α , i.e. in the magnitude of impact of having parent-entrepreneurs on the probability that a person is entrepreneur in standard model.

In the next stage I will control for access to parents' financial capital by including y_3 in the regression. I would like to see by how much the estimate of parameter α changes in this case. This will give an idea of what proportion of the usually estimated "parents effect" can be explained by financial transfers.

Finally, I would like to compare the magnitude of the parameters α and β , thus deciding about the importance of parents' financial capital as opposed to all other parents' resources (skills, attitudes, motivation etc.) in influencing individual's decision to become an entrepreneur.

However, the procedure described above should be executed with caution because both focus variables (y_2 and y_3) are subject to endogeneity.

- If there are unobserved external factors that influence both entrepreneurship of parents and children (like family wealth, particular location of the family, social connections or some specific knowledge on business opportunities, etc.), then the estimate of parameter α is biased.

- Estimate of parameter β can be biased in single-equation regression if people are more likely to use financial resources of their parents once they became entrepreneurs⁹.

To account for possible endogeneity I use instrumental variables for both y_2 and y_3 . I estimate two-stage least squares (2SLS) model¹⁰. Angrist (1991) suggests that this estimation strategy can be used if left-hand side variable as well as right-hand side variable which is subject to endogeneity are both binary.

In the 1st stage y_2 is instrumented by $\mathbf{z} = (z_1, z_2, z_3)$ and y_3 is instrumented by $\mathbf{w} = (w_1, w_2)$:

$$y_2 = \delta_1 z_1 + \delta_2 z_2 + \delta_3 z_3 + \text{other exog. var iables} + u_2 \quad [2]$$

$$y_3 = \lambda_1 w_1 + \lambda_2 w_2 + \text{other exog. var iables} + u_3 \quad [3]$$

$z_1=1$ if one of the parents was a member of communist party¹¹, 0 otherwise;

$z_2=1$ if one of the parents was a director or manager of a department or enterprise in the end of Soviet time, 0 otherwise;

$z_3=1$ if one of the parents worked in a particular sector (see Appendix 2) in the end of Soviet time, 0 otherwise;

$w_1=1$ if one of the parents has higher education, 0 otherwise;

$w_2=1$ if respondent reports having both parents in the family, 0 otherwise.

⁹ This situation is unlikely. According to GEM 2005 in Latvia 24% of entrepreneurs mention relatives as a source of financing a start-up, however, only less than 2% of operating business report using relatives' investment to expand the business. This supports inclusion of financial transfers from parents to children in regression as an exogenous variable.

¹⁰ Since OLS estimation for binary dependent variable generates heteroscedastic errors, robust estimator of variance is used in place of traditional.

¹¹ In final regressions membership in communist party is omitted because it appeared to be a very weak instrument.

Regression in the 2nd stage has a form similar to equation [1]:

$$y_1 = \alpha\hat{y}_2 + \beta\hat{y}_3 + \mathbf{x}\boldsymbol{\gamma} + u_1 \quad [4]$$

I use instrumental variables z_1, z_2, z_3 and w_1, w_2 because they are likely to be correlated with focus variables (parental entrepreneurship and availability of financial transfers from parents) and unlikely to have direct effect on entrepreneurial activity of individual.

The following characteristics of parents in the end of Soviet times are used to instrument parental entrepreneurial experience after 1990: membership in communist party; occupation; industrial sector. In the literature on post-Soviet economies membership in communist party is recognized as a sign of possessing powerful connections. These connections can make it easier to establish a successful venture in the post-Soviet period. Being a director or a manager of an enterprise in the end of Soviet times may have increased chances for privatization and becoming an entrepreneur after the collapse of the Soviet Union. Similarly, work in certain sectors (e.g. retail trade, repair of motor vehicles, food processing, services, education, healthcare etc.) could have increased propensity of individuals to start-up their own business when ‘private enterprise’ was legalized.

Education of parents and family composition is used to instrument availability of financial transfers from parents to their children.

Since the number of instruments is higher than the number of supposedly endogenous variables I test the validity of instruments by Hansen J test of

overidentifying restrictions. Then if instruments are valid I proceed with testing efficiency of 2SLS (as compared with single-equation OLS) with Hausman test, i.e. I test whether supposedly endogenous variables are indeed correlated with unobservables.

4. Results

In this section I provide results of my empirical analysis. Estimated regressions are reported in Appendix 4. First-stage regressions for 2SLS are provided in Appendix 5.

First, I estimate simple OLS, 2SLS and probit model without including information on financial transfers from parents to children (i.e. omitting variable y_3 from regression analysis). The results are reported in columns (1), (2) and (3) in Appendix 4. The first stage of 2SLS in column suggests that the instruments I use for ‘parent-entrepreneurs’ are not weak (the rule of thumb is that F-statistic of excluded instruments is higher than 10). Hansen J statistic does not allow rejecting the null hypothesis of overidentification, and therefore suggests that instruments are valid. I perform Hausman test to compare OLS estimates in column (1) and 2SLS estimates in column (2). The result shows that, in fact, the differences in coefficients in these two models are not systematic. OLS is both efficient and consistent. Binary variable for parent-entrepreneurs which was supposed to be endogenous appeared to be not.

This leads to conclusion that there are no unobserved factors influencing the entrepreneurial behaviour of all members in the family. At least using the available set of instruments we can not provide evidence on existence of such unobservables.

Regressions (4), (5) and (6) are estimated based on the assumption that dummy for parent-entrepreneurs is exogenous. Now I add variable y_3 to control for the existence of financial transfers from parents to children in OLS, 2SLS and probit model. I follow the same procedure as described above to show that variable y_3 is exogenous.

Finally, in model (7) I simultaneously instrument both y_2 and y_3 with all available instruments. I calculate Hansen J statistic and perform Hausman test and I get the same conclusion as previously. Both focus variables can be considered exogenous.

On the basis of these tests I conclude that single-equation model can be used for estimating the focus parameters. Therefore, in subsequent analysis I focus on single-equation probit regressions shown in columns (3) and (6).

Regression (3) suggests that having parent-entrepreneurs is one of the most powerful factors that influence one's likelihood to be an entrepreneur. Probability to be an entrepreneur for those with parent-entrepreneurs is 8.8 percentage points higher than for those without such parents¹². This increases the probability to be an entrepreneur by more than a factor of two (observed probably in the sample is

¹² Dombrovsky and Welter (2006) found that having parent-entrepreneurs have similar effect on entering entrepreneurship in Latvia in 2005.

0.083). Being a female reduces the probability to be an entrepreneur by a similar magnitude. Education in business or higher education appeared to be of lower importance.

In regression (6) I control for access to parental capital, and the magnitude of the effect of having parent-entrepreneurs is reduced from 0.088 to 0.066. The existence of financial flow from parents to children appears to be a significant determinant of a person's probability to be an entrepreneur. Financial 'help' from parents increases one's propensity to become an entrepreneur in approximately same way as parents' experience of being entrepreneurs. This leads us to conclusion that parental financial capital is indeed a very important factor influencing one's ability to start up and operate own business. Moreover, approximately one fourth of previously estimated strong relationship between parent-entrepreneurs and children-entrepreneurs can be explained by financial transfers.

Conclusions

The aim of this paper is to contribute to the literature on the determinants of entrepreneurship in post communist countries and to shed light on the causal mechanism underlining family interactions in the making of entrepreneurs in Latvia.

The study is based on a unique dataset on entrepreneurs and non-entrepreneurs in Latvia, which takes advantage of GEM 2007 Latvian data and complements it

with more specific information on parental background and respondent' s skills and experiences related to entrepreneurial behaviour.

Regression analysis suggests that access to parental financial capital is a very significant factor influencing one's probability to be an entrepreneur. Financial transfers from parents to their children can explain at least one fourth of the strong association between entrepreneurial activity of respondents and their parents. However, the analysis provides no evidence on existence of unobserved exogenous factors influencing the entrepreneurial behaviour of all members in the family.

Bibliography

- Aldrich, H. and P. Kim (2006), "A Life Course Perspective on Occupational Inheritance: Self-employed Parents and Their Children", *Research on the Sociology of Organizations*, Forthcoming.
- Angrist, J. (1991), "Instrumental Variables Estimation of Average Treatment Effects in Econometrics and Epidemiology", National Bureau of Economic Research, Technical Working Paper No. 115.
- Brock, W., and S. Durlauf (2000), "Interactions-Based Models", *Handbook of Econometrics*, Volume 5. J. Heckman and E. Leamer, eds. Amsterdam: North-Holland.
- Burke, A., F. FitzRoy and M. Nolan (2000), "When Less is More: Distinguishing Between Entrepreneurial Choice and Performance," *Oxford Bulletin of Economics & Statistics*, 62(5): 565-587.
- Djankov, S., E. Miguel, Y. Qian, G. Roland, and E. Zhuravskaya (2005) "Who are Russia's Entrepreneurs?", *Journal of the European Economic Association*, 3(2-3): 587-597.
- Dombrovsky, V. and F. Welter (2006), "The role of personal and family background in making entrepreneurs in Post-Socialist Environment", mimeo.
- Dombrovsky, V., K. Kreslins and M. Chandler (2006), "Global Entrepreneurship Monitor 2005 Latvia Report", TeliaSonera Institute, BICEPS, SSE Riga. (Available at <http://www.biceps.org/en/ResearchReports>)
- Dombrovsky, V., O. Rastrigina and A. Jakobsons (2007), "Global Entrepreneurship Monitor 2006 Latvia Report", TeliaSonera Institute, BICEPS, SSE Riga. (Available at <http://www.biceps.org/en/ResearchReports>)
- Dunn, T. and D. Holtz-Eakin (2000), "Financial Capital, Human Capital, and the Transition to Self-Employment: Evidence from Intergenerational Links." *Journal of Labor Economics*, 18(2): 282-305.
- Evans, D. S., and L. S. Leighton (1989), "Some empirical aspects of entrepreneurship", *American Economy Review*, 79(3): 519-535.
- Fairlie, R. and A. Robb (2003), "Families, Human Capital, and Small Business: Evidence from the Characteristics of Business Owners Survey," Working Papers 871, Economic Growth Center, Yale University.
- Gartner, W., K. G. Shaver, N. M. Carter, and P. D. Reynolds, editors (2004), "Handbook of Entrepreneurial Dynamics: The Process of Business Creation", Thousand Oaks: Sage Publications, London.
- Giannetti, M. and A. Simonov (2004), "On the Determinants of Entrepreneurial Activity: Individual Characteristics, Economic Environment, and Social Norms." *Swedish Economic Policy Review* 11(2).

- Grilo, I. and R. Thurik (2006), "Entrepreneurship in the old and new Europe", Scientific Analysis of Entrepreneurship and SMEs paper: EIM Business and Policy research: Zoetermeer, January 2006
- Kim, P., H. Aldrich and L. Keister (2006), "Access (Not) Denied: The Impact of Financial, Human, and Cultural Capital on Entrepreneurial Entry in the United States," *Small Business Economics*, Springer, vol. 27(1), pages 5-22, August.
- Laferrere, A. (2001), "Self-Employment and Intergenerational Transfers." *International Journal of Sociology*, 31(1): 3-26.
- Manski, C. (1993), "Identification of Endogenous Social Effects: The Reflection problem", *Review of Economic Studies*, 60: 531-42.
- Manski, C. (1995), "Identification Problems in the Social Sciences", Cambridge, ass.: Harvard University Press.
- Manski, C. (2000), "Economic Analysis of Social Interactions", *Journal of Economic Perspectives*, 14 (3): 115-136.
- Reynolds, P.D., N. Bosma, E. Autio, S. Hunt, N. DeBono, I. Servais, P. Lopez- Garcia and N. Chin (2005), "Global Entrepreneurship Monitor: Data Collection Design and Implementation 1998-2003", *Small Business Economics* 24: 205-231
- Shapero, A., and L. Sokol (1982), "The social dimensions of entrepreneurship", In *Encyclopedia of entrepreneurship*, C.A. Kent, D.L. Sexton, et al. (eds.), Englewood Cliffs, N.J.: Prentice Hall: 72-90.
- Titma, M. and A. Roots (2006), "Intragenerational mobility in successor states of the USSR", *European Societies*, December 2006, Vol. 8 Issue 4, p. 493-526.
- Uusitalo, R. (2001), "Homo entrepreneurus?", *Applied Economics*, 33(13): 1631-1638.
- Woittiez, I., and A. Kapteyn (1998), "Social Interactions and Habit Formation in a Model of Female Labour Supply", *Journal of Public Economics*, 70: 185-205.

APPENDIX 1

DEFINITION OF ENTREPRENEURS

The dependent variable in the analysis is a dummy variable that equals 1 if a person is a nascent or actual entrepreneur, and 0 otherwise. This definition of entrepreneurship is in accordance with GEM methodology and covers all entrepreneurs at all stages of business life-cycle. A more detailed description is provided below:

Nascent entrepreneurs

A nascent entrepreneur is an adult individual (18-64 years old) who is trying to start up a new business that he or she will fully or partially own. This new business has already passed the stage of being a plain idea, because the individual has made some active steps over the last 12 months that would help launch this business, such as looking for equipment or a location, organizing a start-up team, working on a business plan, beginning to save money etc. However, the business is not fully operating yet, since it has not paid wages for more than three months to its employees or owners.

Actual entrepreneurs (includes baby businesses and established entrepreneurs)

An actual entrepreneur or a business owner is an adult individual who manages and fully or partially owns a business that has paid wages to its owners for more than 3 months.

APPENDIX 2

DESCRIPTION OF VARIABLES USED IN REGRESSION ANALYSIS

Parent-entrepreneurs - dummy variable equals 1 if at least one of the parents owns or owned own business

Age – exact full years

Female – dummy variable equals 1 if a person is female, 0 otherwise

Higher education - dummy variable equals 1 if a person has higher education, 0 otherwise

Education in Business - dummy variable equals 1 if a person has education in business administration or management, 0 otherwise

Good knowledge of Latvian - dummy variable equals 1 if Latvian language is respondent's native language or if a person reports having a good knowledge of Latvian language, 0 otherwise

Received money from parents - dummy variable equals 1 if a person reports receiving large sums of money from parents (more than 1000 LVL ~ 1425 EUR) in the last 5 years, 0 otherwise

Parent was a director/manager – dummy variable equals 1 if at least one of the parents was a director a manager of enterprise or department in the end of Soviet time, 0 otherwise

Parent worked in particular sector - dummy variable equals 1 if at least one of the parents worked in food processing, manufacturing of leather, manufacturing of wood products, repair of motor vehicles, wholesale trade, retail trade, repair of personal and household goods, hotels and restaurants, services, education or healthcare and social work, 0 otherwise

Parent was a member of communist party - dummy variable equals 1 if at least one of the parents was a member of communist party in Soviet time, 0 otherwise

Parent has higher education – dummy variable equals 1 if at least one of the parents has higher education as the highest acquired level of education, 0 otherwise

Both parents in family – dummy variable equals 1 if respondent reports having both parents in the family, 0 otherwise

APPENDIX 3

DESCRIPTION OF THE SAMPLE

Variables	Whole sample (N=2000)		Entrepreneurs (N=158)		Non- entrepreneurs (N=1842)		Test for difference in means	
	Mean	Std. Err.	Mean	Std. Err.	Mean	Std. Err.	p-value	Sig.
all entrepreneurs (nascent and actual)	0.083	0.006	1.000	0.000	0.000	0.000	-	-
nascent entrepreneurs	0.022	0.003	0.262	0.036	0.000	0.000	-	-
age	39.7	0.300	39.4	0.876	39.8	0.317	0.663	
female	0.516	0.011	0.240	0.033	0.541	0.012	0.000	***
Latvian ethnicity	0.577	0.011	0.666	0.038	0.568	0.012	0.014	**
higher education	0.202	0.009	0.303	0.037	0.192	0.009	0.003	***
education in business	0.068	0.006	0.142	0.028	0.062	0.006	0.005	***
education abroad	0.040	0.004	0.073	0.021	0.036	0.004	0.091	*
good knowledge of Latvian language	0.685	0.011	0.802	0.032	0.674	0.011	0.000	***
good knowledge of English language	0.061	0.005	0.116	0.025	0.056	0.005	0.022	**
good knowledge of Russian language	0.748	0.010	0.760	0.034	0.747	0.010	0.719	
parent-entrepreneurs after 1990	0.059	0.006	0.122	0.027	0.053	0.006	0.011	**
worked in parents' business	0.031	0.004	0.096	0.024	0.025	0.004	0.003	***
inherited parents' business	0.008	0.002	0.046	0.017	0.005	0.002	0.016	**
parent has higher education	0.189	0.009	0.312	0.037	0.178	0.009	0.000	***
parent has vocational education	0.374	0.011	0.412	0.040	0.371	0.012	0.318	
parent was a director of an enterprise	0.091	0.007	0.162	0.030	0.085	0.007	0.012	**
parent was a member of communist party	0.145	0.008	0.239	0.035	0.137	0.008	0.004	***
parent worked in a sector of interest	0.352	0.011	0.406	0.040	0.347	0.011	0.152	
received money from parents	0.119	0.007	0.219	0.034	0.110	0.007	0.002	***
high wealth 5 years ago	0.111	0.007	0.212	0.033	0.101	0.007	0.001	***

Note: *** denotes significance of coefficient at 1% level, ** - significance at 5% level, and * - significance at 10% level.

APPENDIX 4: REGRESSION RESULTS

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	OLS	2SLS	PROBIT	OLS	2SLS	PROBIT	2SLS
Parent-entrepreneurs	0.0922**	0.467*	0.0876**	0.0765**	-0.0653	0.0660*	-1.392
	(0.0369)	(0.249)	(0.0365)	(0.0369)	(0.0812)	(0.0341)	(2.589)
Age	0.0125***	0.0168***	0.0126***	0.0127***	0.0145***	0.0126***	0.00312
	(0.00256)	(0.00407)	(0.00261)	(0.00256)	(0.00329)	(0.00257)	(0.0211)
Age squared	-0.000147***	-0.000184***	-0.000150***	-0.000148***	-0.000157***	-0.000149***	-5.38e-05
	(3.10e-05)	(4.20e-05)	(3.19e-05)	(3.09e-05)	(3.85e-05)	(3.15e-05)	(0.000201)
Female	-0.0963***	-0.0906***	-0.0901***	-0.0960***	-0.0932***	-0.0888***	-0.107***
	(0.0128)	(0.0136)	(0.0120)	(0.0127)	(0.0150)	(0.0119)	(0.0349)
Higher education	0.0470***	0.0393**	0.0442***	0.0446***	0.0228	0.0425***	0.0210
	(0.0168)	(0.0182)	(0.0159)	(0.0169)	(0.0213)	(0.0157)	(0.0377)
Education in Business	0.0740**	0.0667*	0.0582**	0.0713**	0.0463	0.0538**	0.0397
	(0.0316)	(0.0342)	(0.0274)	(0.0312)	(0.0349)	(0.0262)	(0.0600)
Good knowledge of Latvian	0.0455***	0.0384***	0.0410***	0.0470***	0.0607***	0.0422***	0.0988
	(0.0116)	(0.0126)	(0.00973)	(0.0116)	(0.0160)	(0.00955)	(0.0841)
Received money from parents				0.0600***	0.603**	0.0511**	1.240
				(0.0230)	(0.254)	(0.0204)	(1.595)
Constant	-0.156***	-0.282***		-0.169***	-0.287***		-0.0336
	(0.0474)	(0.0991)		(0.0477)	(0.0813)		(0.418)
Partial R-squared of excluded instruments		0.0185			0.0078		0.0208
F-statistic		11.560			12.700		0.0250
P-value		0.000			0.000		9.620
Hansen J statistic		0.453			1.332		11.99
P-value		0.5008			0.2485		0.000
Hausman test statistic		2.960			5.550		0.000
P-value		0.8142			0.5934		0.000

NOTE: For OLS & 2SLS coefficients are reported; for PROBIT - marginal effects calculated at mean
 Robust standard errors in parentheses
 *** p<0.01, ** p<0.05, * p<0.1

APPENDIX 5: FIRST-STAGE REGRESSIONS IN 2SLS

MODEL	(1) 2SLS in col.(2) app.4	(2) 2SLS in col.(5) app.4	(3) 2SLS in col.(7)app.4	(4) 2SLS in col.(7) app.4
DEPENDENT VARIABLE	Parent- entrepreneurs	Received money from parents	Parent- entrepreneurs	Received money from parents
Parent was a director or manager	0.0812*** (0.02600)		0.0763*** (0.02680)	0.102*** (0.03330)
Parent worked in particular sector	0.0381*** (0.01160)		0.0363*** (0.01160)	0.0553*** (0.01650)
Both parents in family		0.0766*** (0.01710)	0.0369*** (0.00946)	0.0693*** (0.01740)
Parent has a higher education		0.0645*** (0.02260)	0.012 (0.01720)	0.0389* (0.02340)
Age	-0.0114*** (0.00255)	-0.00593* (0.00351)	-0.0115*** (0.00256)	-0.00599* (0.00347)
Age squared	0.000099*** (0.00003)	0.000041 (0.00004)	0.000101*** (0.00003)	0.000045 (0.00004)
Female	-0.014 (0.00997)	-0.00607 (0.01450)	-0.0131 (0.00995)	-0.00553 (0.01440)
Higher education	0.011 (0.01290)	0.0295 (0.02000)	0.00799 (0.01310)	0.0224 (0.02000)
Education in Business	0.0137 (0.02530)	0.0423 (0.03490)	0.0126 (0.02530)	0.0384 (0.03450)
Good knowledge of Latvian	0.0164* (0.00935)	-0.0208 (0.01550)	0.0160* (0.00940)	-0.0245 (0.01540)
Constant	0.310*** (0.05500)	0.207*** (0.07210)	0.274*** (0.05420)	0.189*** (0.07180)
R-squared	0.079	0.032	0.081	0.046

NOTE: Coefficients are reported; robust standard errors are in parentheses

*** p<0.01, ** p<0.05, * p<0.1