

DOI: <http://dx.doi.org/10.34069/AI/2020.29.05.41>

Motivation of new entrepreneurs in modern economies

МОТИВАЦИЯ НАЧИНАЮЩИХ ПРЕДПРИНИМАТЕЛЕЙ В СОВРЕМЕННЫХ ЭКОНОМИКАХ

Received: February 12, 2020

Accepted: April 3, 2020

Written by:

I.S. Pinkovetskaia¹⁶⁹Web of Science Researcher ID

D-3051-2017

<https://orcid.org/0000-0002-8224-9031>**Diego Felipe Arbelález-Campillo**¹⁷⁰Web of Science Researcher ID

P-1127-2019

<https://orcid.org/0000-0002-9041-9563>**Magda Julissa Rojas-Bahamón**¹⁷¹Web of Science Researcher ID

AAD-5792-2020

<https://orcid.org/0000-0003-4882-1476>**Daniela S. Veas Iniesta**¹⁷²Web of Science Researcher ID

AAF-9930-2020

<https://orcid.org/0000-0002-8473-0670>

Abstract

Recent decades have shown an increasing role of entrepreneurship in both economically developed and developing national economies. The purpose of the research is the estimation of the indicators that describe the proportion of voluntary, demanding and forced entrepreneurs in the total number of early entrepreneurs. The existing ratio of entrepreneurs with different motivation was also evaluated. The study used empirical data obtained in 2018 and presented in the Global entrepreneurship monitoring report. The normal distribution functions were used to develop economic and mathematical models for approximating initial data and evaluating four indicators of early entrepreneurs motivation in different countries.

Keywords: entrepreneurship, motivation, countries, voluntary entrepreneurs, forced entrepreneurs, highly demanding entrepreneurs.

Аннотация

Последние десятилетия показали возрастание роли предпринимательства, как в экономически развитых, так и развивающихся национальных экономиках. Целью исследования является оценка показателей, характеризующих долю добровольных, особо требовательных и вынужденных предпринимателей в общем числе ранних предпринимателей. Также оценивалось существующее соотношение предпринимателей с разной мотивацией. В качестве исходных данных были использованы результаты проекта глобального мониторинга предпринимательства за 2018 год. Функции нормального распределения применялись для разработки экономико-математических моделей аппроксимации исходных данных и оценке четырех показателей мотивации ранних предпринимателей в разных странах.

Ключевые слова: предпринимательство, мотивация, страны, добровольные предприниматели, вынужденные предприниматели, высокопритязательные предприниматели.

¹⁶⁹ PhD, Associate Professor, Ulyanovsk State University, Ulyanovsk, Russia.

¹⁷⁰ Editor Journal Amazonia Investiga (ISSN 2322-6307). Grupo de investigadores, Lenguajes, representaciones y Educación, (Universidad de la Amazonia).

¹⁷¹ PhD. Education and Environmental Culture. Professor IE Jorge Eliécer Gaitán, Colombia.

¹⁷² Professor and Researcher, Institute of Engineering Economics and Humanities, Moscow Aviation Institute (National Research University). Co-Editor Economics Journal (ISSN: 2711-2454).

Introduction

The importance of entrepreneurship at the beginning of the 21st century has increased significantly both in economically developed countries as in developing ones. The business sector in most national economies plays a decisive role in significantly increasing the production of goods, labor and services, contributing to the creation of new jobs and developing competitiveness and the use of innovations (Pinkovetskaia et al., 2020). The Scientific research carried out in recent years shows that entrepreneurship is one of the main factors that assures the development of modern countries. For example, in a study (Acs and Naudé, 2012), it was concluded that, if previous public policy foresaw the predominant development of large companies and concerns, today the association between businessmen and the state is becoming the key. At the same time, in highly developed countries, these links are established at the institutional level. The work (Gupta, Guha and Krishnaswami) shows the significant impact of internal and external factors of the business climate, the development of small and medium-sized companies. Entrepreneurship has been developed in many economic activities (Kiseleva et al., 2019).

Methodology

The surveys carried out in the last 20 years on Global Entrepreneurship Monitoring projects over several years were of great importance in the study of modern entrepreneurship. Reports on the specified project provide information that describes the motivation of early entrepreneurs. Therefore, in the 2018 report (Global Entrepreneurship Monitor 2018-2019, 2019), the data about the reasons that determine the early entrepreneurial activity of adults without disabilities between 18 and 64 years of age are presented. The first entrepreneurs are those people who, in the process of conducting a sociological survey, create their own business or are entrepreneurs for less than 42 months.

The current methodology divides the first entrepreneurs according to their motives into three main types. The first type of motivation brings together the so-called volunteer entrepreneurs. These include adults who use the conditions and opportunities prevailing in the country to start their own business in order to obtain advantages over salaried work. These advantages include a free mode and a work schedule, higher income and financial independence, independence from one's activity

based on the choice of goals and objectives, raising social status, the possibility of self-realization and creative activity. Entrepreneurs focused on a greater independence and striving to receive significantly more income than employees are very demanding. They correspond to the second type of motivation. The third type of motivation brings together forced entrepreneurs, also called entrepreneurs by necessity. These include adult citizens who have no livelihood and therefore start a business because of the lack of other opportunities to earn money. The reasons for creating a business have an impact on its development. In particular, forced employers often stop business in the event of a hired job prospect. That business has low survivability, leading to a lack of desire to improve business qualifications and provide additional resources necessary for the development of their own business. This determines the significant differences between the motivation of the third type compared to the first and second type. Voluntary entrepreneurs direct all their strength to the development and improvement of the business and to obtain the maximum positive effect from it. The research data, including data from the Global Entrepreneurship Monitoring Project, show the great importance of volunteer entrepreneurs to explore new markets, create innovative products and services, and create new jobs. As motivational indicators, the specific severities of volunteer entrepreneurs, highly demanding and obligated, are used in the total number of initial entrepreneurs.

During the last decade, a series of scientific studies have been carried out related to the study of the motivation of entrepreneurs. Of greater interest among them are the following studies. One article (Zwan et al., 2016) is dedicated to the analysis of motivational information for business owners in 33 countries. It showed that there are many differences between voluntary and forced entrepreneurs, including their social and economic characteristics, as well as perceptions of entrepreneurship. An article (Bobera, Lekovic & Berber, 2017) shows that there is a correlation between the level of economic development of countries, measured by the indicator of gross domestic product per capita, and the proportion of volunteer entrepreneurs in their total number. The work (Segal, Borgia and Schoenfeld, 2005) considers the motives of the people who create their own business from the point of view of the theoretical dispositions of the entrepreneurial spirit. The results of the study (De Silva, 2010)

show that many of those who in the initial stage were forced entrepreneurs in the UK, in the following stages of their business development, changed their motivation and became volunteer entrepreneurs. An article (Benz & Frey, 2008) shows that, as a general rule, employers are better satisfied with the results of their activities compared to people who have a paid job. A study (Ketko and Akimova, 2016) showed that the majority of potential entrepreneurs in Russia want to assert themselves. However, it was concluded that business activity to increase self-esteem and recognition is difficult, because state agencies do not provide support to the business activity of the population. The psychological aspects of starting a business with 63 Russian entrepreneurs with different types of motivation are considered at work (Gliznutsin, 2017). It shows that forced entrepreneurs associate their activities with the hope of state support. For volunteer entrepreneurs, such ideas are underdeveloped. In general, in previously published scientific work, little attention was paid to a comprehensive assessment of the motivation of early entrepreneurs in national economies.

Our article analyzes the results of the evaluation of indicators that describe the motivation for business activity.early in modern countries. As initial information, the data from the previous report on the Global Entrepreneurship Monitoring Project was used.

During the study, indicators that characterize the participation of the adult population in entrepreneurial activity in its initial stage in 48 countries were examined. These indicators are the specific severities of the entrepreneurs related to each of the four types of entrepreneurs above in the total number of initial entrepreneurs.

We also study indicators of the prevailing proportions of various types of motivation for entrepreneurs: the specific gravity ratios of voluntary and forced entrepreneurs, as well as the specific gravity ratios of highly demanding and forced entrepreneurs in all countries.

To evaluate all the indicators, the density functions of the normal distribution were used. The construction of such functions, as evidenced by the studies carried out by the author, allows obtaining impartial characteristics of the economic processes studied. In Pinkovetskaya, 2015; Pinkovetskaia et al., 2019) offers a methodological approach for the development of these functions for the study of entrepreneurship.

During the study, the following two hypotheses were tested:

- The level of motivation of the first entrepreneurs has significant differences in different countries;
- Most countries are characterized by a predominance of highly demanding and voluntary entrepreneurs.

Results

A computational experiment based on empirical data presented in the report of the Global Entrepreneurship Monitoring Project for 2018, allowed the development of economic and mathematical models. These models are functions of the normal distribution of the considered indicators.

The following are the functions () that approximate the specific severities of the entrepreneurs for three types of motivation (,%) in the total number of all the first entrepreneurs, for each country:

- the proportion of the first type of motivation, %

$$y_1(x_1) = \frac{390,00}{9,82 \times \sqrt{2\pi}} \cdot e^{\frac{-(x_1-71,69)^2}{2 \times 9,82 \times 9,82}} ;$$

(1)

- the proportion of the second type of motivation, %

$$y_2(x_2) = \frac{357,02}{11,89 \times \sqrt{2\pi}} \cdot e^{\frac{-(x_2-46,93)^2}{2 \times 11,89 \times 11,89}}$$

(2)

- the proportion of the third type of motivation, %

$$y_3(x_3) = \frac{377,14}{10,36 \times \sqrt{2\pi}} \cdot e^{\frac{-(x_3-23,14)^2}{2 \times 10,36 \times 10,36}}$$

(3)

Functions were also constructed that characterize the proportions of specific severities of different types of motivation. They are presented below:

- the proportion of specific gravities of voluntary and forced entrepreneurs

$$y_4(x_4) = \frac{88,01}{2,16 \times \sqrt{2\pi}} \cdot e^{-\frac{(x_4-3,85)^2}{2 \times 2,16 \times 2,16}}$$

(4)

- the proportion of specific gravities of very demanding and forced entrepreneurs

$$y_5(x_5) = \frac{51,57}{1,50 \times \sqrt{2\pi}} \cdot e^{-\frac{(x_5-2,48)^2}{2 \times 1,50 \times 1,50}}$$

(5)

Functional quality control included three tests. A computational experiment showed that the statistical values obtained for the Kolmogorov-

Smirnov test are in the range of 0.041 to 0.110, which is less than the tabulated value (0.152). The values of the statistics for the Pearson test are in the range of 0.038 to 4.334 and less than the value in the table (9.49). Shapiro-Wilk test statistics are 0.95 to 0.97 more than the tabulated value (0.93). Therefore, the analysis confirmed the good quality of the functions (1) - (5).

Discussion

The normal distribution functions (1) - (5) allowed determining the characteristics of the motivation for early entrepreneurial activity that prevails in different countries. The main estimations of the prevailing levels of motivation are presented in the table. At the same time, column 2 of the table shows the average values of 48 countries, and column 3 shows the ranges of variation of the values considered for the characteristic indicators of most countries (68%).

Table.

Indicators that characterize the motivation of the first entrepreneurs.

Indicators	Middle value	Typical values of most countries.
1	2	3
Proportion of voluntary entrepreneurs, %	71.69	61.87-81.51
Proportion of highly demanding entrepreneurs, %	46.93	35.04-57.82
Percentage of forced entrepreneurs, %	23.14	12.78-33.50
Relation of the proportion of voluntary and forced entrepreneurs	3.85	1.69-6.01
Proportion of the participation of very demanding and forced entrepreneurs	2.48	0.98-3.98

The information shown in column 2 allows us to conclude that in 2018, the percentage average of Country-specific volunteer entrepreneurs amounted to almost 72%. In other words, voluntary motivation prevailed. For most countries, this indicator ranged from 62% to 81%. The level of this indicator, greater than the upper limit of the interval indicated in column 3 of the table, was observed in Poland, Switzerland, Colombia, Panama, Cyprus, Great Britain and Greece. Values of the proportion of volunteer entrepreneurs below the lower limit of the interval happened in Brazil, Iran, Angola, Russia, Egypt and India. Only in two of these

countries (Egypt and India) the rate was less than 50%.

The average of 48 countries, the proportion of highly demanding entrepreneurs was almost 47%. In other words, in the countries analyzed, almost half of the first entrepreneurs considered themselves very demanding. In most countries, the value of this indicator ranged from 35% to 59%. Specific gravity values greater than the upper limit of the interval given in column 3 of the table have occurred in countries such as Panama, the Netherlands, Switzerland, South Korea, Cyprus, France, Thailand, and Chile. The specific severities of highly demanding

entrepreneurs from 25.4% to 31.6% were found in India, China, Egypt, Bulgaria, Turkey, Italy and Russia.

The average proportion of forced entrepreneurs in the total number of initial entrepreneurs was 23%. At the same time, for most countries, this indicator ranged from 12.8% to 33.5%. Specific gravity values greater than the upper limit of the range were observed in Egypt, India, Russia, Angola, Guatemala, Brazil, Iran, Lebanon. Smaller values than the lower end of the range (12% to 7%) were observed in Luxembourg, Cyprus, Italy, Sweden, the Netherlands, Poland, the United States, and Switzerland. It is interesting to note that in countries such as Russia, Japan, Germany and Italy, a low level of early entrepreneurship and a low proportion of entrepreneurs who stopped their activities were observed simultaneously.

The share of volunteer and forced entrepreneurs participation in 48 countries averaged 3.8 in 2018. The excess number of volunteer entrepreneurs over forced entrepreneurs was observed in the vast majority (46) of the countries. In only one country (India), this figure was 0.9. The ratio values are smaller than the lower limit of the range indicated in the table, also in Guatemala, Brazil, Angola, Russia and Egypt. The highest proportions of specific gravity of voluntary and forced entrepreneurs (from 11.8 to 6.5) were registered in Switzerland, Poland, the United States, the Netherlands, Sweden, Cyprus, Italy, Colombia, Luxembourg, Panama and the United Kingdom.

The ratio of the number of highly pretentious entrepreneurs to obligated ones averaged 2.5 in all countries under review. The excess of the number of highly demanding entrepreneurs over the forced ones took place in 43 economies. In five countries, this figure was less than 1.0. The highest proportion of specific gravities of very demanding and forced entrepreneurs (from 9.1 to 4.4) was observed in Switzerland, Poland, the United States, the Netherlands, Sweden, Cyprus, Italy, Luxembourg, Panama and the United Kingdom, that is, economically developed.

The data presented in column 3 of the table shows that in 2018 the five indicators analyzed had a significant differentiation per country. This seems logical, since there are important social, economic, demographic and historical characteristics of specific countries.

Therefore, the results of our study confirmed the accuracy of both hypotheses presented above

regarding the significant differentiation of the indicators considered per country and the excess of participation of voluntary and highly demanding entrepreneurs over the participation of forced entrepreneurs in most of the countries.

Conclusions

The study results contain significant scientific novelty and originality, including:

- An evaluation of the indicators that describe the predominant levels of motivation of the first entrepreneurs, using the functions of the density of the normal distribution;
- An evaluation of the indicators that reflect the correlation of the motivation levels of the entrepreneurs;
- The high quality of the approximation of the initial data is demonstrated by the functions (1) - (5) given in the article;
- Average values of the indicators considered for 48 countries included in the global monitoring project were established;
- The predominance in most countries of highly demanding and voluntary entrepreneurs over forced ones;
- Tested significant differentiation of indicators by country;
- There are countries with high and low levels of the indicators considered.

The research results obtained have a certain theoretical and applied value. The study results can be used to develop technology to process data on the motivation of entrepreneurs, using the density functions of the normal distribution. The proposed indicators can be used in further researches about the problems of early entrepreneurial activity. The new knowledge acquired as a result of our work can be used in the educational activities of universities and colleges for the training of entrepreneurs. Government, regional and municipal authorities can apply the results of the study in the development and implementation of projects and programs for the development of the business sector of the economy. In addition, the research results are of interest to all novice entrepreneurs and people interested in starting their own business.

Governments and governmental organizations can use the models developed in the research process to justify strategic documents for the development and improvement of entrepreneurship.

References

- Acs Z.J., & Naudé W. (2012). Entrepreneurship, stages of development, and industrialization / MERIT Working Papers 021. United Nations University - Maastricht Economic and Social Research Institute on Innovation and Technology (MERIT). 21 p.
- Benz, M., & Frey, B. S. (2008). The value of doing what you like: evidence from the self-employed in 23 countries. *Journal of Economic Behavior & Organization*. 68(3). 445-455.
- Bobera D., Lekovic B., & Berber N. (2017). The relationship between motives of entrepreneurial behavior and venture maturity. *Industrija*. 45(1). 81-98.
- Gliznutsin D. V. (2017). Motives for starting a business and ideas about state systems. *Izvestiya Saratov University. New series. The Philosophy Of The Series. Psychology. Pedagogy*. 17(2). 199-202.
- Global Entrepreneurship Monitor 2018-2019. (2019). Global Entrepreneurship Research Association (GERA). 152 p.
- Gupta P., Guha S., & Krishnaswami S. (2013). Firm growth and its determinants // *Journal of Innovation and Entrepreneurship*. 2(15). 1-14.
- De Silva R.L. Business Start-up and Growth Motives of Entrepreneurs: A case in Bradford, United Kingdom. (2010). *Manchester Business School Working Paper, Number 597*. URL: <http://www.mbs.ac.uk/research/workingpapers/> (accessed 2.02.2020).
- Ketko N. V., & Akimova O. E. (2016). Research of motivational preferences of entrepreneurs for the development of Russian small business // *Economic analysis: theory and practice*. 9. 27-38.
- Kiseleva, O., Lebedev, A., Pinkovetskaia, I., Rojas-Bahamón, M., & Arbeláez Campillo, D. (2019). Specialization and concentration of small and medium enterprises employees: Russian data. *Amazonia Investiga*, 8(20), 6-15.
- Pinkovetskaya I. (2015). Modeling of indicators of small and medium-sized enterprises in the regions using the density function of the normal distribution. *Problems of territory development*, 6 (80), 93-107.
- Pinkovetskaia, I., Arbeláez Campillo, D., Rojas Bahamón, M., Gromova, T., & Nikitina, I. (2019). Female entrepreneurship development in the Russian Federation. *Amazonia Investiga*, 8(18), 111-118. Retrieved from <https://www.amazoniainvestiga.info/index.php/amazonia/article/view/287>
- Pinkovetskaia, I., Lyubovtseva, E., Arbeláez-Campillo, D., & Rojas-Bahamón, M. (2019). Small and medium enterprises in Russia and other countries. *Amazonia Investiga*, 9(25), 99-106.
- Pinkovetskaia, I., Nuretdinova, Y., Treskova, T., & Neif, N. (2019). Estimation of fixed capital investment in Russian small enterprises and microenterprises in 2018. *Amazonia Investiga*, 8(21), 42-51.
- Segal G., Borgia D., & Schoenfeld J. (2016). The motivation to become an entrepreneur. *International Journal of Entrepreneurial Behaviour & Research*. 2005. 11(1). 42-57.
- Van der Zwan P., Thurik R., Verheul I., & Hessels J. (2016). Factors influencing the entrepreneurial engagement of opportunity and necessity entrepreneurs. *Eurasian Business Review*. 6. 273-295.