Determining Factors of Entrepreneurial Motivation: Evidence from EU Countries

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Abstract

The aim of our paper is to identify the main determinants of entrepreneurial motivations and to empirically evaluate their impact in 18 EU member states, over the period 2002-2014. The empirical analysis is performed based on data from the Global Entrepreneurship Monitor and the World Bank. In the econometric model, we considered as dependent variables, alternatively, opportunity-driven entrepreneurial activity and necessity-driven entrepreneurial activity. As independent variables we took into account 11 factors that could have an impact on the motivations of entrepreneurs.

The empirical results indicate that the motivation of entrepreneurial activity is influenced by unemployment rates, inflation rates, tax rates, domestic credit to private sector, fear of failure, entrepreneurial intentions and perceived capabilities.

Overall, our study highlights that macroeconomic conditions and the perception of the entrepreneurs about entrepreneurial activity are affecting significantly and with opposite signs the entrepreneurial activity depending on the motivation of entrepreneurs (opportunity or necessity).

Key words: entrepreneurship, motivation of entrepreneurs, entrepreneurship opportunity, necessity entrepreneurs
J.E.L. classification: L26, M13, C33

1. Introduction

An important role in promoting and supporting entrepreneurship is played by knowing and understanding entrepreneurial motivations, which is an area of interest for researchers in the field of entrepreneurship. According to the specialized literature (Robichaud *et al*., 2010; Stephan *et al*., 2015), entrepreneurial motivations are various, including the desire of independence, financial motivations, factors related to family and work-related factors.

Starting with 2001, the Global Entrepreneurship Monitor (GEM) highlights and analysis two types of entrepreneurship, according to the main reason why individuals engage in entrepreneurial activities, namely: opportunity driven entrepreneurship and necessity driven entrepreneurship (Reynolds *et al*., 2001), which have a range of positive economic effects and are influenced by many factors. Opportunity entrepreneurs are the people who start a business in order to pursue an opportunity, while necessity entrepreneurs are individuals who are forced to start a business because they do not have other option of employment or the options that exist are unsatisfactory. Knowing the key factors that have impact on the motivations of entrepreneurs is of interest both for researchers and for policy makers at various levels, in order to adopt appropriate measures to promote and support entrepreneurship at national, regional and international level.

In this context, the objective of our research is to identify the key factors that have impact on the entrepreneurial motivations and to evaluate empirically their influence on 18 EU member states,

over the period 2002-2014. To achieve these goals, our paper is structured as follows: section 2 discusses the variables analyzed and the methodology of research; section 3 presents and discusses the results of our empirical research, and section 4 includes concluding remarks.

2. Data and methodology

The objective of our analysis is to determine how the factors considered as explicative variables, presented below, influence entrepreneurial motivations. For this, we consider two representative indicators which express the motivation of individual in starting a business used by Global Entrepreneurship Monitor (GEM): opportunity-driven entrepreneurs (*odea*) represented by the entrepreneurs who have taken action to create a new business by pursuing perceived business opportunities, and necessity-driven entrepreneurs (*ndea*) which represent the entrepreneurs who have created a new business because of the lack of better employment alternatives. The distinction between necessity driven entrepreneurs and opportunity driven entrepreneurs is of interest because the expected impact of the considered variables on the entrepreneurial activity may be different, depending on the motivation for entrepreneurship.

Entrepreneurial motivations are influenced by many economic factors, that are explanatory variables in our model and that we have selected based on literature in the field. The analysis was based on annual data provided by the GEM and the World Bank, for the period 2002-2014. Our research focuses on the 18 European Union member countries, namely: Belgium, Croatia, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Netherlands, Portugal, Romania, Slovenia, Spain, Sweden, and United Kingdom.

In the following, we presented the explanatory variables of our models and their expected relationship with the dependent variables. It is interesting to observe how the economic context influences the entrepreneurial activity in the European countries. For this we first take into account the *GDP (gdp)* and we observe that, normally, growth periods are favourable for investments and thus for the opportunity-driven entrepreneurs, while crisis periods, associated with an increase of unemployment and reduction of income, determine people to find alternative sources of revenues, becoming then necessity entrepreneurs. Another important macroeconomic factor is *GDP per capita (gdpc)*. An increase in income per capita determines higher levels of entrepreneurship, because the higher income level of the population influences the demand on the market and implicitly the business opportunities. Some studies (Reynolds *et al*., 2001; Wennekers *et al*., 2005; Naudé, 2009; Albiol, 2014) consider income per capita as an important determinant for entrepreneurial activity. They also show that the number of opportunity entrepreneurs increases with the economic development, while the number of the necessity entrepreneurs decreases. Starting from this, we consider that the influence of *GDP growth rate* is positive on the overall entrepreneurial activity and on the opportunity entrepreneurs, while the impact on the necessity entrepreneurs will be a negative one. In the case of GDP per capita we expect a positive sign for the opportunity-driven entrepreneurs and a negative one for the necessity-driven entrepreneurs.

The *unemployment rate (unempl)* it's another factor that may influence the motivations for entrepreneurship, due to the fact that the increase in unemployment determines an increase in entrepreneurship determined by necessity; but a high level of unemployment can also be linked to a stagnation of economic growth, which leads to fewer entrepreneurial opportunities (Wennekers *et al*., 2005; Vidal-Suñé and Lopez-Panisello, 2013). In the specialized literature there is no agreement regarding the sign of the relationship between the unemployment rate and motivations for entrepreneurship. We consider that this relationship should be negative for the opportunity driven entrepreneurs and positive for the necessity driven entrepreneurs, since a higher unemployment rate may lead to an increased perception of business opportunities among entrepreneurs due to necessity but discourages the opportunity-driven entrepreneurs.

Another economic factor that we consider as a determinant of the motivation of entrepreneurship is the *inflation rate (infl)*. Some studies (Vidal-Suñé and Lopez-Panisello, 2013; Sayed and Slimane, 2014), show that in the conditions of an inflation increase can be registered increased expectations of the earnings of entrepreneurs. But, inflation can discourage entrepreneurship due to rising costs for starting a business (Salman, 2014). Therefore, the relationship that we expect is negative for de opportunity driven entrepreneurs and positive for the

necessity driven ones.

In the category of economic factors we also analyze the *total tax rate (tax).* Increasing tax rates may have a negative impact on entrepreneurship by discouraging the creation of new business (Sayed and Slimane, 2014; Salman, 2014). Regarding the entrepreneurial motivations, we expect a negative relationship between tax rates and necessity entrepreneurs but an opposite sign for the opportunity entrepreneurs.

Starting and running a business requires financial resources, and an easy access to finance is crucial for the development of entrepreneurship. So, we also consider as an independent variable the percent of *domestic credit to private sector offered by banks (dcps)*(as % of GDP).This variable also represents a proxy for financial development and has an important role in promoting entrepreneurship. An increase of the share of domestic credit to private sector offered by banks may express an easier access to bank financing, which has a positive impact on entrepreneurship (Reynolds *et al*., 2001; Aghion *et al*., 2007; Naudé, 2009; Vidal-Suñé and Lopez-Panisello, 2013; Sayed and Slimane, 2014). Thus, we expect a positive impact on the motivation of entrepreneurs.

Another category of indicators refers to the perception of the entrepreneurship, for example *fear of failure (fof), entrepreneurial intentions (eint) and perceived capabilities (capab)*. These indicators assessed for those seeing opportunities may prevent them from actually starting a business, for example the fear of failure is very important for the opportunity entrepreneurs and negatively influence their choice to start-up a new business (Albulescu and Tămăşilă, 2014; Albiol, 2014). So, a negative sign is expected, while for the necessity driven entrepreneurs these indicators may not discourage them in starting a new business, due to the absence of an alternative to find a work place.

We also want to test if *time and cost of starting a business* have influence on the motivation of entrepreneurs. Naudé (2009) shows that start-up costs do not have a significantly impact on opportunity and necessity entrepreneurship. Comparatively, Ho and Wong (2007) and Reynolds *et al*. (2001) show that business costs have a negative impact only on opportunity driven entrepreneurship, but have no influence on the necessity entrepreneurship. We expect, like in the other cases opposite signs for the relationship of this variables and opportunity and necessity entrepreneurial activity.

Starting from those stated above we formulate the following hypothesis: *H_1: the economic conditions and the perception of entrepreneurship have a significant impact on the motivation of entrepreneurs*; *H_2: the determinants of opportunity and necessity entrepreneurship have opposite signs.*

3. Results and discussions

In order to statistically analyze the data, we first applied unit-root tests on every variable included in the panel data, to test if data is stationary and control for false relationships among variables. The null hypothesis is that all panels contain unit-root. This hypothesis was rejected in all the cases.

Table no. 1. Descriptive statistics of the variables

Variable	Minimum	Maximum	Mean	Std. deviation
odea	18.38	80.47	51.49	12.09
ndea	3.22	50.17	19.33	10.00
gdp	-14.35	11.90	0.85	3.63
gdpc	-12.92	12.93	0.62	3.66
unempl	2.80	27.20	9.18	4.38
infl	-4.48	15.40	2.38	2.08
tax	18.40	76.70	44.57	13.46
dcps	0.22	202.19	102.02	44.35
fof	15.12	61.29	36.64	7.14
eint	1.55	31.70	9.51	5.05
capab	14.58	60.67	42.67	7.87

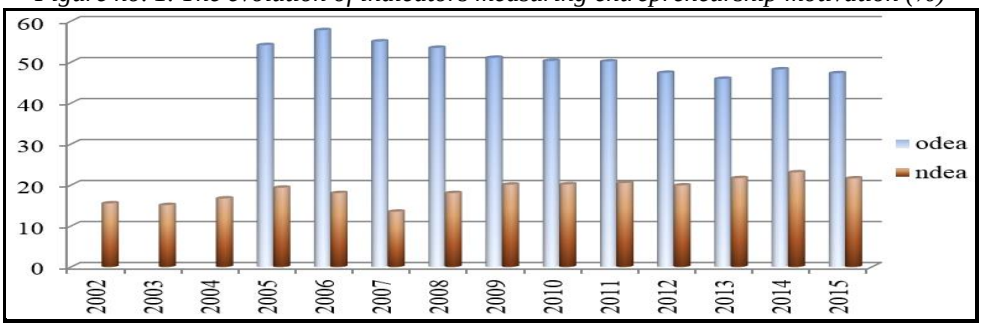
cost	0.00	22.50	5.84	6.33
time	2.50	70.00	14.59	13.12

Source: processed by the authors after E-views results

The results of the descriptive statistics of the explanatory and dependent variables are presented in Table 1. They show that the biggest standard deviation was observed for the domestic credit to private sector. This indicator has registered a significant disparity which indicates important differences between countries regarding their degree of financial development.

On the other hand, the descriptive statistics of the dependent variables show that both opportunity entrepreneurs and necessity ones have high standard deviation. This fact shows that there are important differences between countries but also important variations for the period considered in the analysis. From Figure 1, we observe that the percentage of necessity driven entrepreneurs its half (or smaller) of the percentage of opportunity driven entrepreneurs. We also observe a slightly increase of the necessity entrepreneurs accompanied with a slightly decrease of the opportunity ones in the period of the financial crisis.

Figure no. 1. The evolution of indicators measuring entrepreneurship motivation (%)



Source: processed by the authors after GEM Key indicators (2015)

Before the regression analysis, we have tested all the variables against autocorrelations. We have also taken into account the problem of multicollinearity. For our analysis we have considered the reference point for establishing a high correlation as being 0.80, according to Bryman and Cramer (2001). The results of the correlation test applied to our variables shows that there exists multicollinearity between GDP and GDP/capita, and also between tax rate, unemployment, entrepreneurial intentions, cost and time. So, in order to obtain accurate results when applying the regression analysis we use separate models of regression, by eliminating the highly correlated variables.

We want to test which are the factors that are influencing the motivation of the entrepreneurial activity in the European Union. Thus, we use two regression models that have different dependent variables: opportunity-driven entrepreneurial activity and necessity-driven entrepreneurial activity. The results obtained are centralized in Table 2.

Table no. 2. The results of the regression models

	odea		**ndea**	
	Coefficient	*Prob.*	*Coefficient*	*Prob.*
gdp	.081	.716	-.166	.326
gdpc	.333	.196	-.142	.504
unempl	-1.394***	.000	.918***	.000
infl	-1.082***	.005	.730**	.013
tax	.079	.258	-.097**	.092
dcps	.039**	.031	-.093***	.000
fof	-.187*	.089	.184**	.021
eint	-.573***	.001	.702***	.000
capab	-.129	.278	.275***	.000
cost	-.121	.344	-.046	.557
time	-.044	.541	.054	.090

Const.	7.530***	.000	.056	.989
F-test	16.43***	.000	20.66***	.000
R^2	.3797		.4172	

** and *** denotes that coefficients are significantly at the 95% and 99% level.
Source: processed by the authors after E-views results

Based on the results of the static regression models and the statistically significant coefficients, we can conclude that unemployment rate, inflation rate, tax rate, domestic credit to private sector, fear of failure, entrepreneurial intentions and perceived capabilities are the main determinants of the motivation of entrepreneurs. When we analyze separately the two models we observe some differences, so the main determinants of opportunity-driven entrepreneurial activity are: unemployment rate, inflation rate, domestic credit to private sector, fear of failure and entrepreneurial intentions. On the other hand, the necessity-driven entrepreneurial activity is determined by unemployment rate, inflation rate, total tax rate, domestic credit to private sector, fear of failure, entrepreneurial intentions and perceived capabilities. These results are confirming hypothesis 1.

When analysing the coefficients we observe that the significant ones have opposite signs depending on the motivation of the entrepreneurial activity, confirming hypothesis 2 and being in accordance with our expectations. *Unemployment rate* is statistically significant for both models, and has a negative coefficient for opportunity entrepreneurs and a positive one for necessity entrepreneurs, in line with our expectations. This can be explained by the fact that the increase in unemployment determines an increase in entrepreneurship determined by necessity, and discourages the entrepreneurship determined by opportunity.

For the *inflation rate* the coefficient is significant for both the models considered, but with different impact on entrepreneurial motivation, and in accordance with our expectations. Thus, the inflation rate influences negatively the opportunity entrepreneurs, because a higher rate of inflation determines the increase of costs for starting a business. On the other hand, the inflation rate has a positive impact on the necessity entrepreneurs because of the increase in their expectations of earnings, in the conditions of increasing the level of prices for products and services.

The *total tax rate* has a significant coefficient only for the necessity driven entrepreneurs, and it's a negative one. This result can be explained by the fact that an increase of the tax rate as percentage of commercial profits determines a reduction of the profit of entrepreneurs, discouraging the necessity entrepreneurial activity.

Domestic credit to private sector has a statistically significant influence for both the models, but with different signs. For the opportunity driven entrepreneurs the coefficient is positive, fact that shows that an increase in the share of loans provided by banks could indicate an easier access to financing, which could stimulate the creation of new businesses from the part of this type of entrepreneurs. On the other hand, for necessity entrepreneurs the sign is negative. One possible explanation for this situation could be that, although it is registered a decrease in loans provided by banks, for entrepreneurs motivated by necessity the necessity dominates, so although they do not have access to credit, will still start new businesses but will seek other non-banking financing sources, maybe some informal resources (from family and friends).

The perception about entrepreneurship expressed by *the fear of failure* and the *entrepreneurial intentions* has an important influence on entrepreneurial motivation, but with different signs, in accordance with our expectations. The negative sign for opportunity entrepreneurs can be explained by the fact that they are following opportunities on the market and are negatively affected by the possibility of failure. On the other hand, the entrepreneurs motivated by necessity not being able to procure income in other ways will not be discouraged by the perception about entrepreneurial activity on the market, their necessity being higher and more important than the fear of failure. Also, the necessity driven entrepreneurs are stimulated by the increase of entrepreneurial intentions on the market, because this increase shows determines an increase of their confidence in the evolution of the entrepreneurial activity. But, with an opposite sign appears the coefficient for the opportunity entrepreneurs, when entrepreneurial intentions are higher than the probability of making an unique activity with higher profits is smaller. For the necessity entrepreneurs we observe also a significant positive impact coming from the *perceived capabilities*,

if the necessity driven entrepreneurs think they are capable to start-up and run a business then they will increase their activity.

The other considered variables, such as GDP, GDP/capital, cost of start-up procedure and time needed to start a business have not statistically significant coefficients for either one of the considered models. The effects of the considered variables combined have a relatively small impact on the motivation of entrepreneurial activity, as shown by R-squared value of around 40%. These results show that are also other factors that may have an important influence on entrepreneurial motivation, that should be included in the analysis, this being one of our future directions of the research.

4. Conclusions

In our paper we have investigated the determinants of entrepreneurial motivation from 18 EU countries included in the analysis. The purpose of our study was to test the formulated hypotheses and to offer evidence with respect to the impact of the considered indicators on opportunity driven entrepreneurial activity and necessity driven entrepreneurial activity.

The empirical results of this research show that a part of the considered indicators are significantly affecting the entrepreneurial motivation in the European Union countries, according to the results of other empirical studies. Thus, the motivation of entrepreneurial activity is influenced by unemployment rate, inflation rate, total tax rate, domestic credit to private sector, fear of failure, entrepreneurial intentions and perceived capabilities. When we analyze separately the two models we observe some differences, so the main determinants of opportunity-driven entrepreneurial activity are: unemployment rate, inflation rate, domestic credit to private sector, fear of failure and entrepreneurial intentions. On the other hand, the necessity-driven entrepreneurial activity is determined by unemployment rate, inflation rate, total tax rate, domestic credit to private sector, fear of failure, entrepreneurial intentions and perceived capabilities. So, we can conclude that macroeconomic conditions and the perception of the entrepreneurs about entrepreneurial activity are affecting significantly and with opposite signs the entrepreneurial activity depending on the motivation of entrepreneurs (opportunity or necessity) in the 18 European Union countries analyzed.

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