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Factors Influencing New Business Formation

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Abstract: The purpose of this study is to identify the factors that influence the creation of new businesses and to point out both the differences and the similarities existing between countries and groups of countries in terms of these influencing factors. We are mainly interested in the place Romania and Bulgaria have among the countries of the world from the perspective of entrepreneurial spirit and its influencing factors. To capture the level of business formation we use New business density from World Bank Doing business. Drawing on the existing literature we consider for our analysis several indicators related to economic environment such as GDP per capita, unemployment rate, inflation rate, the level of taxes, foreign direct investments and public debt and indicators describing the quality of governance. The research uses 2014 data for 67 countries, from all development categories, collected from Heritage Foundation database. The research results obtained with principal components analysis show that good governance results in higher levels of GDP per capita and income taxes and the increase of the level of business formation. Also, good governance leads to a decrease in inflation and unemployment. Furthermore, the hierarchical cluster analysis is used to identify groups of countries and to outline similarities and differences between them.

Keywords: entrepreneurship; business density; governance; economic environment; principal components analysis

JEL Classification: C38; E02; H20; M13; O11

1. Introduction

The relationship between entrepreneurship development and economic performance has been largely debated and unanimously acknowledged in literature and decision making.

At the same time, a wide range of psychological, sociological and economic factors are proven to impact upon the rate of entrepreneurship: from age, religion, experience, professional status, education to culture, trust and confidence, legislation, size of government, fiscal pressure, unemployment etc. The influence these factors have on entrepreneurial activity and the direction and the strength of this link vary depending on the country's level of development (Stel et al, 2005; Kuckertz et al., 2016).

A framework for analyzing entrepreneurship in the context of both its determinant factors and impact on economic performance is provided by Thurik, Wennekers & Uhlaner (2002, p. 163). The researchers present the causality and feedback between society-level conditions (technological, economic, demographic, cultural and institutional), the rate of entrepreneurship (nascent, start-ups,

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total business ownership) and, furthermore, economic performance (personal wealth, firm profitability and economic growth).

This paper focuses on the first side of the above framework, primarily on the influence of macroeconomic and institutional factors on entrepreneurship. The purpose is to verify by empirical research the factors that influence the creation of new businesses, in current economic and institutional climate. Starting from the premise that good governance and a higher level of development results in higher rate of business entries, we examine key macroeconomic and institutional indicators that might have an influence on new business formation. At the same time, we aim at identifying the place Romania and Bulgaria have among the countries of the world from the perspective of entrepreneurial spirit and its influencing factors.

The rest of this paper is structured as follows: in the second section we provide a review of literature on business formation in relation with institutions and macroeconomic environment. Section 3 briefly describes the research data and methodology. In Section 4 we present the empirical results and in the last section we draw and discuss the main conclusions.

2. Background

When addressing questions such as why some countries are rich and others poor, or why some countries benefit from entrepreneurial activity while others not, researchers find the answer in the quality of the institutional environment which provides incentives for entrepreneurial activity and behavior. Differences in institutional quality are proven to explain differences in entrepreneurial activity (Hall & Sobel, 2008; Diaz Casero et al, 2015). When exploring the institutional determinants of macro-level entrepreneurship, Valdez & Richardson (2013) conclude upon the relationship between a country's normative, cultural-cognitive and regulative institutions and entrepreneurial activity. Holcombe (2003, 25) shows that entrepreneurial activity is possible in an entrepreneurship supportive institutional setting, i.e. one which makes profit opportunities available to entrepreneurs. On the same line of argumentation, Sautet, (2005, p. 9) points out that "entrepreneurship is not dependent on the resources in an economy. Rather, the key is the quality of institutions that permit the exploitation of resources and opportunities". The existing rules of the game determine the payoffs which orientate entrepreneurs to a certain type of behavior. In Baumol's terms (1990) this behavior might take one of the following forms: productive, unproductive or even destructive.

Good institutions such as, stable and well enforced property rights, enforced contracts, free market, rule of law, political stability etc. have been proven as catalysts for entrepreneurial activity.

When analyzing the impact of institutional framework on entrepreneurial environment on a sample of 33 European countries using company-level data, (Desai et al., 2003, p. 31) prove that "greater fairness (i.e. low corruption) and stronger protection of property rights are critically important in encouraging both the emergence and the growth of new enterprises, particularly in emerging markets". Aiming at investigating the relationship between economic freedom and entrepreneurship, measured by the level of self-employment, Nyström's (2008) empirical findings show that a smaller government sector, better legal structure and security of property rights, as well as less regulation of credit, labor and business tend to increase entrepreneurship. Using panel data from 44 countries, Chowdhury et al. (2015) found that strong property rights and freedom from corruption are positively related to new firm start-up and nascent entrepreneurship.

Studies on the influence the level of taxes, considered by some researchers (Chowdhury et al., 2015) a formal institution, has on entrepreneurship reveal that higher taxes discourage entrepreneurial activity by weakening incentives and reducing potential gains for the entrepreneurs (Chowdhury et al., 2015). The empirical results obtained by Gentry & Hubbard (2000) point out an increase in entrepreneurial entry when tax rates are less progressive. On a sample of 118 countries over a period of six years, (Braunerhjelm & Eklunnd, 2014) found that the tax administrative burden significantly reduces the entry rate and that this effect is unrelated to general taxes on corporate.

The level of FDI inflows, also a reflection of a country's institutional framework, impacts upon all types of entrepreneurial activity. Some studies point to a negative connection (Chowdhury et al., 2015) while others show a direct and significant relationship between FDI and business development in emerging countries (Herrera-Echeverri et al., 2013).

Also, a number of studies analyze several economic indicators related to entrepreneurial activity. For example, considering the level of economic development, (Wennekers et al., 2005) find support for a U-shaped relationship between this indicator and nascent entrepreneurship. (Klapper et al., 2010) discuss about a significant positive correlation between the log of GDP per capita and entry density rates.

The next section of the paper presents the data and methods used in order to analyze the relationship between macroeconomic and institutional factors and new business formation and to characterize the countries included in our sample from the perspective of the considered variables.

3. Data and Methods

In order to explore the link between the rate of new business formation and economic and institutional environment we compile a database containing 2014 data on New business density and several macroeconomic and institutional indicators covering 72 countries.

New business density (*abbrev. NBD*) is calculated as the number of newly registered firms per 1000 working-age people (those aging 15–64 years). Country level data is available at World Bank Doing Business.

The data set covering the institutional aspects contains information on the six governance indicators, released by World Bank namely, Voice and accountability (*VAC*), Political stability and absence of violence (*PS*), Government effectiveness (*GovE*), Regulatory quality (*RQ*), Rule of law (*RL*) and Control of corruption (*CC*).

The macroeconomic indicators used in this paper are GDP per capita, Unemployment rate (*UR*), Inflation rate (*IR*), Income Tax Rate (*ITR*), Corporate Tax Rate (*CTR*) and FDI Inflow and Public Debt. They are drawn from Heritage Foundation database.

The methods used to explore the link between new firm formation and the influencing factors are Principal Components Analysis (PCA) and Hierarchical Clustering.

4. Empirical Results

The analysis is carried out on a sample of 67 countries, after eliminating the countries which showed extreme values with some variables: Qatar (extreme value for GDP per capita), Hong Kong (extreme value for New Business Density), Nepal, Senegal (Unemployment), Belarus (Inflation). The countries

under analysis are as follows: 24 countries in Europe, 17 in Asia, 14 in America, 11 in Africa and 2 in Oceania. The New business density indicator is analyzed in relation to governance, GDP per capita, Unemployment rate, Inflation rate, Income Tax Rate, Corporate Tax Rate and FDI Inflow and Public Debt indicators.

After processing data by means of Principal Components Analysis, we decided to eliminate the FDI Inflow (Millions) and Public Debt (% of GDP) indicators from our analysis because of the fact that they behaved differently as compared to other indicators. Thus, we have reached results which support the adequate application of this method for the database we have created. Therefore, most of the absolute values of the coefficients in the correlation matrix are higher than 0.5, thus indicating significant correlations among variables. The value of the matrix determinant is very low, i.e. close to 0, and shows that there are strong correlations among variables. The New Business Density indicator shows significant direct correlations with all Governance, GDP per capita indicators and negative correlations with Inflation rate. The Unemployment rate is directly correlated with New Business Density while showing significant reverse correlations with some components of the Governance indicator, such as: Government effectiveness, Control of corruption, Regulatory quality, Rule of law, as well as with GDP per capita and Inflation rate. Consequently, we expect a negative influence of Unemployment rate on New Business Density due to these phenomena. We also note the existence of positive correlations among Income Tax, Governance and GDP per capita indicators, which points to the fact that developed countries, with strong institutions spend more and also levy a greater fiscal burden in order to support spending.

The presence of significant correlations among variables is also supported by the high value of the Kaiser-Meyer-Olkin (KMO=0.847) statistic, which indicates a good solution reached by means of the Principal Components.

The first two factorial axes account for approximately 71.18% of the total variance in the cloud of variables, each of them being higher than 1, 6.89 being the value of the first factorial axis and 1.66 - the value of the second one. According to Benzécri's and Kaiser's criteria (Pintilescu, 2007,pp. 59-61), the PCA results will be interpreted in relation to the first two factorial axes.

The first factorial axis is the most important, accounting for 57.38% of the total variance in the cloud of variables. The indicators which show the strongest positive correlations with the first factorial axis are New Business Density, Governance and GDP per capita as well as Inflation rate, though negatively correlated (figure 1.). The indicators which show a strong positive correlation with the second factorial axis are Income Tax Rate and Corporate Tax Rate. Unemployment rate shows a weak, negative correlation with both factorial axes.

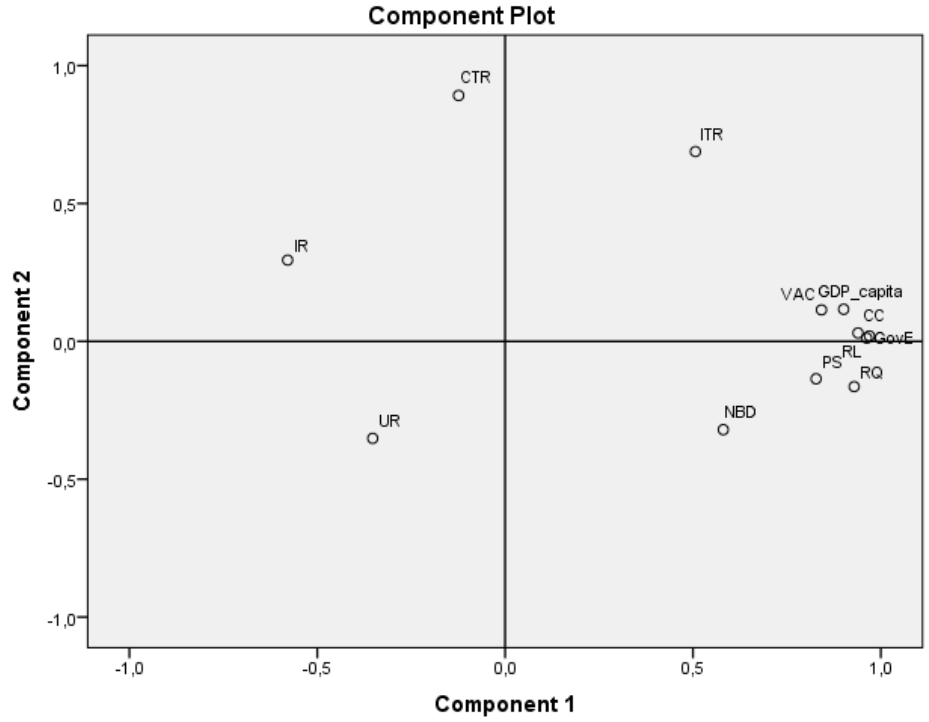

Figure 1. Representation of variables within the first two factorial axes system.

Therefore, the hypothesis according to which good governance results in higher GDP per capita, higher income taxes and New Business Density increase is confirmed. Also, good governance leads to a reduction in unemployment and inflation rates.

In order to identify the profile of the group of countries under analysis according to the analyzed variables, we will illustrate their position within the first two factorial axes system (figure 2). The relatively high number of countries under analysis makes it difficult to have them grouped homogeneously based on the graphic representation in the first two factorial axes system.

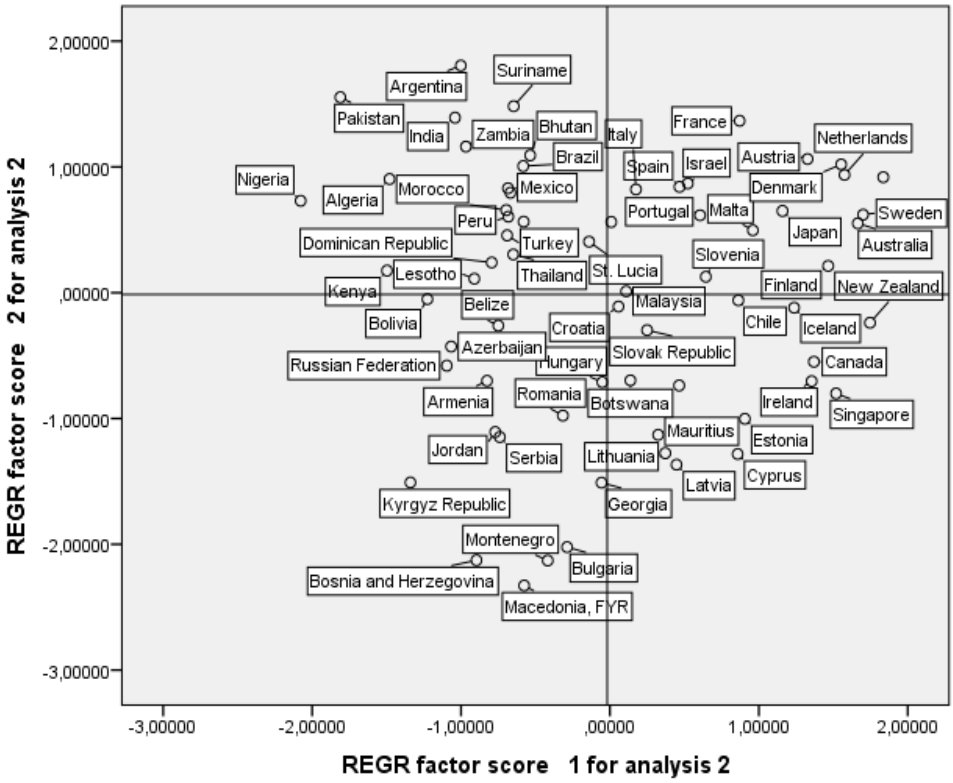

Figure 2. Representation of countries within the first two factorial axes.

Thus, for higher accuracy in grouping the countries, we have applied hierarchical cluster analysis. We found that there are no significant differences between grouping countries by means of the Principal Components Analysis or by Hierarchical Cluster. Consequently, we have identified the following groups of countries:

- the group of countries with high values in Governance, GDP per capita and NBD indicators and low values in Unemployment and Inflation rates, which gathers the following homogeneous subgroups: i) Denmark, Netherlands, Sweden, Norway, Austria, Japan, France; ii) Canada, Finland, Ireland, Chile, Iceland; iii) Australia, New Zealand, Malta;

- the group of countries with negative values in Governance indicators and very low values in GDP and NBD, respectively, and high Unemployment and Inflation rates: Algeria, Pakistan, Nigeria, Kenya, Bosnia and Herzegovina, Macedonia, Serbia, Montenegro, Georgia, Dominican Republic, Bolivia, Azerbaijan, Armenia.

- the group of countries showing average values of the indicators strongly correlated with the first factor axis: Spain, Israel, Italy, Portugal, Slovenia, Malaysia, Czech Republic, Slovakia, Hungary, Estonia, Latvia, Lithuania.

- the countries with good NBD, Governance, GDP per capita values and low Inflation and Taxes rates (ITR and CTR) are illustrated in sector IV of the first two factorial axes: Estonia, Latvia, Cyprus, Iceland, Botswana, Mauritius, Lithuania.

Romania's negative, though pretty low, coordinate in relation to the first factorial axis (the correlation coefficient is -0.316) places our country in the immediate vicinity of the second group of countries. Our neighbor country, Bulgaria (its correlation coefficient is -0.288), is also placed in the negative

sector. Consequently, the two countries show very low or even negative values in terms of Governance, GDP per capita and NBD and very high Inflation values. Romania's coordinate in relation to the second factor axis is -0.976 while Bulgaria's is -2.022. These values indicate the fact that, compared to Bulgaria, Romania's taxes are higher and unemployment rate is lower.

5. Conclusions and Discussions

This paper aimed at identifying the factors that influence the creation of new businesses and to point out both the differences and the similarities existing between countries and groups of countries in terms of these influencing factors. The results of Principal components analysis showed a positive association between the rate of new businesses, institutional quality and GDP per capita. Good governance results in higher levels of development and an increase in entry rate. Our results are consistent with previous studies in the field (Klapper, 2010; Aidis, 2012; Chowdhury, 2015).

Entrepreneurship appears and develops within a rule of the law institutional framework which offers equal opportunities to all economic agents and warrants their freedom to appropriate the results of their work (Baciu & Botezat, 2013, p. 541). The quality of the regulatory environment and the government's ability to formulate and implement policies to support private sector influence a country's level of development and entrepreneurial activity.

That is how we can explain that the business entry rates are high in the developed countries like Denmark, Netherlands, Sweden, Norway, Austria, Japan, Finland, Australia, New Zealand. These countries are characterized by the best scores in terms of absence of corruption, business freedom, governmental performance (Baciu, 2014, p. 13).

The less developed countries such as Algeria, Pakistan, Nigeria, Kenya, Bosnia and Herzegovina, Macedonia, Serbia, Montenegro, Georgia, Dominican Republic, Bolivia, Azerbaijan, Armenia are suffocated by unemployment and inflation and perform very low in terms of institutional quality and new business formation.

According to our results, Romania is placed in the immediate vicinity of the above mentioned less developed countries, with very low institutional quality and low entry rate. The Romanian institutional framework abounds in rules and regulations and this complexity invites at non-compliance (Iacobuţă, 2009). According to the White Charter of Romania SMEs (2015), the major problems that affect Romanian entrepreneurs in their activities are: bureaucracy, excessive taxation, excessive controls and corruption. They are all consequences of the weak institutional framework, despite the progress Romania has made over the years.

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