How Does Corruption Influence The Entrepreneurial Environment In Romania?

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Abstract: Even if entrepreneurship was and is studied extensively by researchers it has many aspects and interesting things that we need to find in order to better understand the private sector. The challenge arises when we try to analyze entrepreneurship nationwide because economic, legislative, social and even cultural differences influence this environment in a different way from country to country. Entrepreneurship is found in the list of areas adversely affected by corruption. In this article we try to analyze how this impact takes place in Romania, a country in economic development where the corruption level is constantly high.

JEL classification: M13, M21

Key words: entrepreneurship; corruption perceptions; business demography; business birth rate, business death rate

1. INTRODUCTION

Unfortunately, the theories that refer to economic growth do not put too much focus on entrepreneurship (Romer, 1986; Acs & Sanders, 2013). It is maybe the reason why the majority of indicators that deal with this activity at a national level are simple aggregates of entrepreneurial activities developed at an individual level (Gustafsson & Autio, 2011). Although it is still difficult to define entrepreneurship at an individual or at a company level, the task becomes even more complex when entrepreneurship at a national level comes into play. (Djankov, Glaeser, La Porta, Lopez-de-Salinas, & Shleifer, 2003; Reynolds, et al., 2005). If we apply entrepreneurial measures at a national level without any theoretical or conceptual base for the choices made, it leads to a series of measures that most of the time do not match with each other. (Acs, Autio, & Szerb, 2014).

According to the data provided by the Global Entrepreneurship Monitor and the European Commission, the Romanian entrepreneurial ecosystem faced major discrepancies in 2014. Even though 90% of the population with age between 18-64 years old (excluding those involved in entrepreneurial activities) believe that it is very difficult to start a new business because of the lack of financial support, 32% of the same population plan to start a new business in the following 3 years. However, a mere 6% of the active population get to develop their own startups. Nevertheless, problems arise when dealing with the sustainability of entrepreneurial initiatives. More than half of the newly created companies fail to survive the critical 42 month period as they either shut down or suspend their services.

An important aspect to consider is that entrepreneurial perception, quality of
governance (Aidis, Estrin, & Mickiewicz, 2010), access to resources and corruption are some of the elements that influence the entrepreneurial dynamic (Minniti, 2010). The radical way in which corruption affects entrepreneurial development (Mbaku, 2010) is one of the main reasons we decided to analyse the influence corruption has over entrepreneurship in Romania. First of all, we present the corruption profile in Romania by summarizing the activity of the Romanian National Anti-Corruption Directorate (DNA). Thus, in the last 7 years, over 4700 culprits have been indicted, 90.25% of which have been prosecuted, while 1500 were convicted by final judgement (Report from the Commission to the Council and the European Parliament- EU Anti-Corruption Report, 2014). More seriously, almost half of those sentenced are highly ranked officials. In addition, for the first time in Romanian history, on September 17 2015, the Prime-Minister in office was indicted, being investigated for forgery under private signature (17 offenses) recurrent complicity in tax evasion and money laundering.

2. THEORETICAL BACKGROUND

Corruption can be defined as a private transaction between two parties that involves abuse of public responsibility for private purposes and whose main influence is resource allocation either immediately or in the near future (Macrae, 1982). Corruption is present in both developed and developing countries (Avnimelech, Zelekha, & Sarabi, 2011), on the understanding that countries with transition economies (Radaev, 2004) and tougher regulations for start-ups (Djankov, La Porta, Lopez-de-Silanes, & Shleifer, 2002) have a high level of corruption that continues to grow at an alarming rate. Most researchers in this field are focusing their attention on identifying and analyzing corruption cases which include: inefficient public institutions, a lack of service orientation in the public sector, economic isolation, high level of bureaucracy and colonial past (Gurgur & Shah, 2005). Our paper does not focus on studying the causes of corruption but rather on analyzing the ways in which it influences the entrepreneurial environment.

Corruption reflects both state incompetence and the disorganized structure of the economic market (Desai & Acs, 2007). In addition to the public sector, corruption also has a negative impact on economic growth (Méon & Sekkat, 2005), while also affecting entrepreneurial abilities in different ways depending on the type of entrepreneurial risk assumed (Desai & Acs, 2007). This impacts entrepreneurs through various ways including: abuse of the system by corrupt public officials in order to protect illegal revenue (Kurer, 1993), compromising product quality (Rose-Ackerman, 1997), increased uncertainty which leads to increased risks (Campos, Lien, & Pradhan, 1999). A study by Goodman (1990) showed that corruption protects incompetent entrepreneurs and ineffective companies on the market. Moreover, Goodman (1990) stated that corruption does not create new opportunities to enter the market, but rather allows for the survival of incompetent entrepreneurs who can offer a bribe and manipulate the political system in their favor.

On the other hand, corruption is part of the societal norms and regulations, generating an increase in transaction costs and a decrease in volume and efficiency of investments (Ngunjiri, 2010). As a result, investment decisions are influenced by the bribe the company plans on offering. (Sarkar & Hasan, 2001). Another negative effect to consider is how reducing the reward for merit leads to underestimating the importance of education by strengthening the belief that success can be achieved through luck and
corruption rather than through hard work and education (Ngunjiri, 2010). The incidence of the phenomenon of corruption can hinder businesses to grow above a certain threshold and may deter prospective entrepreneurs in the process of starting a new business (Barkhatova, 2000).

With all the above, there are certain cases in which corruption "greases the wheels of commerce", but overall has a negative effect on economic development (Aidt, 2009).

3. METHODOLOGY

The research is based on the compilation and analysis of a database comprised of data from specialized websites such as Transparency International and the Romanian National Institute of Statistics. In order to study the ties between corruption and the entrepreneurial environment, as well as the intensity of these new ties, we used 4 quantitative variables analyzed in the course of 17 years, during 1997-2013. The time period is relatively short because the variable that analyses the level of corruption was only added to the database in 1995 with the data for Romania not being available until two years later. Hereinbelow, we briefly introduce these variables aiming to offer an accurate understanding and to prevent any confusion regarding their statistical analysis.

According to Transparency International, Corruption Perception Index (CPI) is the indicator that shows how corruption is perceived in the public sector of each analyzed state. CPI consists of a combination of polls conducted by renowned institutions in order to present the level of corruption on a scale of 0-10, where 0 represents a highly corrupt environment, while 10 represents a very clean environment. As defined by Eurostat manuals, an enterprise’s birth is the creation of a new company without the involvement of other companies, a process that generates new jobs and economic growth. The birth rate indicator is calculated as the ratio between the number of enterprise births in the reference period (t) and the number of active enterprises in period (t). The death rate is calculated by dividing the number of enterprise deaths (companies that end their economic activity indefinitely) in the reference period (t) and the number of enterprises active in period (t). The fourth variable used in this analysis is the labour productivity per person, which is calculated according to the time period 2010 who take the value 100. According to this, a value of labor productivity per person smaller than 100 means than in the year analyzed the labour productivity per person has decreased compared to 2010 and a value above 100 signifies that in that period of time labour productivity per person exceeds the value recorded in 2010.

In order to represent the variables and to analyze the ties and correlations between them, we used specific software such as Microsoft Excel 2007 and SPSS (Statistical Package for Social Sciences) version 17.0, where before performing this analysis and creating graphical representations, we defined the variables and entered the data.

4. RESULTS AND DISCUSSIONS

We begin our analysis by calculating the descriptive statistics for all the variables included in the study (table 1), statistics which include indicators of central tendency, dispersion and shape of distribution. Furthermore, we provide graphical representations (figure 1 and figure 2) for the variables, which help us, study their evolution in the time period analyzed. The average CPI value during 1997-2013 is 3.3612, value that is approximately equal to that recorded in 1999.
During this time period, the CPI was subject to various fluctuations that can be generally explained by the frequent political and economic changes in Romania. The minimum value from 2002 (2.6) prompted the Romanian authorities to develop measures to combat corruption. Due to the successful implementation of these measures and the demands coming from the European Commission, we notice a sharp drop in corruption that reached its peak in 2012 when the CPI value was 4.4. Also in figure 1, we notice that after Romania joined the EU, it lead to a series of positive changes in terms of corruption levels and after 2007, the CPI reached its highest values exceeding the average. Because of the reduced sample data and due to the fact that the indicator was recorded with one digit after decimal point, there are more modal values (the modal value is the value with the maximum frequency of occurrence) of the CPI with the lowest recorded value being 2.8 in 2001 and 2003.

Data source: Transparency International

Figure no.1 Evolution of CPI in Romania (1997-2013)

Since the variance calculates the sum of the distance squared between the observed values and the mean, we prefer to use the standard deviation distribution parameter in order to study the scattering of the values. The parameter measures the spread of a set of observations. The larger the spread, the further they are from the mean. On that account, in the case of CPI, the average deviation from the mean does not show a high value (0.53654).

In order to indicate the deviation of the empirical distribution in relation to a
symmetrical distribution around the mean, we calculate the Skewness coefficient, which measures the degree and direction of asymmetry. Thus, the positive value of the Skewness coefficient (0.507), in the case of the CPI variable, shows that its distribution is skewed to the right due to the fact that the mean is higher than the median (the middle value of the distribution). Here we can observe that the CPI is positively asymmetrical since it is skewed to the right. In the case of the other three variables - business birth rate (-0.165), business death rate (-0.073) and labour productivity per person (-0.184), where the mean is lower than the median, the negative value of the Skewness coefficient shows distributions that are skewed to the left, hence they are negatively asymmetrical.

Table no.1 Descriptive statistics

<table>
<thead>
<tr>
<th></th>
<th>Corruption Perceptions Index (CPI)</th>
<th>Business birth rate</th>
<th>Business death rate</th>
<th>Labour productivity/pers on</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mean</strong></td>
<td>3.3612</td>
<td>26.41</td>
<td>16.85</td>
<td>83.62</td>
</tr>
<tr>
<td><strong>Mode</strong></td>
<td>2.80a</td>
<td>15.41a</td>
<td>18.80</td>
<td>55.30a</td>
</tr>
<tr>
<td><strong>Standard Deviation</strong></td>
<td>.53654</td>
<td>6.43283</td>
<td>6.13240</td>
<td>20.83</td>
</tr>
<tr>
<td><strong>Variance</strong></td>
<td>.288</td>
<td>41.381</td>
<td>37.606</td>
<td>434.27</td>
</tr>
<tr>
<td><strong>Skewness</strong></td>
<td>.507</td>
<td>-.165</td>
<td>-.073</td>
<td>-.184</td>
</tr>
<tr>
<td><strong>Kurtosis</strong></td>
<td>-.681</td>
<td>-1.087</td>
<td>-.554</td>
<td>-1.553</td>
</tr>
<tr>
<td><strong>Minimum</strong></td>
<td>2.60</td>
<td>15.41</td>
<td>5.60</td>
<td>55.3</td>
</tr>
<tr>
<td><strong>Maximum</strong></td>
<td>4.40</td>
<td>36.53</td>
<td>27.90</td>
<td>113.8</td>
</tr>
</tbody>
</table>

*a. Multiple modes exist. The smallest value is shown*

The Kurtosis coefficient (Table no. 1), also called the peakedness coefficient, has a negative value in the case of all 4 variables, which means that they have a platykurtic distribution. It can be observed that the curve of the variables is more flat-topped than the normal distribution curve. The higher the modal value of the kurtosis coefficient is the more values distant from the mean there are. In the case of two variables (CPI and business
death rate), the modal values of the kurtosis coefficient are not greater than 0.7 which means that there is a reduced number of variables distant from the mean. Although the Kurtosis modal value for the business birth rate and labour productivity per person slightly exceeds the value of 1, this does not represent a great value therefore there aren’t many values of the variable that are far from the mean.

In the case of the business birth rate, it can be observed in Figure 2 that it reached a minimum of 15.41% in 1997 and showed different fluctuations in the following years until 2001. From 2001 until 2005, when the business birth rate was 36.53% (maximum value), there was significant growth every year. In the next period of time, different fluctuations can be observed once again, though the business birth rate has never reached the value recorded in 2001 (19.75%). If we analyze the mean of this variable (26.41%), we see that it has a value approximately equal to the one recorded in 2010 (26.20%). Furthermore, if we study the standard deviation value (6.43), we find that the average deviation from the mean is not very high. In other words, there are not that many extreme values of the business birth rate, and if we look at the modal value we realize that it represents the minimum value and only appears once in the sample studied.

![Figure no. 2 Evolution for business demography indicators for Romania (1997-2013)](https://example.com/image)

*Data source: www.insse.ro and Eurostat*

**Figure no. 2 Evolution for business demography indicators for Romania (1997-2013)**

In order for the entrepreneurial and economic environment to develop, the business death rate must be as low as possible. In the analyzed period, this variable had an average of 16.85%. In 2008, it recorded a maximum value of 27.90%, explained by the onset of the
global economic crisis, which had also affected the Romanian economy. However, the lowest death rate occurred in 2012 (5.60%), with one of the explanations being the high absorption of EU funds in that year. As in the case of the business birth rate, it has a standard deviation (6.13) that shows a lower degree of scattering for the value of the variables.

Although there is a period of small decrease (2008-2010), the labour productivity per person recorded constant growth until it reached its maximum value in 2013 (113.8) (Figure 2). This increase can be explained by the constant increase of the minimum wage as well as by the legislative landscape that has supported in recent years the rights of the employees especially the work in a safe environment. The analyzed time period has an average of 83.62 for the labour productivity per person, figure strongly influenced by the minimum value from 1997 (55.3) which is almost half the reference value from 2010. This extreme minimum value, among other factors, also leads to a higher standard deviation than in the other 3 cases (20.83).

Since the sample is too small (under 20) for studying correlations, we cannot apply parametric tests and as a result we use the Spearman test. Spearman’s rank correlation coefficient is calculated by taking into consideration the ranks of the students. It can have values between -1 and +1. Negative values close to -1 indicate a strong negative correlation, while positive values close to 1 show a strong positive correlation. It should be noted that this interpretation only applies when the value of Sig. is lower than the chosen threshold of significance. (usually the threshold of significance is equal to 0.05) In table 2, we present Spearman’s correlation coefficients between the CPI and the other three variables that represent the entrepreneurial environment.

<table>
<thead>
<tr>
<th>Table no. 2 Spearman Correlation Coefficient</th>
</tr>
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<tbody>
<tr>
<td>Correlation Coefficient</td>
</tr>
<tr>
<td>--------------------------</td>
</tr>
<tr>
<td>Correlation Coefficient</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
</tr>
</tbody>
</table>

**. Correlation is significant at the 0.01 level (2-tailed).

Also in table 2, we see that the value of Sig. is greater than 0.05 in the case of correlation between CPI and the business death rate, which means that there are no significant connections between the CPI and these two variables. However, in the case of correlation between the CPI and the labour productivity per person, the value of Sig is smaller than 0.05, which means that there is a connection between the two. If we look at this coefficient from the perspective of another threshold of significance, more specifically the one with a value of 0.01, we see that in this case there is also a correlation between the CPI and the labour productivity per person. This correlation is strong and positive because
the value of Spearman’s coefficient (0.720) is positive and close to the value of +1. In other words, the increase in the value of CPI (which determines the decrease in the level of corruption) leads to an increase in the labour productivity per person. Interestingly enough, while the level of corruption does not affect the business demographics in Romania, the situation changes when dealing with labour productivity per person. A possible explanation for this phenomenon can be the different perception of corruption by employees compared to entrepreneurs who provide their jobs.

We wanted to compare our findings with other studies conducted in Romania but searching the databases we have not identified other items that explore the connection between the corruption and entrepreneurship in Romania.

5. CONCLUSIONS

By analyzing two important areas for the socio-economic development – the entrepreneurial area and the corruption in the public sector, our paper brings important contributions to the current research. Even though we expected strong negative correlations between the level of corruption and business demographics (business birth rate and business death rate), we observe, much to our surprise, that in Romania they are not present. A possible explanation for this phenomenon might be how Romanian entrepreneurs can easily adapt to the effects the corruption from the public sector has on their business.

In contrast with the perception that the employees from Romanian companies have on corruption, entrepreneurs that conduct economic activities in Romania have a different perspective on this matter. Thus, we can observe a strong negative connection between the level of corruption and labour productivity per person. In other words, in Romania, an environment where corruption reaches high levels will determine employees to have a lower labour productivity who can lead to poor economic results and even to lower investments.

The results of the research concerning the influence of corruption on entrepreneurship need to be taken into consideration by politicians who make decisions that can influence this environment. Legislative decisions can have a major impact on entrepreneurship, so it is necessary and important that they are made based on the empirical research, as well as some in-depth personal research.

6. ACKNOWLEDGMENT

This paper has been financially supported within the project Investing in people! Ph.D. scholarship, Project co-financed by the Sectoral Operational Program For Human Resources Development 2007 – 2013, Priority Axis 1. "Education and training in support for growth and development of a knowledge based society", Key area of intervention 1.5: Doctoral and post-doctoral programs in support of research. Contract nr.: POSDRU/159/1.5/S/137070 – “Increasing The Attractiveness And Performance Of Training Programs For Doctoral And Postdoctoral Researchers In Engineering Sciences - Atracting”, Technical University of Timisoara, Romania.

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