Considerations on Romania’s Entrepreneurial Profile: Barriers to Productive Entrepreneurship

Emilia Hermana*, Zsuzsanna K. Szabob

a,b”Petra Maior”University of Tg. Mures, N. Iorga Street no.1, Tg.Mures 540088

Abstract

In Romania, a wide-spectrum of registered entrepreneurial activities can be observed, even though they survive in unfavourable conditions with a very low impact on the economic growth (Szabo and Herman, 2012). This paper presents an analysis of Romania’s entrepreneurial performance in the European context based on the Global Entrepreneurship and Development Index (GEDI) proposed by Acs&Szerb (Acs et al., 2013a). GEDI permits a multidimensional analysis of entrepreneurship in comparison with GEM and WB data. Moreover, in order to identify possible policies that foster productive entrepreneurship, a statistical analysis of the Global Competitiveness Index (WEF, 2013) and the Summary Innovation Index (EU, 2013) was made.

Keywords: productive entrepreneurship; GEDI, entrepreneurial attitudes, abilities and aspirations; innovation performance.

1. Introduction

Entrepreneurship exists in every country, but the outcomes from entrepreneurial activities are very different across societies. The specialist literature distinguishes between

* Corresponding author. Tel.
E-mail address: emilia.herman@ea.upm.ro
formal/informal, legal/illegal and necessity/opportunity entrepreneurship respectively (Desai, 2009).

Entrepreneurs can engage in productive activities resulting in economic growth, an increase in real output due to increases in real productivity or they can engage in unproductive ones resulting in economic stagnation or regress (Coyne and Leeson, 2004). Baumol makes an important distinction between productive and unproductive entrepreneurship (1990, 2002). He shows that both the level and the type of entrepreneurship are determined by institutions, and what differs across areas is not the degree of underlying entrepreneurial spirit, but instead how that spirit is channelled. Productive entrepreneurship generates economic wealth through innovation and filling gaps in the market.

Douhan and Henrekson (2008) state that the function of productive entrepreneurship is to increase an economy’s innovativeness as well as its ability to adapt. Productive entrepreneurship is important to an economy because it is the fundamental source of increased efficiency, economic growth and wealth creation (Coyne et al., 2010; Sobel, 2008) and it is regarded as an essential driver of the economic performance of a country (Davidsson and Henrekson, 2002). Coyne and Leeson (2004) highlight that “Productive entrepreneurship encompasses those activities that benefit both the entrepreneur and society at large”.

Making a difference between quality and quantity entrepreneurship needs to become a necessity for policy makers in transition economies. Quantity represents an important element, but studies have shown that it is not sufficient for economic growth. Recently, in order to offer a detailed look into the entrepreneurial character of nations, experts (Szerb and Acs, 2011; Acs and Szerb, 2012; Acs et al., 2013a) have created the Global Entrepreneurship and Development Index (GEDI), which captures the multidimensional nature of entrepreneurship, includes the qualitative and quantitative aspects of entrepreneurial activity, and combines both individual and institutional data. This composite index “gives policymakers a tool that helps them understand the entrepreneurial strengths and weaknesses of their countries’ economies, and thereby enables them to implement policies that foster productive entrepreneurship” (Acs and Szerb, 2012). The main aim of the GEDI was to clarify the role that entrepreneurship has on economic development. Former studies showed that entrepreneurship measured mainly in terms of action (expressed from a quantitative point of view) relative to economic development takes a U or L shape (GEM Reports, Wennekers et al., 2010). Experts (Acs and Szerb, 2012) have demonstrated the existence of a positive S-shaped relationship between entrepreneurship, expressed by GEDI, and economic development (GDP/capita), entrepreneurship being higher in countries with innovation-driven economies than in countries with factor-driven economies. The intersection point of the S-shaped curve with the vertical axis (entrepreneurship axis) shows that all countries have entrepreneurial activity. However, it is distributed differently in the form of productive, unproductive and “destructive” entrepreneurship.

This paper presents an analysis of Romania’s entrepreneurial performance, in the European context, emphasizes the entrepreneurship’s strengths and weaknesses. The study is based on GEDI which permits a multidimensional analysis of the entrepreneurship in comparison with GEM and WB data. Moreover, are analyzed the barriers to productive
entrepreneurship in Romania, in order to identify possible policies that foster productive entrepreneurship.

2. Methodology and data

In order to reach the paper’s objectives, the methodology used consists of the empirical approach and secondary data analysis using publicly available databases. We applied the GEDI methodology to examine Romania’s entrepreneurial performance. The GEDI index is composed of three sub-indexes, called “the 3 As”: the entrepreneurial attitude (ATT), the entrepreneurial ability (ABT) and the entrepreneurial aspiration (ASP). These sub-indexes encompass the 14 pillars (opportunity perception, start-up skills, non-fear of failure, networking, cultural support, opportunity start-up, tech sector, quality of human resource, competition, new product, new technology, high growth, internationalization and risk capital) that define the profile of a country’s National System of Entrepreneurship. Each pillar is made up of an institutional and an individual variable, which reflect the micro- and the macro-level aspects of entrepreneurship (see Acs and Szerb, 2012; Acs et al., 2013a). The values of GEDI overall, sub-indexes, pillars and variables are on a scale of 0.0 to 1.0. The closer to 1 this value is, the higher the productive entrepreneurship level and the quality of the drivers of productive entrepreneurship, at national level. The statistical data on GEDI are for 2011 and provided by Acs et al. (2013a).

In order to study the intensity of the relationship between productive entrepreneurship and economic development (GDP/capita), we used the Spearman correlation coefficient. Furthermore, in order to highlight the barriers to productive entrepreneurship in Romania, we made a statistical analysis of the Global Competitiveness Index (GCI), provided by the Global Competitiveness Report 2013–2014 (WEF, 2013), and the Summary Innovation Index (SII) from Innovation Union Scoreboard (EU, 2013). For the statistical data processing, the SPSS software package was used.

3. The analysis of Romania’s entrepreneurial profile in the European context

Romania, an efficiency-driven economy, according to the most recent statistical data, having an overall GEDI score in 2011 of 0.3 points, is ranked 50th globally out of 118 countries and last in the EU (out of 26 countries, without Luxemburg and Malta). Figure 1 shows that, at EU level, there are significant differences between countries. The Nordic EU countries recorded a high GEDI value from 0.5 to 0.63. Sweden together with Denmark, having a GEDI of 0.63 points, are the EU leaders, ranking 2nd and 3rd (after the USA) out of 118 countries, followed by the Netherlands (0.58), France and Belgium (0.53). In the last places, together with Romania, we find Bulgaria and Greece, with an equal score of 0.31 and the group of countries-Portugal, Italy, Cyprus and Croatia, with a score of 0.34. Taking into consideration that Romania recorded a GEDI score of only 0.3 compared to 0.63, recorded by the EU leader, we can state that Romanian’s National System of Entrepreneurship, in the light of the GEDI index, was operating in 2011 at 47.6% ‘efficiency’ relative to the EU leaders.

The GEDI encompasses the factors that generate productive entrepreneurship. The high value of GEDI (in the Nordic EU countries) coincides with a higher productive entrepreneurship, whereas a low value of this index reflects a decrease in productive
entrepreneurship, accompanied by unproductive entrepreneurship (generally, in the former communist countries and four countries of the south EU region - GIPS).

**National System of Entrepreneurship** represents “the dynamic, institutionally embedded interaction between entrepreneurial attitudes, activities, and aspirations, by individuals, which drives the allocation of resources through the creation and operation of new ventures” (Acs et al., 2013b).

In the light of these considerations, Romania’s entrepreneurial profile depends on the level and intensity of manifestation of entrepreneurial attitudes, abilities and aspirations, but mainly on the way in which these interact at national level.

Comparing the three dimensions of GEDI (Figure 1), it can be seen that, in the case of Romania, the **entrepreneurial ability** (ABT) sub-index has a higher value (score 0.33, being ranked 42nd out of 118 countries and 24th out of 26 EU countries) relative to entrepreneurial aspirations sub-index and entrepreneurial attitudes sub-index.

Research studies underline that the quality of entrepreneurship is strongly influenced by the stage of economic development. Entrepreneurial attitudes represent key focus for factor driven economies, the entrepreneurial activity for the efficiency driven economies and the entrepreneurial aspiration for innovation driven economies (Acs and Szerb, 2011). In case of Romania, as an efficient-driven economy the **entrepreneurial attitude** (ATT) sub-index value is too low.

![GEDI and sub-indexes GEDI in 2011](image)

Source: Elaborated by the authors based on data provided by Acs et al. (2013a)

As for the **entrepreneurial attitude** (ATT) sub-index, Sweden is the leader of the 26 countries in the EU, holding the first place worldwide. Romania holds the last position in the EU and the 64th out of 118 countries, with a value of this sub-index of 0.29, below the European average. The Nordic countries are in the first positions, in the European Union, and Romania, Greece, Croatia and Cyprus are in the last positions. There are significant negative gaps recorded by the GIPS group of countries (Greece, Italy, Portugal and Spain) compared to the other EU developed countries (Fig. 1. and Fig. 2).

We found the existence of a strong positive relationship between the level of economic development (GDP/capita) and entrepreneurial attitudes, EU level (Spearman correlation coefficient = +0.82, Table 1), the increase in the level of economic development being
accompanied by the increase in entrepreneurial attitudes.

A high level of entrepreneurial attitude, at national level, reflects a positive attitude of a country’s population towards entrepreneurs and entrepreneurship, determined by a higher opportunity perception potential, of having the proper start-up skills and personal networks to successfully launch businesses, as well as by a reduced manifestation of fear of failure to start a business. All these are influenced by institutional factors, such as market size, level of education, culture, the general riskiness of a country, and a population’s rate of internet user (Szerb and Acs, 2011).

The highest level of entrepreneurial ability (ABT) sub-index, in EU, was recorded in Denmark, which ranked 1st out of 118 countries. In the last three positions, in EU, we find Bulgaria, Poland and Romania. The high level of entrepreneurial activity in the EU-15 countries, especially those in the north, reflects a high level of opportunity-driven entrepreneurship achieved by entrepreneurs with an education level above the secondary one and in technology-intensive sectors. The existence of motivation based on opportunity is a sign of better planning, and sophisticated strategy. Moreover, a higher growth is estimated than in the case of necessity-driven entrepreneurs. In these countries, the high level of entrepreneurial ability reflects the quality of start-ups more than it reflects the quantity of start-ups. A more reduced number of start-ups with high growth potential (in innovation-driven economy) can surpass the results obtained by a higher number of start-ups, but which are unproductive (with a reduced potential) in an efficiency-driven economy or factor-driven economy.

We identified a strong direct correlation between the level of entrepreneurial ability (ABT) and economic development in the EU countries (Spearman correlation coefficient =+0.84, Table 1). In economies with reduced entrepreneurial attitudes (for example, Romania), there is also high necessity-driven entrepreneurship (Szabo and Herman, 2012), as well as entrepreneurial activity mainly in traditional sectors, where market penetration barriers are minimum, and less in sectors with a high technological level, thus having an inefficient entrepreneurship.
Table 1. Multiple correlation matrix, EU countries

<table>
<thead>
<tr>
<th>Spearman’s rho</th>
<th>GEDI sub-index</th>
<th>ATT sub-index</th>
<th>ABT sub-index</th>
<th>ASP sub-index</th>
<th>GDP real/capita (euro)</th>
</tr>
</thead>
<tbody>
<tr>
<td>GEDI</td>
<td>1</td>
<td>0.91***</td>
<td>0.86**</td>
<td>0.82**</td>
<td>0.78**</td>
</tr>
<tr>
<td>ATT sub-index</td>
<td>1</td>
<td>0.76**</td>
<td>0.69**</td>
<td>0.82**</td>
<td></td>
</tr>
<tr>
<td>ABT sub-index</td>
<td>1</td>
<td>0.49*</td>
<td>0.84**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ASP sub-index</td>
<td>1</td>
<td>0.54**</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GDP real/capita (euro)</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Correlation is significant at the 0.01 level (2-tailed); *Correlation is significant at the 0.05 level (2-tailed).

Source: Own calculations based on data provided by Acs et al. (2013a) and Eurostat database (2013)

Entrepreneurial aspirations (ASP) sub-index reflects the effort of the early-stage entrepreneurs to introduce new products or services, develop new production processes, penetrate international markets, substantially increase the number of their employees and finance a start-up with formal and/or informal venture capital. Innovation, internationalization and higher growth are essential characteristics of productive entrepreneurship (Acs and Szerb, 2009), thus entailing the entrepreneurs’ strategic thinking. The level of entrepreneurial aspirations is, generally, higher in European innovation leader countries, where there is an extremely high level of innovation (EU, 2013), as well as economic development. In a previous study (Szabo et al., 2013), we show that, in EU, the positive relationship between the level of economic development and innovation performance is confirmed.

On the contrary, in European eastern (Romania, Poland, Hungary) and the southern countries (GIPS- Greece, Italia, Span, Portugal), the level of entrepreneurial aspirations is much lower. Romania with a score of 0.29 ranks 64th out of 118 countries and 26th out of EU countries. At EU level, a positive statistically significant correlation was identified between entrepreneurial aspirations and economic development (Spearman correlation coefficient = +0.54, Table 1), reflecting the fact that economic development goes hand in hand with entrepreneurial aspirations. The high level of entrepreneurial aspirations reflects the quality of entrepreneurial activity with a positive impact on economic development.

Moreover, the existence of a direct and strong relationship between productive entrepreneurship (GEDI) and economic development (Spearman correlation coefficient = +0.78, R²=0.803, Table 1) is confirmed.

Achieving a high level of economic development is influenced by the existence of productive and innovative entrepreneurship (especially in member states EU-15), where entrepreneurs start a business being motivated by recognizing a business opportunity on the market, they have a higher level of education, and high propensity to sectors with a high technological level. Furthermore, entrepreneurs can be named as “successful entrepreneurs”, which means they are open to the internationalization of the business and have higher impact on economy (estimating a higher growth in created jobs).

On the contrary, EU less developed countries, especially Romania, are faced with the conditions of inefficient entrepreneurship, with high propensity to necessity-driven entrepreneurship, a low level of innovation and activity in sectors with a high technological
level, and a low impact on job growth. Although Romania surpassed the status of factor-driven economy, it still has a high share of population that is self-employed in agriculture, specific to the first stage of development (Herman, 2013), fact which does not favour a predominantly productive entrepreneurship.

4. Romanian Entrepreneurial performance: weaknesses and strengths

Taking into consideration that productive entrepreneurship results from the interaction of a total of 14 constituent pillars that make up the “three AS” (Acs and Szerb, 2012, p. 8), the interaction between entrepreneurial attitudes, abilities and aspirations respectively, in order to have a clearer picture of the strengths and weaknesses of the Romanian entrepreneurial performance, we analyse the pillars of the GEDI, including both individual and institutional variables.

Figure 3 shows that Romania displays poor entrepreneurial performance in most of the pillars comparative to the EU leaders. With regard to entrepreneurial attitudes sub-index, the lowest pillar is Opportunity Perception (0.18), determined, first of all, by the extremely low level of the individual variable “Opportunity Recognition” (0.26), which reflects the share of working-age population that identify good opportunities to start a business in the area where they live. The fact that in Romania, a former socialist country, there is a low perception on the opportunity to start a business can be explained by the existence of a long history of centralized economy in which private businesses were restricted. The extremely low perception of business opportunities in the area where entrepreneurs live, based on a market with a relatively low purchasing power has determined a low level of opportunity-driven entrepreneurship, oriented towards economic activities with a lower technological level.

Under the entrepreneurial ability sub-index, Romania has the lowest score for the Technology Level pillar (0.15). This is the result of a combination of entrepreneurial activity in the technology sector and firm-level technology absorption capacity. This very low score comes from a low level of the percentage of those early-phase start-ups (TEA) that are in those sectors that apply medium or high technology (“Technology Level” individual variable; score 0.21) and a low level of ability of Romanian firms to absorb new technology (“Tech Absorption” institutional variable, score 0.3).

As for the entrepreneurial aspirations sub-index, the lowest pillars are Process Innovation (0.09), Risk Capital (0.13) and Product Innovation (0.23). The main cause for this extremely reduced level of the Process Innovation pillar is determined by the very low Romanian score at the institutional-level GERD variable, which measures R&D percentage of GDP (score 0.11). Furthermore, the weakness of this pillar indicates the application frequency of new technology are at relatively low levels (individual variable- New Tech, score 0.39). Risk Capital is a very weak pillar for Romania, fact which reflects that business financing and undercapitalization is a critical weakness of Romanian start-ups and new ventures. Romania’s score for the Product Innovation pillar is far below the EU leader, indicating lower levels of new product development.

Start-up Skills (0.46), Competition (0.49) and High Growth (0.64) can be considered strength pillars per sub-index, determined, in general, by comparison with scores recorded by Romania for the other pillars. It is our belief that only the existence of entrepreneurial skills and a high
level of education cannot assure the conditions for productive entrepreneurship without an institutional framework which stimulates changing an idea into action.

![Diagram of GEDI's fourteen pillars for Romania and European leaders in 2011](image)

Source: Own calculations based on data provided by Acs et al. (2013)

However, if we compare the values recorded by Romanian with those of the EU leaders (Sweden- GEDI leader and attitudes and entrepreneurial aspirations; DK- leader-entrepreneurial activity), we notice that Romania is far from the European leaders (see Fig.3). Thus, there are substantial negative gaps, which are difficult to reduce, unless measures are taken to make entrepreneurship more efficient.

Data on the pillars concerning the competitiveness of the Romanian economy, as components of Global Competitiveness Index (GCI), presented in Fig. 4.a., show that Romania has the lowest competitive position for Innovation, Infrastructure and Institutions. Taking into consideration that infrastructure and institutions are the pillars belonging to the category of basic requirements, we are faced with the paradox of the Romanian economy, which managed to be an efficiency-driven economy, without a normal and efficient functioning of the production factors (GEA, 2010, p. 10).
Basic infrastructure influences entrepreneurship in terms of the ease with which entrepreneurs can access physical resources such as transportation, utilities and communication, which will affect their ability and the cost at which they can market their products and services (Ellis and Williams, 2011).

According to many studies (e.g. Baumol, 1990, Sobel et al., 2007; Johnson, et al. 2000, Acs et al, 2013a), institutions significantly influence entrepreneurship at national level. Weak institutions represent a significant barrier to entrepreneurship (Estrin et al., 2007). As for the *Ease of Doing Business Rank*, Romania is ranked 72nd out of 185 countries, worldwide, and 23rd out of the 26 EU countries, above Italy, Greece and Croatia (W.B., 2013). This position is an additional proof that, in Romania, the institutional environment represents an important barrier to productive entrepreneurship. In order to improve the entrepreneurial performance, there is need to improve the “Ease of Doing Business” rank, because lower costs for registering a firm encourages the entrepreneurs and increases the firm’s productivity. Shorter time for registering a firm, as well as simpler procedures, is reflected in higher employment opportunities in the formal sector. (W.B., 2013).

The empirical studies (Dahlstrand and Stevenson, 2010; Kardos, 2012) highlight that innovation performance of enterprises represents an important driver for sustainable economic development and productive entrepreneurship. From the perspective of the *Summary Innovation Index (SII)*, which captures an assessment of the innovation...
performance at national level, the level of innovative SMEs and their activities are incorporated in “linkage & entrepreneurship” and “innovators” dimensions (EU, 2013). Fig. 4b. highlights that these two dimensions represent Romanian weaknesses of innovation performance, having negative effects on national entrepreneurial performance. “The inexistent own funds for innovation, high innovation costs, and the lack of experience are considered barriers” to innovation performance at the level of SMEs (Szabo et al., 2013).

5. Conclusions and recommendations

Entrepreneurship only if it is opportunity driven and productive should be considered as one of the key tools to generate more growth and better jobs as well as to achieve social cohesion and combat social exclusion.

In Romania, generally in Eastern European countries, the nationalized and centralized system of the communist economies reduced the entrepreneurial capacities of today’s active population to zero. Our results show that the Romanian’s National System of Entrepreneurship, in the light of the GEDI index, was operating in 2011 at 47.6% ‘efficiency’ relative to the EU leaders. This places Romania on the last position in the European Union, with a low level of productive entrepreneurship performance.

The analysis of the variables that form the GEDI sub-indexes reveals that Romania needs to improve both the individual aspects and the institutional aspects in order to increase its national entrepreneurial performance. Special attention needs to be given to the institutional variables which record a poorer performance compared to the individual one (0.39 compared to 0.44). Furthermore, we highlight the fact that higher productive entrepreneurship can be achieved only under the circumstances of a developed infrastructure and some efficient institutions.

In order to increase the entrepreneurship efficiency in Romania, there is need to improve entrepreneurship both at individual and institutional level. Policies to stimulate and encourage innovative and creative mindsets in Romania are needed. The reduction of the necessity driven entrepreneurship must become a national priority.

For increasing the national entrepreneurship performance, as well as the impact on economic development, Romanian government policy needs to improve the weakest pillars of GEDI, Process Innovation, Risk Capital, Technology Level and Opportunity Perception respectively. In Romania, there is need for simultaneous action, both at institutional and individual level, but with a special focus on developing the institutional environment for making entrepreneurship more efficient.

Romania needs to improve the technological structure of the economic activity, implicitly of the entrepreneurial activity, and to encourage more start-ups in the tech sectors. Poor performance from a technological point of view is influenced by the poor performance in innovation, especially in “process innovation”, the least efficient pillar belonging to entrepreneurial aspirations. Improving this pillar entails public investments as well as private ones in R&D.

The very low share of Romanians who identify good opportunities to start a business in the area where they live requires the improvement of entrepreneurial education so that entrepreneurial attitudes and intentions are stimulated. Recently, the European Commission (2013, p.5) has stated that “Investing in entrepreneurship education is one of the highest return on investments Europe can make”.


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