
ECONOMIC TRENDS AND ENTREPRENEURIAL ACTIVITY

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Abstract

Entrepreneurship is about discovering, evaluating and exploiting opportunities to create future goods and services, so special attention has to be paid to researching the concept of perception of opportunities. As a social force the entrepreneurial activity generates economic effects, but the real challenge is to find which factors are influencing the entrepreneurship and what drives the involvement of individuals in entrepreneurial activities. The data of 50 states, related to the entrepreneurial activity, were collected for the year 2019. The dependence between GDP and entrepreneurial activity was analyzed from a two-way perspective and Total early-stage Entrepreneurial Activity (TEA) was the dependent variable. Other two independent variables were established: Perceived opportunities (PO) and Perceived capabilities (PC), as percentage of the population aged 18 – 64, persons involved in any stage of the entrepreneurial activity or who consider that they have the skills and knowledge necessary to start a business.

We identified that there is a statistically significant direct relationship between TEA and PC, also a weak direct relationship between PO and PC. The estimated correlation ratio shows that the link between the dependent variable -TEA and the independent variables: PO, PC, GDP is strong. The values obtained from the econometric modeling, respectively from the multiple regression equation, validate the research hypothesis

Keywords

Entrepreneurial activity, perceived opportunities, perceived capabilities, Total Early-stage Entrepreneurial Activity (TEA).

JEL Classification

O12, O47, P17, P42

Introduction

From the very beginning, the existence of the human being was confronted with the need to satisfy his personal and family needs, for which he had to look for new resources. Initially these needs could be provided by the individual, but later the work specialized, and thus the

division of labor appeared. Individuals sought to obtain the necessary earnings to purchase goods and services that would ensure their existence. However, the progress of society and the economy as a whole has been characterized by change and competitiveness. The continuous development of the society has determined the revolution of the means of work, with the help of which it carries out existential activities. Basically, economies are characterized by large primary sectors, and as they develop, by secondary and, ultimately, tertiary sectors. The progress of economies and their transition to other stages of development determine the need for the formation of new industries and businesses. Thus, entrepreneurial initiative becomes almost imperative (Wennekers and Thurik, 1999).

Scientific research on entrepreneurship, from recent years, has brought new approaches. The large numbers of studies investigating the entrepreneurial phenomenon and the implications to related activities have brought new elements that prove the complexity of this field. Research has shown that entrepreneurial activities not only generate jobs and career opportunities, but also represent a means of economic growth through innovation (Drucker, 2014).

So, we can say that entrepreneurial activity is a social force that produces economic effects, that requires to be supported in the current context. The real challenge is to find answers to questions such as: 1) Which factors are influencing the entrepreneurship? or 2) What drives the involvement of individuals in entrepreneurial activities?

According to Arenius and Minniti (2005), entrepreneurship is based on discovering, evaluating and exploiting opportunities to create future goods and services. Special attention was paid to researching the concept of perception of opportunities. Self-confidence, risk-taking and skills in discovering opportunities have been significantly correlated, in many researches, with the creation of new businesses. Thus, when entrepreneurs made decisions, they relied significantly on subjective, even biased, perceptions rather than objective expectations (Shane and Venkataraman, 2000).

The perception of opportunities can be considered a determining factor in the development of entrepreneurship, and an inadequate level of entrepreneurial activity may reflect a lack of vision of community members, called "poor entrepreneurial thinking." Also, in addition to the perception of opportunities, many previous researches have taken as a key predictor the intention of a person to start a business, personal skills (Ebrahim and Schott, 2011; Noguera, Alvarez and Urbano, 2013; Walker, Jeger and Kopecki, 2013). Thus, self-confident people may have a low perception of threats and therefore may approach entrepreneurship with a reduced fear of failure which often increases business success (Krueger, 2007; Tsai, Chang and Peng, 2016).

We can consider that entrepreneurial activity or the processes of creation and development of a business result from the interaction between the individual's perception of an opportunity and the perception of the ability to act on that opportunity (Bosma et al., 2020). Certainly, perceptual variables are not the only determinants of entrepreneurial activity, so we seek to find out if the evolution of this field depends on the level of economic development, measured as GDP per capita. The dependence between GDP and entrepreneurial activity will be analyzed from a two-way perspective, the author aiming at the mutual influence between the two variables. Entrepreneurial activity uses the opportunity to create profit for the entrepreneur, at the same time it creates goods and services in the economy that generate direct income, and through employment it generates indirect income for the economy. Therefore, we can consider that the impact of entrepreneurship is spread on the whole economy.

Bjørnskov and Foss (2008) conducted a study on economic freedom and entrepreneurship in which they measured the influence of global economic development on the emergence of new firms in the economy. The results reached by the two researchers showed that

economic development (GDP per capita) is inversely associated with entrepreneurship. In other words, when the economy develops, there is a polarization of entrepreneurial activity towards the status quo.

The present paper aims to analyze the influence of the value of gross domestic product (per capita on purchasing power parity), the ability to perceive and exploit the entrepreneurial opportunities exercised on entrepreneurial activity. Regarding the “measurement of the degree of entrepreneurial activity” we will use the indicator Total early-stage Entrepreneurial Activity (TEA). Influencing factors can be grouped into perceptual variables (perception of opportunities and perception of capabilities) and factors aimed at economic development, in this case GDP per capita.

Methodology

From a methodological perspective, the research uses both qualitative and quantitative analysis. In order to identify the determinants of entrepreneurial activity, a review of the literature was conducted and, subsequently, data were collected in order to validate or refute the information found in the literature. In order to establish a link between the dependent variable and the three independent variables, multiple linear regressions were used. In the context of the evolution of society, we aim to identify the factors that influence the development of entrepreneurial activity. Starting from this premise, the data related to the entrepreneurial activity registered at the level of a sample of 50 states were collected. The data collected are provided by the Global Entrepreneurship Monitor (2020), the World Bank (2019, 2020).

The research hypothesis can be formulated as follows: entrepreneurial activity is influenced by the value of gross domestic product per capita at purchasing power parity, as well as by the ability to perceive and exploit entrepreneurial opportunities.

The dependent variable is Total early-stage Entrepreneurial Activity (TEA). This represents% of the total population aged between 18 and 64 who are either new entrepreneurs or managers and business owners.

The independent variables were established based on the literature. In such conditions, the following three were chosen: (1) Perceived opportunities: percentage of the population aged between 18 and 64 who report opportunities to open a business in the area where they live. (2) Perceived capabilities: percentage of the population aged between 18 and 64 persons, involved in any stage of the entrepreneurial activity, who consider that they have the skills and knowledge necessary to start a business. (3) GDP / capita PPP (USD): is the gross domestic product converted into international dollars, using purchasing power parity rates and divided by the total population.

The purpose of the article is to identify elements that justify entrepreneurial activity, starting from the influence of GDP and the existence of companies. In this regard, the following variables were used: Total early-stage Entrepreneurial Activity (TEA), Perceived opportunities, Nascent entrepreneurship rate, New business ownership rate and GDP / capita PPP (USD).

Statistics

Following the analysis of the data related to 2019, we can summarize the following:

- 12.82% of the population aged 18 - 64 are either new entrepreneurs or managers;
- 53.65% of the population aged 18 - 64 notice opportunities to open a business;
- 58.27% of the population aged 18 - 64, involved in any stage of entrepreneurial activity, consider that they have the skills and knowledge needed to start a business;
- the average value of GDP per capita at purchasing power parity is USD 37,928.76.

Table no. 1 Correlations between variables

		tea	Po	pc	Gdp
Pearson Correlation	Tea	1.000	.053	.561	-.190
	Po	.053	1.000	.472	.128
	Pc	.561	.472	1.000	-.351
	Gdp	-.190	.128	-.351	1.000
Sig. (1-tailed)	Tea	.	.358	.000	.093
	Po	.358	.	.000	.189
	Pc	.000	.000	.	.006
	Gdp	.093	.189	.006	.
N	Tea	50	50	50	50
	Po	50	50	50	50
	Pc	50	50	50	50
	Gdp	50	50	50	50

We identified that there is a statistically significant direct relationship between Total early-stage Entrepreneurial Activity (TEA) and Perceived Capabilities (PC). There is also a weak direct relationship between Perceived Opportunities (PO) and Perceived Capabilities (PC). And, between Perceived Capabilities (PC) and Gross Domestic Product per capita (GDP per capita) there is an inverse and weak relationship between Perceived Capabilities (PC) and Gross Domestic Product per capita (GDP per capita). All correlations are statistically significant, with a probability of 95%.

It is necessary to specify the fact that, following the data processing, Sig values higher than 0.05 were also returned, which underlines that they are statistically insignificant. Among them, we find: (1) The relationship between Total early-stage Entrepreneurial Activity (TEA) and Gross Domestic Product per capita (GDP per capita); (2) The relationship between Total early-stage Entrepreneurial Activity (TEA) and Perceived Opportunities; (3) The relationship between Perceived Opportunities and Gross Domestic Product per capita (GDP per capita).

Summarizing the above, with a probability of 95%, we admit that there is a statistically significant correlation between: Total early-stage Entrepreneurial Activity (TEA) and Perceived Capabilities (PC), Perceived Opportunities (PO) and Perceived Capabilities (PC), as well as between Perceived Capabilities (PC), and Gross Domestic Product per capita (GDP per capita). Thus, the results obtained are in accordance with those in the literature.

Table no. 2 Correlation ratio

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.618 ^a	.382	.342	5.79096	.382	9.480	3	46	.000

Note: a. Predictors: (Constant), gdp, po, pc

The estimated correlation ratio is 0.618 which shows that the link between the dependent variable (TEA) and the independent variables (perceived opportunities, perceived capabilities and GDP per capita) is strong. The estimated value of the determination ratio is

$R^2 = 0.382$, which means that the variation of the dependent variable (TEA) is explained in proportion of 38.2% by the variation of the independent variables.

Table no. 3 ANOVA

ANOVA ^a						
	Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	953.693	3	317.898	9.480	.000 ^b
	Residual	1542.619	46	33.535		
	Total	2496.311	49			

Notes: a. Dependent Variable: TEA; b. Predictors: (Constant), pc, gdp_capita, po

Regression equation:

$$Y_x = -2.945 - 0.146PO + 0.385PC + 3.03GDP \quad (1)$$

The value $b_0 = -2,945$ represents the level of Total early-stage Entrepreneurial Activity (TEA), given that Perceived Opportunities, Perceived Capabilities and GDP per capita are constant.

The value $b_1 = -0.146$ shows how much, on average, the total early-stage Entrepreneurial Activity (TEA) decreases, to a 1% increase of Perceived Opportunities, if the rest of the independent variables remain constant.

The value $b_2 = 0.385$ shows how much, on average, the total early-stage Entrepreneurial Activity (TEA) increases, to a 1% increase of Perceived Capabilities, if the rest of the independent variables remain constant.

The value $b_3 = 0.385$ shows how much, on average, the total early-stage Entrepreneurial Activity (TEA) increases, at an increase of GDP / capita by one unit, if the other independent variables remain constant.

Conclusion

The scientific research of the last two decades approaches the entrepreneurial phenomenon starting from previously analyzed premises that included it in the sphere of the determinants of development. Distinctive valences have been discovered for the latter, involving, among others, the innovative process or the labor market. Therefore, the complexity of entrepreneurial activity is described by the vitalizing force placed on the process of human development, respectively on its determinants of economic or social origin. From such a perspective, our approach started from trying to identify possible answers to dilemmas that revolve around the factors influencing entrepreneurial activities and those that determine the decision to start such enterprises.

The specialized literature provided us with certain analytical milestones located in close correlation with the processuality of the activities of discovery, evaluation and exploitation of the entrepreneurial opportunities, respectively of the way of their individual perception. A complementary aspect of the perceptual variable on market opportunities (considered in previous research) refers to the subjective side involved in decisions to start a business, an element that emphasizes the individual perception of the existence of entrepreneurial capabilities. Regarding the measurement of the results of entrepreneurial activity, studies suggest the existence of interdependence between the macroeconomic indicator - GDP per

capita, and the entrepreneurial phenomenon, as evidenced by the direct impact of the latter on income generation, production of goods and services, the degree of employment, etc.

Therefore, our study focused on identifying the influence of the group of perceptual factors (opportunities and capabilities) as well as the one that describes, to a certain extent, the level of economic development (P.I.B. per capita). The two dimensions were juxtaposed with the G.E.M. (Global Entrepreneurship Monitor) Total early-stage Entrepreneurial Activity (TEA), as a dependent factor. The research hypothesis - entrepreneurial activity is influenced by the value of gross domestic product per capita at purchasing power parity, as well as the ability to perceive and exploit entrepreneurial opportunities, was statistically tested on a sample of 50 states whose data were collected in 2019 from the GEM database and that of the World Bank.

The descriptive synthesis of the analyzed indicators included information on the average percentage compared to the population aged 18 to 64, respectively: approximately 13% are engaged in entrepreneurial activities, 54% notice the existence of business opportunities, and 58% consider that have entrepreneurial skills and knowledge. It should also be noted that the average value of gross domestic product per capita at purchasing power parity was USD 37,928.76, which proves a relatively high level of economic development in the sample states.

Strong ($R = 0.618$) and statistically significant correlation ($\text{Sig} < 0.05$) between incipient entrepreneurial activity and the perception of business opportunities, together with the existence of entrepreneurial skills, as well as between the latter and the level of development expressed by the Domestic Product Gross per capita, it shows that subjective assessments of economic realities are what determine individual decisions regarding the start of entrepreneurial activities. In addition, only the perception of the existence of entrepreneurial skills and abilities will determine the final decision towards entrepreneurship, even if the opportunities are perceived on their positive side.

The values obtained from the econometric modeling, respectively from the multiple regression equation, validate the research hypothesis and may outline certain conclusions.

First, this model suggests that entrepreneurial activity is diminishing, *ceteris paribus*, to an increase in the perception of the existence of opportunities. This result is contrary to previous theoretical conclusions, according to which the existence of opportunities positively influences entrepreneurial activity (Kirzner, 1973). However, we consider the *ceteris paribus* clause to be the cause of this confusion. In reality, the way individuals perceive entrepreneurial opportunities can be severely dissociated from what they perceive to be their personal skills or abilities.

Second, the decision of the entrepreneurial debut can be taken starting not from the existence of the opportunity, but from the awareness of the existence of specific skills. Business opportunities can be identified later. This conclusion is validated in our model by the value of the coefficient b_2 . Entrepreneurial activity is positively influenced by the perception of individual skills. And this, we believe, is due to the fact that the process of self-knowledge is, in essence, of a psychological nature. The limitations of this approach do not allow a detailed analysis of the individual perceptual values of the selected sample.

Finally, the model proves, once again, that the dimensions of entrepreneurial activity contribute to understanding the process of economic development. It must be based on the recognition of the entrepreneurial phenomenon as one of the determinants of prosperity. Economic development is due to entrepreneurs, their attitude and talent.

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