The Nature of Entrepreneurship and its Determinants: Opportunity or Necessity?

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Paper outline

- Introduction: motivation, objectives
- Literature review: concept of entrepreneurship motivated by necessity or by opportunity, explaining also the determinants of these types of entrepreneurship.
- Methodology: describes the objectives of the study, the nature of the data, and the estimation techniques
- Empirical evidence: analyzing and discussing the obtained results
- Conclusions

Introduction

- Entrepreneurship an interdisciplinary issue
- Entrepreneurship by necessity
- Entrepreneurship as opportunity
- A wide range of determinants is considered to understand which are the more relevant to explain entrepreneurship
- A cross-section model is estimated at the country-level.
- The convex hypothesis (U shape) between entrepreneurship and per capita income is tested
- The threshold level is determined that drives the shape of this relationship.

The importance of entrepreneurship

- Entrepreneurship is a complex, dynamic and having diversified purposes
- Different concepts associated with economics, management and psychological or sociological perspectives.
- Essential for economic growth and main vehicle of economic development
- Important effects on employment, innovation and well being
- As a necessity affects unemployment in the short term, (creation of self-employment)
- As an opportunity affects employment, innovation and growth in the long term (technology-based activities)
- Economic as well institutional factors are important determinants to explain entrepreneurial activities
- Cultural dimensions are also important, such as education, religion, language, ethnic factors, the role of women in the labour market

Methodological issues

- Total Entrepreneurial Activity (TEA) of a country is the Variable to explain in the estimation approach (given by the Global Entrepreneurship Monitor (GEM) in 2011)
- The sample enhances 36 countries, developed and less developed
- A multiple regression analysis is used based on cross-country data
- Competitiveness, Economic and financial factors, Socio-cultural factors are the set of variables tested for statistical relevance to explain TEA
- The most important factors explaining countries entrepreneurship are:

  - Infrastructure (1 to 7)

  - Voice & Accountability (-2.5 to 2.5), index of freedom participation

  - Government Spending (0 to 100)

  - Political Stability and Absence of Violence (-2.5 to 2.5)

Sample of countries

Table 1 – Sample of 36 countries

Algeria	Greece	Portugal
Australia	Hungary	Romania
Belgium	Iran	Russia
Bosnia & Herzegovina	Ireland	Slovenia
Brazil	Jamaica	South Africa
Chile	Japan	Spain
Colombia	Latvia	Sweden
Croatia	Lithuania	Thailand
Czech Republic	Malaysia	Turkey
Denmark	Netherlands	United Kingdom
Finland	Peru	United States of America
France	Poland	Uruguay

Models to estimate

$$\ln TEA_i = b_0 + b_1 Infrast_i + b_2 Voice \& Account_i + b_3 GSpend_i + b_4 PolStab_i + u_i \quad [1]$$

$$u_i \sim i.i.d.(0, \sigma_u^2)$$

$$\ln TEA_i = \beta_0 + \beta_1 \ln GDPpc_i + v_i \quad\quad\quad [2]$$

$$v_i \sim i.i.d.(0, \sigma_v^2)$$

$$\ln TEA_i = \alpha_0 + \alpha_1 GDPpc_i + \alpha_2 GDPpc_i^2 + w_i \quad\quad\quad [3]$$

$$w_i \sim i.i.d.(0, \sigma_w^2)$$

Table 5 – Estimation results of the TEA equation (dependent variable lnTEA)

Explanatory variables and constant:	Model 1		Model 2	Model 3	Model 4
	OLS	GLS			
Constant	2.210 (***) P-value < 0.00001	2.192 (***) P-value < 0.00001	4.782 (***) P-value < 0.00001	2.941 (***) P-value = 0.00010	2.754 (***) P-value < 0.00001
Infrastructure (2nd pillar)	-0.240 (***) P-value = 0.00428	-0.221 (***) P-value = 0.00139	----	----	----
Voice and Accountability	0.709 (***) P-value = 0.00044	0.679 (***) P-value = 0.00009	----	----	----
Government Spending	0.014 (***) P-value = 0.00002	0.013 (***) P-value < 0.00001	----	0.010 (***) P-value = 0.00041	----
Political Stability and Absence of Violence	-0.441 (***) P-value = 0.00231	-0.454 (***) P-value = 0.00139	----	----	----
ln PIB pc	----	----	-0.260 (***) P-value = 0.000036	-0.135 (**) P-value = 0.03128	
PIB pc	----	----	----	----	-3.034e-05 (***) P-value = 0.0004
PIB pc^2	----	----	----	----	2.424e-010 (**) P-value = 0.0159
Statistic robustness					
R^2	0.673	0.710	0.287	0.446	0.353
F-stat	$F_{(4,31)}$ = 15.914 P-value = 3.50e-07	$F_{(4,31)}$ = 18.947 P-value = 5.66e-08	$F_{(1,51)}$ = 20.519 P-value = 0.000036	$F_{(2,50)}$ = 20.123 P-value = 3.88e-07	$F_{(2,50)}$ = 13.643 P-value = 1.90e-05
Heteroscedasticity (White test)	$\chi^2_{(14)}$ = 10.049 P-value = 0.759	-	$\chi^2_{(2)}$ = 5.329 P-value = 0.070	$\chi^2_{(5)}$ = 9.030 P-value = 0.108	$\chi^2_{(2)}$ = 6.526 P-value = 0.258
Instability (Chow test)	$F_{(5, 26)}$ = 0.498 P-value = 0.775	-	$F_{(2, 49)}$ = 0.204 P-value = 0.816	$F_{(3,47)}$ = 0.982 P-value = 0.409	$F_{(3,47)}$ = 0.982 P-value = 0.666
Specification (Reset test)	$F_{(2, 29)}$ = 0.433 P-value = 0.653	-	$F_{(2, 49)}$ = 3.566 P-value = 0.036	$F_{(2,48)}$ = 1.842 P-value = 0.169	$F_{(2,48)}$ = 1.575 P-value = 0.217

Actual and fitted Ln_TEA_ versus GDP_per_capita_2011_current_p
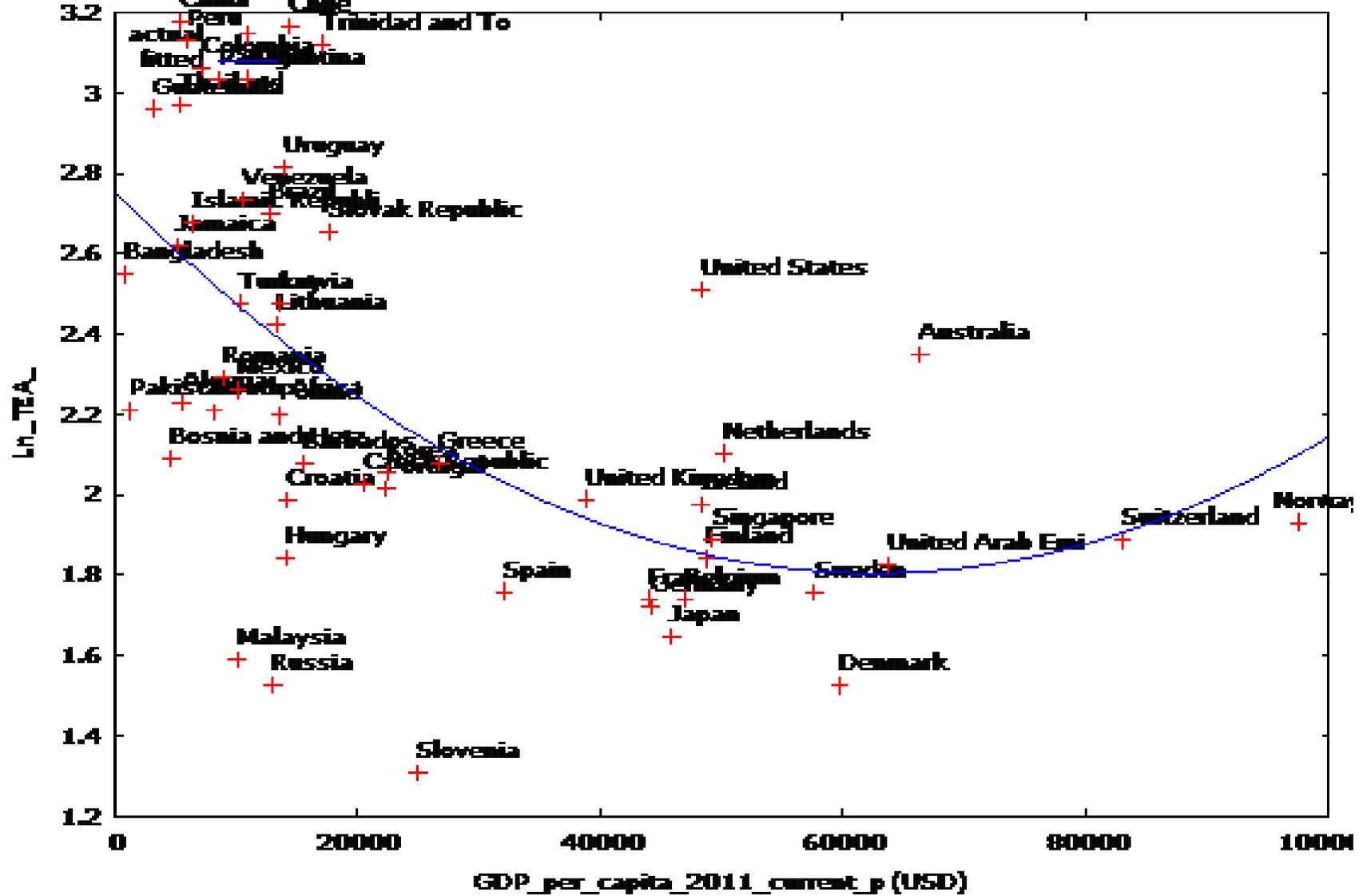
Discussion

- The variables 'Infrastructure' and 'Political Stability' have a negative impact on entrepreneurial activities (TEA)
- The higher the infrastructural capacity of a country leads to a lower rate of entrepreneurship since less space left to develop business activities.
- Countries with greater political stability have less propensity to entrepreneurial activities.
- Countries with less political stability, usually at an early stage of development, have higher rates of entrepreneurship, especially with regard to self-employment which is a kind of entrepreneurship by necessity.
- Evidence shows an inverse relationship between TEA and income per capita.
- Entrepreneurial activities are motivated by necessity rather than by opportunity.
- The threshold per capita income level is about $ 62,582.51 and beyond that point entrepreneurship is interpreted as being motivated by opportunity / capacity rather than by necessity predominated mostly by the Nordic countries (Sweden, Switzerland, Denmark and Norway).

Conclusion

- Empirical evidence shows that the variables 'Infrastructure' and 'Political Stability' had a negative impact on entrepreneurial activity (TEA), while the variables 'Voice and Accountability' and 'Government Spending' positively affected TEA.

- It is therefore concluded that countries with poor infrastructures, less political stability, and higher freedom of expression or business association show higher propensity to entrepreneurial activities.

- The regression between TEA and GDPpc showed that a U shaped relationship exists, suggesting that entrepreneurship is motivated by necessity rather than by opportunity options.

- It is shown graphically that less developed countries have higher rates of entrepreneurship than the more developed economies and this is consistent with the necessity driven entrepreneurship hypothesis.

Conclusion

- The main findings are in line with the characteristics of entrepreneurship as necessity, usually associated with less-skilled casual work (also known as 'chore'), uncertainty and deregulation of the labor market, and low wage opportunities.

- In order to avoid the economic and social consequences from this kind of entrepreneurship, it is important for countries to develop policies that benefit innovation activities through the improvement of human capital qualifications and create conditions that favour the development of entrepreneurship that promotes higher economic growth and development.