



# Policy Brief on European dataset of Global Entrepreneurship Index

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## Policy brief on the Results of Global Entrepreneurship Index (GEI)

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### Abstract

Since its initiation in 2008, the Global Entrepreneurship Index (GEI) research has addressed two important questions: (1) why an individual chooses to become an entrepreneur while others do not and (2) why entrepreneurial activities differ across countries. The GEI approach combines individual data with contextual institutional factors. We examine the performance of entrepreneurial ecosystem of 26 out of its 28 member countries of the European Union. According to the GEI Index, the EU countries differ considerably in the quality of their entrepreneurial ecosystems. In addition to highlight the most binding bottleneck factors of entrepreneurial ecosystems, the GEI methodology also provides rough indications on how much a country should invest to alleviate a given bottleneck. One of the most important implications of our analysis is that uniform policy does not work, and the EU member states should apply different policy mixes to reach the same improvement in the GEI scores.

### Introduction

The GEI approach to entrepreneurship involves five important aspects (Acs and Szerb 2012). First, it views entrepreneurship as a concept of quality rather than quantity. Second, it considers both institutional and individual factors vital in measuring entrepreneurship. Third, measuring the pillars of entrepreneurship is based on a benchmark of the best five percent existing achievement for each particular pillar. Fourth, the averages of each fourteen pillar values are equalized to

provide the same marginal effect. This point is particularly important from the entrepreneurship policy point of view. And fifth, it views the building blocks of entrepreneurship, the fourteen pillars, not as independent but as integrated elements of a system. The performance of the system of entrepreneurship depends on the weakest pillar, and that a good performance in one pillar can substitute only partially for a badly performing element of the system. A practical application of this theory is the penalty for bottlenecks (PFB) methodology.



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While previous entrepreneurship measures incorporated only individual data, the GEI combined individual data with contextual institutional factors. GEI also holds that the building blocks, called pillars, of the National System of Entrepreneurship (NSE) interact with one another. The Penalty for Bottleneck methodology quantified the system view by stating that the performance of the NSE is determined by the country's worst performing pillar.

## Section 1: Methodology

GEI defines country level entrepreneurship as the NSE that „...is the dynamic, institutionally embedded interaction between entrepreneurial attitudes, abilities, and aspirations, by individuals, which drives the allocation of resources through the creation and operation of new ventures” (Acs et al 2014, p.479). GEI proposes five levels of index building as the GEI super-index measuring entrepreneurship at the country level, the three sub-index (attitudes, abilities and aspirations), 14 pillars, 28 variables and 49 indicators. All pillars contain an individual and an institutional variable component. Viewing from the system perspective, GEI takes into account the connection between the individual and the institutional factors as interacting variables. An important implication of the GEI analysis is the best way to increase the GEI is to reduce the differences between the pillars by enhancing the weakest GEI pillar. However, another pillar may become the weakest link constraining the performance in entrepreneurship. This system dynamics leads to the problem of “optimal” allocation of the additional resources.

## Section 2: Results

The EU average GEI is 52.39 while the US represent a significantly higher value (83.25). Dividing the EU-member countries into the Old (pre-2004 members) and the New (the

countries that joined in 2004 and 2007), there is a significant difference in the performance of entrepreneurial ecosystem: The Old members' GEI average is 61.26 while the New member states' GEI average is only 41.77. EU member countries seem to score high in the aspiration related pillars of “Internationalization”, “Process Innovation” and “Risk Capital” and of ability related pillars of “Opportunity Startup” and “Technology Absorption”. EU countries score relatively low in the attitudes related pillars like “Networking”, “Opportunity Perception”, “Risk Acceptance” and “Cultural Support”.

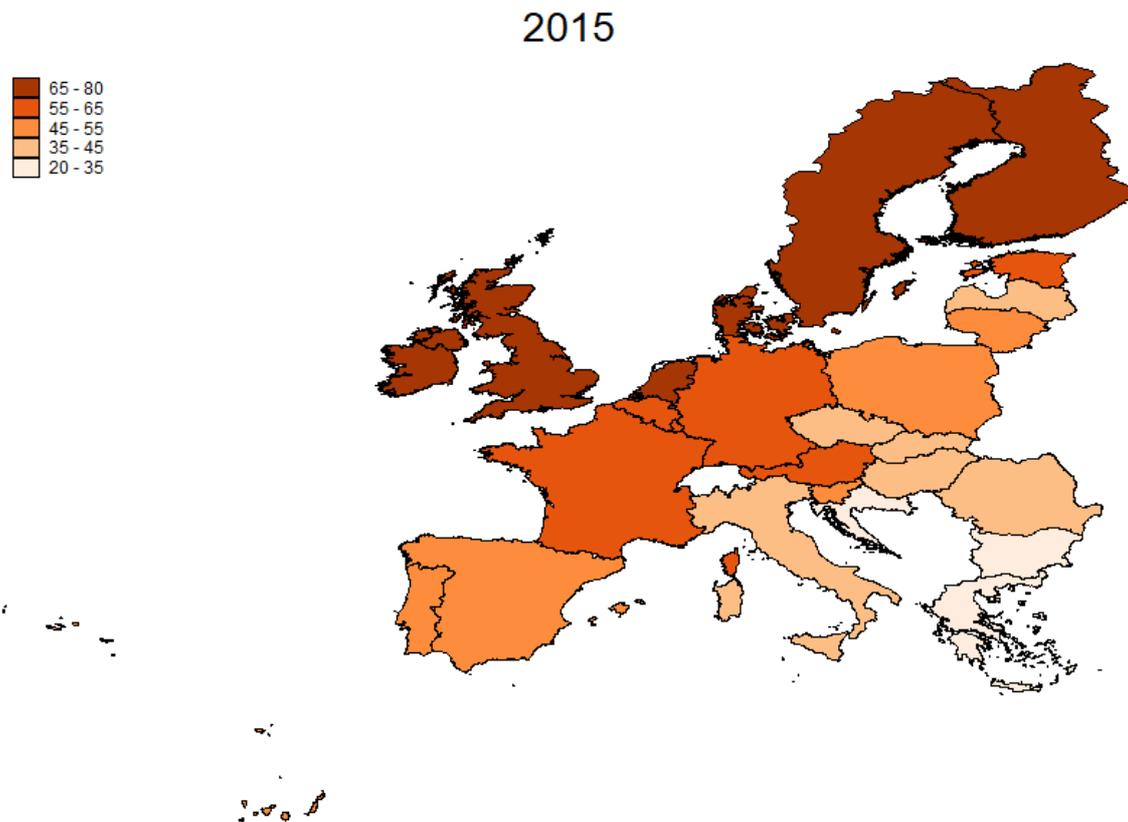
Concerning the geographical distribution of GEI scores, we identified that the best values have the Northern and Western European countries. The highest GEI scores (i.e. the best performance of entrepreneurial ecosystem) have the Scandinavian countries, the Netherlands and the UK. The scores of France, Belgium, Germany, Luxembourg, Austria and Estonia (as the only one from the Central and Eastern European area) are above the average value. Spain, Portugal, Slovenia, Poland and Lithuania represent moderate values. A couple of Central and Eastern European countries as well as Italy show a GEI score below the average, since the lowest scores had Romania, Bulgaria and Greece.

The “optimal” policy mix is different for the 26 EU member countries. There are not even two countries having the same policy mix to improve the GEDI score by 5. Old EU member states seem to be relatively weak in High Growth, except Denmark, Finland, Germany, Ireland and Luxemburg. Human capital is also a weak pillar in many developed EU countries. New EU member states are particularly fragile in the attitude related pillars of Opportunity Perception and Risk Acceptance. These weaknesses perhaps are related to the heritage of the socialist system.





Figure 1: The GEI scores of EU countries in 2015



Countries also differ in the amount of effort needed to improve their NSE: For Luxembourg there is only a 0.11 points (1.1%) improvement required while Hungary requires 0.60 (10.3%) to increase the overall GEI score by 5 points. All the other EU countries are between these two extremes. It is relatively easier to improve the GEI score if the country has only one weak pillar (Luxembourg, Austria, Denmark, Czech

Republic) as compared to those countries that have a more balanced entrepreneurial profile and require more pillars to improve their GEI score: Poland needs to enhance eight pillars, Hungary, Slovakia seven pillars, Bulgaria, Slovakia, Romania and the UK six pillars. All these findings underline the importance of differentiated entrepreneurship policy in the EU member states.

### Section 3: Recommendations

The analysis above suggests three important conclusions. First, the EU has been lagging behind its main competitor, the US, in all aspects of entrepreneurship. Second, the relatively low level of entrepreneurship is one

of the main reasons for the relative stagnation of the EU. The less entrepreneurial Southern European countries struggle and suffer the most. Third, the EU recognized its lagging position but these ambitious aims described in the 2000 Lisbon Agenda seem not to be fulfilled. On the contrary, the differences





between the EU and the US have increased, calling for a new and more comprehensive approach.

The EU member nations' example highlights the usefulness of the GEI method in analysing the entrepreneurial profiles of countries from a system perspective. According to the GEI index, the EU countries differ considerably in the quality of entrepreneurial ecosystems. Moreover, even larger differences exist over the 14 pillars at the country level. In addition to highlighting the most binding bottleneck factors of entrepreneurial ecosystem, the GEI methodology also provides rough indications on where and how much a country should invest to alleviate a given bottleneck.

The unique feature of GEI's Penalty for Bottleneck methodology is that, it is possible to begin simulating alternative policy scenarios and their possible effects at the system level. While numerous potential policy mixes exist, we analysed only one situation in which the GEDI scores were improved by all the 26 EU member countries by 5, about 9%. This simple simulation was based on four important binding assumptions that limit the practical applicability of the results. One of the most important implications of the analysis is that uniform policy does not work, and the EU member states should apply different policy mixes to reach the same improvement in the GEI. As such the GEI framework offers guidance for policy makers and provides an excellent starting point for further policy analysis.

## Concluding remarks

The EU member nations' example highlights the usefulness of the GEI method in analysing the entrepreneurial profiles of countries from a system perspective. According to our results, the EU has been lagging behind the US, in all aspects of entrepreneurship. The relatively low level of entrepreneurship is one of the main reasons for the relative stagnation of the EU.

Although the EU recognized its position but the differences between the EU and the US have increased. Therefore this situation is calling for agenda new approach.

## Sources or further reading:

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Acs, Z. J., Autio, E., Szerb, L. (2014) National Systems of Entrepreneurship: Measurement Issues and Policy Implications. *Research Policy*, 43(3), 476-494.

Acs, Z. J., Åstebro, T., Audretsch, D. B., Robinson, D. T. (2016) Public policy to promote entrepreneurship: a call to arms. *Small Business Economics*, 47, 35–51.

Acs, Z. J., Szerb, L., Autio, E. (2015) *The Global Entrepreneurship and Development Index 2015*. Springer International Publishing

Szerb, L., Acs, Z. J., Autio, E. (2013) Entrepreneurship and policy: The national system of entrepreneurship in the European Union and in its member countries. *Entrepreneurship Research Journal*, 3(1), 9-34.

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