
CORRUPTION AND ITS IMPACT ON ENTREPRENEURSHIP

Mihaela-Sorina Dumitrescu¹, Dorel Paraschiv² and Maria Nițu³

^{1) 2) 3)} *The Bucharest University of Economic Studies, Romania*

E-mail: sorina.dumitrescu16@yahoo.com; E-mail: dorel.paraschiv@ase.ro

E-mail: nitumaria2@gmail.com

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Abstract

Corruption reduces competitiveness, private investments, limiting the success rate for an entrepreneur and creating an unhealthy ecosystem which does not allow the development of a prosper environment. Entrepreneurship creates prosperity, generates jobs and economic growth.

The objectives of the research paper are to present two relevant indexes - Corruption perception index and Global entrepreneurship index and to analyse the connection between corruption and entrepreneurship through comparing these important indexes.

Using statistic methods like graphic method and the regression method, it was demonstrated an intense and a direct connection between the two indexes. More accurate, the less corruption there is, the healthier will be the entrepreneurship ecosystem.

Entrepreneurs are searching for a healthy ecosystem which offers support and opportunities, not for a corrupt one because they have key skills like innovation, vision, feelings for market opportunities or opening for risk.

Keywords

corruption perception index, global entrepreneurship index, entrepreneurship

JEL Classification

D73, M21

Introduction

Corruption drags on the economic growth. The way of spending public funds is inefficient, missing productive outcomes.

According to European Commission, corruption creates losses of 120 billion euro per year, amount which is comparative to the annual budget of the EU. This is an estimated amount by specialized institutions, but the social cost does not involve just the public funds diverted or the bribes paid, but also the loss from distortion of incentives, misallocation of resources and other negative impacts of corruption. (European Commission, 2018)

Corruption makes the environment less attractive for business, reducing competitiveness, private investments and the potential of the economy.

Moreover, it decreases the trust in public institutions, reducing the quality of their services for the private sector. The more integrity and transparency exist in the public sector, the less corruption will be and the rule of law will be consolidated, allowing competitiveness, more efficient public spending and tax collection.

Entrepreneurship creates prosperity, generates jobs and economic growth. Innovation and entrepreneurship have contributed to economic development since the period of Schumpeter. (Harbi & Anderson, 2010).

An entrepreneur represents „a person with the vision to see an innovation and the ability to bring it to market. Entrepreneurs envision scalable, high-growth businesses”.

Entrepreneurial ecosystem is defined by The Global Entrepreneurship and Development Institute as “...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.” (The Global Entrepreneurship and Development Institute, 2018).

In the literature are debated both perspective for the relation between corruption and entrepreneurship. The most frequent opinion is that corruption has a “sand-the-wheel effect” on entrepreneurial ecosystem, but other studies identified a “grease-the-wheel effect” (Uribe-Toril et al., 2019). This effect is explained by the negative impact that corruption has on the competitiveness, like barriers to private system as excessively strict regulations, difficult conditions for obtaining a loan, favoring the establishment of new firms (Ceresia, 2018).

Also, using an econometric model, it was demonstrated that the rate of self-employment decreases at the same level with the increasing of corruption index. (Harbi & Anderson, 2010).

The aim of the research paper is to validate the hypothesis that corruption influence in a negative way the entrepreneurship, through comparing two important indexes - Corruption perception index and Global entrepreneurship index, using statistic methods.

Corruption Perception Index

Transparency International organization measures the level of public sector corruption around the world and how countries fight against corruption.

The Corruption Perception Index is considered a *de-facto* standard, based on data coming from international surveys of reputable institutions directly interested in fighting against corruption like World Bank, business people and experts. Scores are assigned according to parameters 0 - extremely corrupt and 100 - not corrupted.

According to Transparency International Organisation, the composite index comes from 13 surveys of institutions which are specialised in business climate analysis and governance, covering views of businesspeople and expert assessments.

Data shows that countries like Bulgaria and Greece do not make serious progress against corruption, compared to Sweden and Denmark which have the highest indexes - 85 and 88.

Global Entrepreneurship index

The Global Entrepreneurship Index is “a composite indicator for the health of the entrepreneurship ecosystem in a given country”. It shows the quality of the entrepreneurship and the support for the entrepreneurial ecosystem. It was identified three levels for a country’s score: “the overall GEI score, scores for Individuals and Institutions, and the pillar level” (Ács Z et al., 2018).

The Global Entrepreneurship and Development Institute identified 14 important pillars, which contributes to the health of entrepreneurial ecosystems (figure no. 1). Pillars are detailed in the annex no. 1.

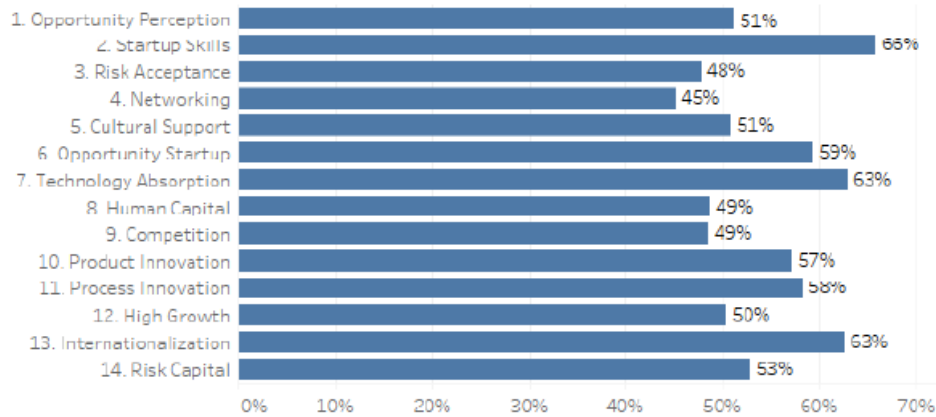


Fig. no. 1 Europe component average in 2018

Source: The Global Entrepreneurship and Development Institute, Global Entrepreneurship index, 2018 <https://thegedi.org/2018-global-entrepreneurship-index/>

According to the report of Global Entrepreneurship and Development Institute, Europe has high scores for the pillars Internationalization and Technology Absorption.

Also, the score for the pillar Startup Skills has recently growth. Switzerland leads with 80%. European countries scored high on Startup Skills, due to the access to education which allows the development of the skills which are necessary for starting a business.

The weakness of the region is the Networking pillar, but overall we can observe that for all the components of GEI, the scores seems to be relatively balanced, showing that a mix of policy could have a larger impact for the overall performance, than focusing on one policy area.

On the top we find the Northern European and at the bottom Eastern European nations. For example, Bulgaria, The United Kingdom, Italy, Ireland and Poland improved their GEI scores by minimum 3.5 points comparing to their 2017 scores. (Ács Z et al., 2018).

The connection between CPI and GEI

Considering the variable “Corruption perception index” and “Global entrepreneurship index” for the EU countries (table no. 1), it was analysed the connection between corruption and entrepreneurship using elementary methods of analysis like the graphic method and the regression method.

Table no. 1 Corruption perception index & Global Entrepreneurship index

Country	CPI 2018	GEI 2018 (%)
Austria	76	66
Belgium	75	64
Bulgaria	42	28
Czech Republic	59	43
Cyprus	59	48
Croatia	48	34

Denmark	88	74
Estonia	73	55
Finland	85	68
France	72	69
Germany	80	66
Greece	45	37
Ireland	73	74
Italy	52	41
Latvia	58	40
Lithuania	59	51
Luxembourg	81	58
United Kingdom	80	78
Netherlands	82	68
Poland	60	50
Portugal	64	49
Romania	47	38
Slovenia	60	54
Slovakia	50	45
Spain	58	45
Sweden	85	73
Hungary	46	36

Source: Eurostat, 2018. *Corruption Perceptions Index* (source: Transparency International https://ec.europa.eu/eurostat/web/products-datasets/-/sdg_16_50)
 The Global Entrepreneurship and Development Institute, *Global Entrepreneurship index, 2018* <https://thegedi.org/2018-global-entrepreneurship-index/>

Using the graphic method for identifying the type of the connection between the two indexes presented above, it can be observed, considering the layout of the points to the first bisecting, a strong connection in a first phase, which weakens slightly in the other part of the correlogram (figure no. 2).

We can deduce a direct and an intense connection between the indexes of corruption and entrepreneurship.

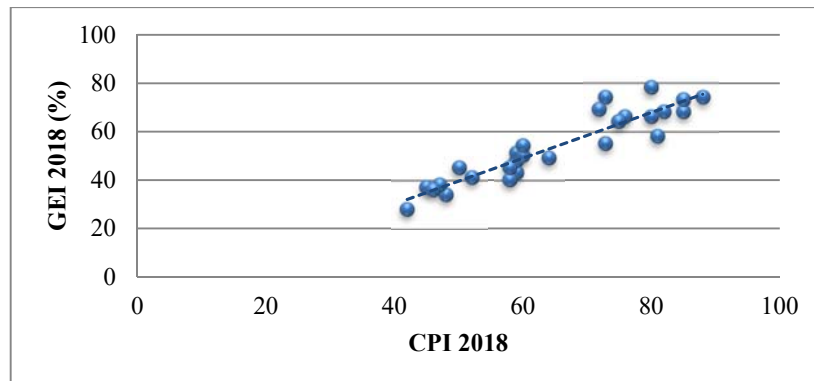


Fig. no. 2 Correlogram

Source: own interpretation after the statistics

Pearson correlation coefficient (fig. no 3) is used for the analysis of the statistical connection between CPI and GEI (%) and shows a strong and a direct correlation, the coefficient being statistically significant for a level of significance of 5%.

	CPI 2018	GEI 2018 (%)
CPI 2018	1	
GEI 2018 (%)	0,9309	1

Fig. no. 3 Correlation Matrix

Source: own interpretation after the statistics

For highlighting the dependence between *Global Entrepreneurship Index (GEI)* and *Corruption Perceptions Index (CPI)*, it was realized a regression analysis based on the following model:

$$GEI(\%) = \beta_0 + \beta_1 \cdot CPI + \varepsilon \quad (1)$$

The econometric model estimated, based on the values of the two variables (fig. no. 4) is:

$$\text{Predicted GEI} = -7,714 + 0,945 \cdot CPI \quad (2)$$

The model is valid for a level of significance of 5% (*Significance F = 0.0000*), the variation of CPI explaining 86.6% from the variation of GEI (fig.no 4).

The coefficient of the variable CPI is statistically significant for a level of significance of 5% (*P-value=0.0000*) and shows that the increasing of CPI with one unit will cause a growth of 0.95% for GEI.

SUMMARY OUTPUT						
<i>Regression Statistics</i>						
Multiple R	0,9309					
R Square	0,8665					
Adjusted R Square	0,8612					
Standard Error	5,3876					
Observations	27					
ANOVA						
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>	
Regression	1	4711,02	4711,02	162,30	0,00000	
Residual	25	725,64	29,03			
Total	26	5436,67				
	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>
Intercept	-7,714	4,937	-1,563	0,131	-17,882	2,453
CPI 2018	0,945	0,074	12,740	0,000	0,792	1,098

Fig. no. 4 Regression analysis

Source: own interpretation after the statistics

Abbreviations and acronyms

CPI – Corruption perception index

GEI – Global entrepreneurship index

Conclusions

Corruption will always be harmful to the society and will not allow the evolution of its economy. From an entrepreneur point of view, corruption is more harmful because it limits the success rate and do not promote the innovation and the entrepreneurial skills, but an unhealthy ecosystem which does not allow the development of a prosper environment.

The only chance to succeed in a corrupted society is to become corrupt, fact which is opposite to the entrepreneurship. When you want to become an entrepreneur, you have key skills like innovation, vision, feelings for market opportunities, opening for risk and you are searching for a healthy ecosystem which offers support and opportunities, not for a corrupt one.

Corruption and entrepreneurship represent two opposite dimensions. Less corruption exists, more opportunities for entrepreneurship will exist.

The article validates this hypothesis and shows through statistic methods a direct and an intense connection between two global representative indexes, which apparently are independent - Corruption perception index and Global entrepreneurship index, also being explained the methodology of its calculating.

One possible extensions of the research could be the analysis of the factors which contributed to the growth of these two indexes and how they could be extended to the others European countries.

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Appendix

Annex no. 1 Components of the entrepreneurship system

Pillar	Question
Opportunity Perception	Can the population identify opportunities to start a business and does the institutional environment make it possible to act on those opportunities?
Startup Skills	Does the population have the skills necessary to start a business based on their own perceptions and the availability of tertiary education?
Risk Acceptance	Are individuals willing to take the risk of starting a business? Is the environment relatively low risk or do unstable institutions add additional risk to starting a business?
Networking	Do entrepreneurs know each other and how geographically concentrated are their networks?
Cultural Support	How does the country view entrepreneurship? Is it easy to choose entrepreneurship or does corruption make entrepreneurship difficult relative to other career paths?
Opportunity Perception	Are entrepreneurs motivated by opportunity rather than necessity and does governance make the choice to be an entrepreneur easy?
Technology Absorption	Is the technology sector large and can businesses rapidly absorb new technology?
Human Capital	Are entrepreneurs highly educated, well trained in business and able to move freely in the labor market?
Competition	Are entrepreneurs creating unique products and services and able to enter the market with them?
Product Innovation	Is the country able to develop new products and integrate new technology?
Process Innovation	Do businesses use new technology and are they able access high quality human capital in STEM fields?
High Growth	Do businesses intend to grow and have the strategic capacity to achieve this growth?
Internationalization	Do entrepreneurs want to enter global markets and is the economy complex enough to produce ideas that are valuable globally?
Risk Capital	Is capital available from both individual and institutional investors?

Source: The Global Entrepreneurship and Development Institute, *Global Entrepreneurship index*, 2018. <https://thegei.org/2018-global-entrepreneurship-index/>