# THE PHENOMENON OF CORRUPTION AT THE LEVEL OF THE G20 VS. ROMANIA

**Silviu Duțulescu[1], Ileana Nișulescu-Ashrafzadeh[2]**
[1] [2] Academy of Economic Studies, Bucharest, Romania
silviudemetrius@yahoo.com
nisulescu_ileana@yahoo.com

**Abstract:** *Corruption is a mass phenomenon which is present on all the globe's meridians, being relatively easy to identify but very tricky to accurately measure, which assumes a large number of particularities attaining to the complexity of it: culture, education, tolerance, awareness and value system. The phenomenon of corruption at the level of G20 has some particularities, which could be influenced by the governments of the states by increasing the standard of living and the level of education among their people. The fiscal strategy of a government plays an important role in this equation, such that many people are willing to commit acts of corruption, not necessarily due to greed or rent-seeking behaviour, but because they want to save their ongoing businesses and assure a better standard of living for themselves and their close ones. The database is composed of all the member countries of the G20, at which we have added, for comparability reasons, Romania and the European Union as a whole. We follow the phenomenon of corruption by means of economic variables (GDP per capita), fiscal variables (taxation level), educational level (average number of years spent in an educational institution), social variables (the population's trust in the act of justice) and political variables (political stability). These independent variables will be correlated by means of a reference system, meaning the Corruption Perception Index calculated by Transparency International. All the 5 independent variables reflect the reality of the year 2014. In this sense, we have run a series of regressions with the help of the Excel software, each independent variable being correlated to the variable Corruption Perception Index; the resulting series of correlation coefficients applied on the database values were arranged in a 3-part ranking: the first third – countries where the phenomenon of corruption is low, the second third – countries with a medium level of the corruption phenomenon, and the last third – countries with a high level of corruption. Even though the macroeconomic indicators of Romania are lower than those of many countries of the G20, nevertheless our country is situated in the middle of the ranking, with a score higher than the EU average, outstanding many G20 member countries.*

**Keywords:** corruption phenomenon; G20; Romania; taxation level; corruption map; country ranking

**JEL classification:** *C40, D12*

## INTRODUCTION

The complexity of the corruption phenomenon, as well as the difficulty of quantifying it due to its many influence factors, has always been a disputed field in many scientific papers. Literature tries to identify and analyse the correlations between the size of the phenomenon of corruption and its determining factors,

many times pointing out that the actual methods of evaluation assume a limited explanatory power.

Literature remarks the significant link between corruption and the economic potential of a country, given the fact that the phenomenon of corruption attains great heights both at the level of the public institutions, and in the private sector (Heckelman and Powell, 2010). The final results show that high levels of corruptions are hindering the development of society, and in the long, will lead to the suffering of all the actors involved, including the population. Although the phenomenon of corruption creates misery for us all, few of us think about the causality between low pension funds and tax evasion; or at the link between fictive networks and insufficient funds for compensated medicine; the unemployed person rarely blames the lack of available jobs on the business owner who employs people without a work contract. Fiscal evasion has led to the increase of taxes and the decrease of the job offers, finally leading to corruption as a result of this process.

Matei (2008) argues that there is a very strong correlation between the dimension of the corruption phenomenon and the political instability. Thus, the stronger the "political battle", the higher the probability that corruption will develop more rapidly in that state. Limiting ourselves to statistical data, it is very risky to elaborate a pertinent theory, because corruption is a complex phenomenon. For a higher degree of accurateness, it would be necessary the dissemination of this phenomenon by the type of corruption.

Marinescu and Jora (2013), show how the phenomenon of corruption can manifest on at least 2 dimensions. On the one hand, there is defensive corruption, meaning the attitude of the citizens towards the corruptible behaviour of the public functionary, and on the other hand there is the offensive corruption, meaning the attempt of some to "buy" higher public functionaries for a personal gain. Graeff and Svendsen (2012) state that the phenomenon of corruption leads to inefficient allocation of resources in a state, thus reducing labour productivity. Similar studies are dome by authors Li and Zahra (2012) who show the link between the dimension of the phenomenon of corruption in a country and the inefficiency of politicians to counteract it. Kaditi (2010) states that investors originating from countries with low levels of corruption, usually avoid making large investments in states with high levels of corruption. Zelekha and Sharabi (2012) underline the contagious effect of this phenomenon. Thus, when the commercial partners of a very corrupt state interact with economic partners from a less corrupt state, there is a tendency of levelling out, such that the less corrupt state will have to harshen the anticorruption measures to avoid the increase in the phenomenon of corruption.

The phenomenon of corruption is an ensemble of elements and mechanisms through which the services destined to the populations are intentionally diminished by a small group of people who intend to use the resources for personal gain (Jensen et al 2010). A demonstration of the destructive potential of the phenomenon of corruption, when it is out of the authorities' control, could be the situation of Peru which, although owner of the largest gold mines in the world - Yanacocha, cannot market this resource for the benefit of the population; actually, more than half of the population lives in poverty while revolts and street fights are commonplace. In the view of the author Raicu (2010), the phenomenon of corruption targets the vulnerabilities of the public system and illegally exploits them to obtain advantages and personal gains. According to Uslaner (2008), countries with a totalitarian regime have a higher risk of spread of the phenomenon of

corruption than a democratic state. Thus, Moris (2009) did a set of detailed analysis regarding the capability of the political class, no matter whether the regime was totalitarian or democratic, to create and implement reforms that would discourage the development of the phenomenon of corruption at high levels.

No matter the perception we have on the phenomenon of corruption, one of the most efficient "weapons" against corruption is transparency and correct public informing regarding the way in which high functionaries of the state choose to protect the population's interest.

## METHODOLOGY

The research motivation began from the assumption that the phenomenon of corruption is the primary responsible for reducing the resources necessary for a nation to develop through industry, investments, job creation, leading to low development levels and a lot of mistrust in the public institutions from the part of the population. In this context, one of the main objectives of the present research is the identification of the main causes that are conducive to the development of this phenomenon, as well as the influence that these causes have on the phenomenon of corruption. To reach these objectives we have chosen a qualitative research methodology. In this sense, we have analysed a significant number of scientific papers from the international but also Romanian literature. Another objective was to present in a practical manner the mechanism through which the phenomenon of corruption may be amplified, but also the effects that it creates. In this sense, we have undergone a quantitative research, using as instrument of research the case study. The diversity of the evaluation methods, as well as the undifferentiated character of the methods included in the process of evaluation, contributes to the increasing of uncertainties in this research, manifesting at the same time dilemmas regarding the relevance of the offered data. In this sense, we aim for a professional, trustworthy argument which has as final purpose presenting and interpreting results in an as objective as possible manner. In the present situation, we aim to underline the phenomenon of corruption through economic variables (GDP per capita), fiscal variables (taxation level), educational level (average number of years spent in an educational institution), social variables (the population's trust in the act of justice) and political variables (political stability).

All the 5 independent variables reflect the reality of the year 2014, and as a resource for all these variables we have chosen the reports of the World Bank (Doing Business), United Nations (Human Development Reports) and PWC (Paying Taxes). These independent variables will be compared to a reference system represented by the Corruption Perception Index calculated by Transparency International.

The database is composed of member countries of the G20, to which we add, for comparability reasons, Romania and the European Union as an entity. The European Union, even though it is not a country like other 19 of the G20, will be analysed on the whole. In order to establish the values for the analysed variables corresponding to the EU, we have considered an average of the values of the 28 member countries of EU. To establish the influence of each independent variable on the dimension of the phenomenon of corruption, we will first run multiple regressions with the help of the (Microsoft Office) Excel software, and depending on the values of R Square, we will establish the values of the coefficients of

correlation which will be applied to the database previously constructed. Following the results obtained for each country including the EU, we will construct a ranking divided in 3 parts in the following manner: the first third (the highest scoring countries) will be included in area A to define countries with very low level of corruption, the second third will be included in area B to define countries with a medium level of corruption and the last third will be included in area C to define countries with the highest level of corruption. After accomplishing this ranking, we will do a correlation between the variable of taxation level and the scores obtained by the countries, in order to establish particularities and correlation between the size of the phenomenon of corruption in one country and the level of fiscal taxation. By having available information about every country, provided by the 4 variables for which we will run a regression (GDP per capita, Education, Trust in justice, Political stability), we can establish in what degree the corruptible behaviour of people can be influenced by the fiscal strategy of a government. In this way, we can estimate whether the size of the phenomenon of corruption assumes precise, measurable causes (poverty, low education, etc.) or less measurable ones (greed, rent-seeking, etc.). This paper aims to literally sketch a map so that the information provided could be more easily understood and interpreted even by people without economic background. Based on this information, comments, comparisons, opinions, personal considerations or even predictions for next years are forwarded. This research assumes a convergence of several dimensions that the phenomenon of corruption touches upon (economic, educational, fiscal, social, political).

**RESULTS AND DISCUSSIONS**

Following the collection, structuring and processing of the information inherent to each variable analysed, we have obtained a database synthetized in table no. 1:

**Table 1:** Database

| Countries | Corruption phen. | GDP per capita | Education | Trust in justice | Political stability | Taxation level |
|---|---|---|---|---|---|---|
| South Africa | 44 | 12122 | 9,94 | 63,94 | 43,20 | 30,10 |
| UK | 78 | 39267 | 13,05 | 94,23 | 60,68 | 34,00 |
| Saudi Arabia | 49 | 52821 | 8,70 | 65,38 | 35,44 | 14,50 |
| Argentina | 34 | 22050 | 9,83 | 18,27 | 49,03 | 107,80 |
| Australia | 80 | 42261 | 12,96 | 96,15 | 87,38 | 47,00 |
| Brazil | 43 | 15175 | 7,66 | 55,29 | 45,15 | 68,30 |
| Canada | 81 | 42155 | 13,00 | 94,71 | 91,26 | 24,30 |
| China | 36 | 12547 | 7,54 | 42,79 | 29,61 | 63,70 |
| South Korea | 55 | 33890 | 11,89 | 80,77 | 53,88 | 27,90 |
| France | 69 | 38056 | 11,13 | 88,46 | 59,22 | 64,70 |
| Germany | 79 | 43919 | 13,07 | 93,27 | 79,13 | 49,40 |
| India | 38 | 5497 | 5,39 | 54,33 | 13,59 | 62,80 |
| Indonesia | 34 | 9788 | 7,59 | 41,83 | 31,07 | 32,20 |
| Italy | 43 | 33030 | 10,10 | 66,83 | 64,08 | 65,80 |
| Japan | 76 | 36927 | 11,52 | 89,42 | 84,47 | 49,70 |
| Mexico | 35 | 16056 | 8,47 | 37,98 | 20,87 | 53,70 |
| Romania | 43 | 18108 | 10,78 | 63,46 | 49,51 | 42,90 |
| Russia | 27 | 22352 | 11,95 | 26,44 | 18,45 | 50,70 |
| USA | 74 | 52947 | 12,94 | 89,90 | 66,99 | 46,30 |
| Turkey | 45 | 18677 | 7,56 | 59,62 | 12,14 | 40,20 |
| EU | 64,21 | 32209 | 11,40 | 82,88 | 73,58 | 41,90 |

Source: Authors' projection

After running the statistical regression functions for each independent variables, we have obtained 4 outputs centralised and presented in table 2. For differentiation purposes, the values of each variable was denoted with 1 – GDP per capita variable, 2 – Education variable, 3 – Trust in justice variable and 4 – Political stability variable.

**Table 2:** Correlation coefficients for independent variables

| Regression Statistics | 1 | Regression Statistics | 2 |
|---|---|---|---|
| Multiple R | 0,773833017 | Multiple R | 0,737412038 |
| R Square | **0,598817538** | R Square | **0,543776514** |
| Adjusted R Square | 0,577702672 | Adjusted R Square | 0,519764752 |
| Standard Error | 12,03269158 | Standard Error | 12,83159474 |
| Observations | 21 | Observations | 21 |
| Regression Statistics | 3 | Regression Statistics | 4 |
| Multiple R | 0,937572797 | Multiple R | 0,847101144 |
| R Square | **0,879042749** | R Square | **0,717580349** |
| Adjusted R Square | 0,872676578 | Adjusted R Square | 0,702716157 |
| Standard Error | 6,607052655 | Standard Error | 10,09576588 |
| Observations | 21 | Observations | 21 |

Source: Excel outputs

As it can be seen from table 2, the variable Trust in justice has the strongest correlation with the dimension of the phenomenon of corruption. A high correlation is also noticeable for the last variable, Political stability, while the

weakest correlation is attributed to the variable Education. A fist conclusion shows that the variable Trust in justice could have a major impact in shaping the phenomenon of corruption. Following the processing of the data from Table 1, we have obtained the following ranking, synthetized in Table 3:

**Table 3:** Country ranking according to the estimate of the level of corruption

| Country | Score | Area | Country | Score | Area | Country | Score | Area |
|---------|-------|------|---------|-------|------|---------|-------|------|
| Canada | 156,69 | A | France | 127,11 | B | Turkey | 65,62 | C |
| Australia | 155,16 | A | South Korea | 116,84 | B | Indonesia | 63,40 | C |
| Germany | 146,80 | A | Italy | 110,91 | B | China | 63,23 | C |
| Japan | 146,26 | A | Romania | 97,55 | B | India | 60,56 | C |
| USA | 135,24 | A | South Africa | 92,86 | B | Argentina | 57,05 | C |
| UK | 134,29 | A | Saudi Arabia | 88,74 | B | Mexico | 53,30 | C |
| EU | 132,53 | A | Brazil | 85,48 | B | Russia | 43,45 | C |

Source: Authors' projection

The first position in the ranking is occupied by Canada, while the last position, by Russia, making the amplitude of the sample equal to 113.24 points. As shown in the Transparency International 2014 Report, Russia is the most corrupt state of the G20, being outweighed by few countries such as Uganda, the Republic of Congo, Afghanistan or Somalia. A particular case in this research is represented by the EU, which, although not a state in itself, was taken into account as the 20th member state of G20. We are in fact speaking about 28 countries, which registered sufficiently high average values to qualify for area A. Excluding EU, we notice that in area A, we find countries with the highest economic potential and at the same time, with the highest geopolitical influence. The amplitude for this area is 24.16 points, meaning 41.96% lower than area B and 8.97% higher than area C.

In area B, we notice the largest score differences between the first and last country, France (127.11) and Brazil (85.48). Romania is situated exactly in the middle of both area B, and of the entire sample, with a score of 97.55 points, 3.95% lower than the average overall country score. In the ranking, Romania is placed between Italy and South Africa, at approximately the same score distance from both.

Although not a member of the G20, Romania registers values very close to the G20 group average for all the main variables, Trust in justice (63.46), Political stability (29.51). For the countries of area C, the amplitude of the score between Turkey (65.62) and Russia (42.45) is at the lowest level (22.17). In these countries, we estimate that the phenomenon of corruption is at the highest levels. As a particularity, these countries register the lowest values for the variable Trust in justice (below 60 points) and for the variable Political stability, with the exception of Argentina (49.03); as such, the highest values start from 31 points downwards while, by comparison, Canada registers a value three times higher for the same variable (91.26). Countries with the best results registered for the Trust in justice variable are Australia (96.15), Canada (94.71) and UK (94.23), while the lowest scores for the same variable are registered in Mexico (39.98), Russia (26.44) and Argentina (18.27)

The fiscal policy of a government can manifest a strong influence on the business environment and on the population's standard of living, in some situations either encouraging or hindering the development of corruption. Keeping this in

mind, we have researched a correlation between the scores regarding the phenomenon of corruption of the 21 countries analysed and the taxation (fiscal) level of each country at the level of the year 2014. This correlation is suggestively presented in figure 1.
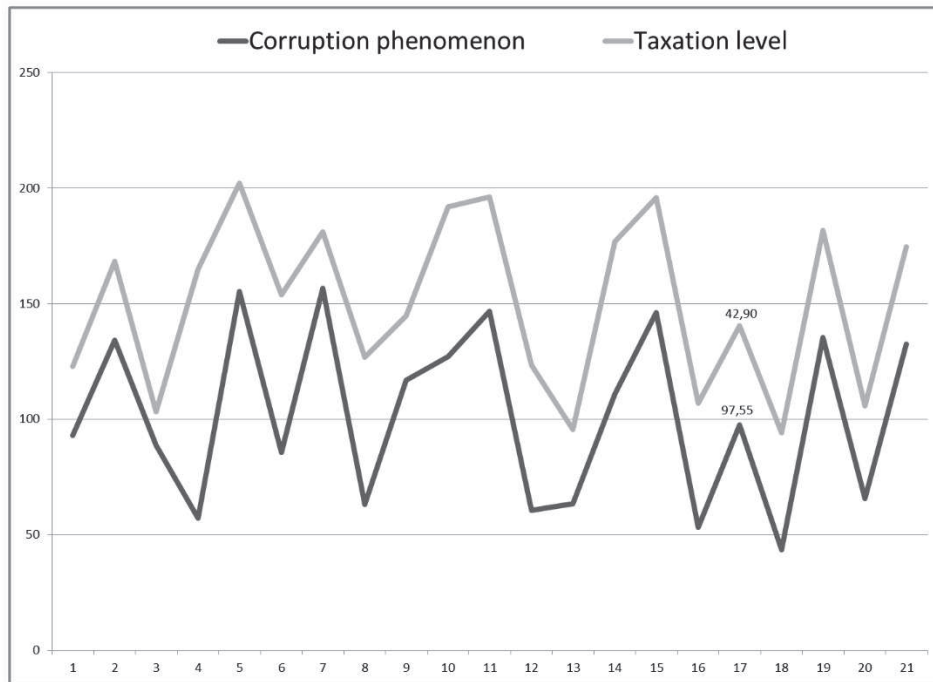


**Figure 1:** The correlation between corruption phenomenon and taxation level
Source: Authors' projection

As we can see in figure 1, the dimension of the phenomenon of corruption (the black line) correlates strongly with the taxation level (the grey line). Although we cannot speak about a perfect correlation of the two graphs, the trends are close enough, which suggests that at the G20 level, an important factor influencing the corruption phenomenon is represented by the fiscal policy. In Romania, the taxation level is 42.90% of the profit obtained by a company after paying all its taxes, a level below the G20 average of 48.47%. Although the taxation level in Romania is situated below the G20 average, placing it among the first 10 countries in the corruption level ranking, its position is negatively affected by the variable GDP per capita which is 18 108 $ per capita, meaning a lot lower than the average of the G20 group (28 564.47 $ per capita) or of the EU (32 209 $ per capita). We can conclude that in Romania, the size of the corruption phenomenon is due, in large part, to the lower living standards, which remains a catalyst for the maintaining and even development of the phenomenon of corruption.

After undergoing the analysis and observations, the data were synthetized and exposed in a suggestive, comprehensible manner as a map, presented in figure 2.

**Figure 2:** Map of corruption at the level of the G20 member countries
Source: Authors' projection

As we can see from figure 2, there is no correlation between the territorial size of a state and the size of the phenomenon of corruption, but rather a correlation between the economic potential of a country and the size of the phenomenon of corruption. In general, a larger country in terms of territorial size (Russia, China, Australia, Canada, and USA) benefits from the presence of important natural resources, which may potentially transform it into an economic power; from this point on, we can start discussing about the phenomenon of corruption. In the present study, the European Union was perceived as a state and analysed in its entirety, but in a future article, the analysis will focus on the 28 member states independently, in order to establish with a higher accuracy the size of the phenomenon of corruption in this territory.

**CONCLUSIONS**

The variable that has the strongest correlation to the size of the phenomenon of corruption is the variable Trust in justice, such that, with only one exception (France), all countries from area A have values of this variable larger than the countries from areas B and C.

The second most important variable according to its influence on the phenomenon of corruption is Political stability. Just as with the case of the first variable, with only one exception (UK 60.68), all countries from area A register higher values of this variable compared to countries from areas B and C.

Romania, which is situated in the middle of the ranking (11th position) registers values which are lower than the G20 average for the variables Trust in justice and Political stability.

Romania also registers lower than average values for the first variable (GDP per capita), meaning 63.43% of the average GDP per capita for G20.

Romania registers higher values than the sample average for the variables

Education and Taxation level.

According to this research, the highest level of corruption is registered in Russia.

In Russia, the Taxation level is higher than the average of the analysed countries, being situated at 50.70% of a company's profit, while the values of the variables Trust in justice and Political stability are among the lowest values of the entire sample of countries analysed.

As it is evident from the reports of Transparency International since 2010 until today, Russia is the most corrupt country of the G20, the situation being due, in part, to economic causes, GDP per capita being 22 352 $, lower with almost 6 000 $ than average GDP per capita of G20.

Russia registers very good values for the variable Education (11.95 years), a lot higher than the sample average.

The country with the weakest values for the educational component is India, with an average of 5.39 years, followed by countries such as China, Turkey, Indonesia and Brazil, countries which register values below 8 years. With the exception of Brazil (area B), all these countries are situated in area C, and in their cases, the large size of the phenomenon of corruption may be due on the lack of awareness of the population of the disastrous effects that this phenomenon might have.

Among the countries with the highest Education levels we mention Germany (13.07 years), UK (13.05 years), Canada (13 years), Australia (12.96 years) and USA (12.94 years). All these countries are situated in area A, and one of the explanations for this fact may be that the people in these countries are aware of the risk they expose themselves to, when they practice or tolerate corrupt behaviour.

A particular case to discuss is Argentina, a country situated in area C, which has a taxation level of 107.90%. In this country, an economic agent would find it impossible to legally do business in absence of subsidies or tax exemptions.

With the exception of Argentina, countries with high levels of taxations are Brazil (68.30%), Italy (65.80%) and China (63.70%).

The country with the lowest level of taxation is Saudi Arabia (14.50%) followed at a distance of almost 10 percent by Canada (24.30%).

Surprisingly, besides Turkey and Russia which are geographically situated on 2 continents, no other country located on the European continent is situated in area C, most of them being found in area A.

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