DOSSIER: CORRUPTION, INFORMALITY & ECONOMIC GROWTH

Corruption in Albania. Quantitative Analysis of the Impact on Economic Growth

Giacomo Morabito
Ph.D. candidate, Department of Economics,
University of Messina
gmorabito@unime.it

Abstract

Corruption is usually considered a strong constraint on economic growth and development. According to research by Transparency International, the Southern Europe is one of most corrupted regions, and corruption is particularly high in the former socialist states. In particular, corruption in Albania is still considered highest among the Balkan countries. Corruption affects the daily lives of Albanian ordinary people in their dealings with public administration. The high and regular incidence of corruption in public life, and other abuses of power, slows down the process of democratization. Therefore, the European Union has allocated funds to support the judiciary in combating corruption. In 2012, the Transparency International Report ranked Albania as the most corrupt country in Europe, and also as one of the most corrupt countries in the world. According to the vast array of academic literature, the effect of corruption on economic growth is negative and statistically significant. However, recent empirical studies find that the direct effect of corruption on growth is statistically insignificant. This paper investigates the impact of corruption on economic growth in Albania using a panel data set over the period from 2005 to 2014. Measuring corruption statistically is very complex, and almost all known models for the measurement of corruption are based on perceptions of some categories of the population, such as the Corruption Perception Index. Corruption certainly affects negatively the economic growth of Albania, but perception-based indicators are not completely reliable. Therefore, the aim of this paper is how corruption is statistically relevant after a statistical comparison of the results obtained from the use of two different proxies for measuring corruption in Albania. In fact, in addition to the

Corruption Perception Index, are considered the statistics on corruption on the basis of criminal proceedings by the judiciary in Albania as a proxy for corruption.

Keywords: *Albania, Balkans, Corruption, Economics*

Introduction

Generally, crime has a negative effect on investments and in particular on foreign direct investments (FDI). Legality, good legislation, effective regulation of economic activities, and efficient public administration are the main components of an institutional system able to stimulate innovation and entrepreneurship. Instead, organized crime, corruption, and tax evasion not only weaken social cohesion, but also have deleterious effects on the allocation of financial and human resources and the effectiveness of ongoing reforms. They do not allow a favorable environment for business activity, and therefore limit employment opportunities and reduce the chances of economic growth. However, in the case of corruption, recent empirical studies find that its direct effect on growth is statistically insignificant. Corruption is usually considered a strong constraint on economic growth and development. Those economies that are afflicted by a high level of corruption—which involves the misuse of power in order to achieve certain goals in illegal, dishonest or unfair ways—cannot prosper as fully as those with a low level of corruption.

Corruption in its many forms (bribery, nepotism, fraud, embezzlement) adversely impacts the economies and societies of affected countries. However, studies show that the level of corruption in countries with emerging market economies is much higher than it is in developed countries. Transparency International is an international non-governmental organization which is based in Berlin, Germany, and was founded in 1993. Its nonprofit purpose is to take action to combat corruption and prevent criminal activities arising from corruption. According to research by Transparency International, the Southern Europe is one of most corrupted regions, and corruption is particularly high in the former socialist states. In particular, corruption in Albania is still considered highest among the Balkan countries. Corruption in the public sector remains one of the Albanian biggest challenges, particularly in areas such as political parties, health, and justice systems. The low wages, the social acceptance of bribery, and the narrow social networks make difficult the task of combating corruption for police, judges and customs officials.

The collapse of the socialism has not brought towards effective democracy. One of the critical points is the political and social conflict that is often erupted into open violence, and that brought the country to the brink of civil war in 1997, when the scandal broke of pyramids schemes. However, the support offered by

Albania to NATO intervention in Kosovo in 1999 has re-opened the 'doors of Europe;' ten years later, in 2009, Albania applied for EU membership but the European Commission assessment, while recognizing progress made, concludes that Albania's democratic institutions still lack effectiveness and stability and have not yet been brought to European rules. In 2012, the Transparency International Report ranked Albania as the most corrupt country in Europe, and also as one of the most corrupt countries in the world. The country was in 116th position (out of 176 countries). Even if the European Council's Group of States against corruption said that Albania has made great progress in its anti-corruption efforts, analysts claim that the country has more work to do. The high and regular incidence of corruption in public life, and other abuses of power, would certainly slow down the process of democratization.

Therefore, in 2012 the European Union has allocated funds to support the judiciary in combating corruption. The present level of corruption, cronyism, and nepotism still significant affects the proper functioning not only of the political machine, but also the administrative and judicial, with consequent repercussions on the economy. Actually, the measures recommended and implemented do not seem to have any significant impact: financial crime is eroding the economy of Albania, while money could have been used in infrastructure, education and to pull people out of poverty. In Albania corruption is widespread particularly in public services, health, and education. Certain economic, political, and social circumstances—such as poverty, high unemployment, fragile democratic institutions, and lack of confidence in the state—cause the phenomenon of clientelism. Moreover, through the manipulation of public resources in the interests of the actors in power, around the political system there are intertwined informal personal networks based on exchanges of favors.

The clientelist distribution of resources—such as granting of public contracts and licenses necessary to exercise certain type of trade, employment of key posts in public institutions by the members and collaborators of the party, etc.—is a significant voter mobilization tool. And political parties, especially those in power that are in a position to freely dispose of public resources, would prefer to manipulate public resources as long as this will allow them to maintain their power. In the case of Albania, according to the reports of international organizations, corruption is closely linked to organized crime, and it has become an accepted fact, a sort of 'moral norm.' Therefore, corruption is difficult to investigate and prosecute, and it is also a major impediment to growth. In fact, discouraging investment from abroad, it inhibits in doing business in the country, and anti-corruption mechanisms adopted so far by the country governments have been ineffective. It is a phenomenon that has a negative impact private economic initiative and, therefore, economic development, since the aspiring entrepreneur is forced to pay

a bribe to get the license. Therefore, public contracts are granted to those who are able to pay more rather than those best qualified.

The current Prime Minister of Albania, Edi Rama is fighting malfeasance and corruption in Albania. The practice of lavish bribes and kickbacks deeply affects public offices and local politics. The government has also opened an online platform funded by the World Bank, called 'e-Albania' that will serve to avoid corruption. In fact, this project will eliminate the contact with public officials to allow a drastic reduction of corruption, which often takes place in offices and administration buildings. This project has also been supported by the European Union that, until now, has already allocated €100 million to fight corruption and malfeasance in Albania. Even if it will be more difficult for a citizen to give bribes, or kickbacks, to the duty officer, will similar initiatives be useful to significantly reduce corruption and its economic impact? According to Olken (2009), if citizens' perceptions about corruption are accurate, then the democratic process and grass-roots monitoring can potentially provide incentives for politicians to limit corruption; but if citizens have little in the way of accurate information about corrupt activity, then the political process may not provide sufficient incentives to restrain corruption.

In the case of Albania, the government should extend the institutional capacity to investigate and prosecute those responsible for corruption cases, and take effective measures against corruption of public offices—such as the publication of the declaration of incomes of parliamentarians—in order to promote transparency in public administration and in institutional settings. Many scholars stress the importance of transparency in ensuring the quality of public services in such areas as health, sanitation, and education. Indeed, an institutional environment characterized by openness and transparency is of central importance for the effective and efficient management of public resources, and also for private markets. Lack of transparency around the decisions made by policy makers and government officials can lead to resource misallocation as funds. How much can transparency affect the quality of the government services relevant for businesses? What is the impact of corruption on the economy of a country? Is there a correlation between corruption and economic growth? According to the vast array of academic literature, more corruption reduces investments and consequently limits the rapid development in key areas of the country. However, recent empirical studies find that the direct effect of corruption on growth is statistically insignificant.

The paper addresses this issue and analyzes statistically the effect of corruption on economic growth in Albania. The remainder of this paper is organized as follows. The next section presents the relevant studies on the economic impact of corruption. The third section presents develops includes the econometric framework and empirical results about the correlation between corruption and economic growth. The fifth section concludes discussing the results.

Literature review

Corruption is a social and economic process, and it is considered a strong constraint on growth and development. Therefore, corruption is one of the most discussed topics both politically and academically. The academic point of view, the existence of International Handbook on The Economics of Corruption attests to the maturity of the economy of corruption. Some authors trace the birth of the economy of corruption in Rose-Ackerman (1975), and since then it has grown strongly from a theoretical point of view (i.e. Bardhan, 1997; Jain, 2001; Aidt, 2003). The academic literature finds different effects of corruption on economic performance. Some research considers that corruption only reduces economic performance, and this is due to an increase of transaction costs and uncertainty, inefficient investments, and misallocation of production factors (Murphy et al., 1991; Shleifer and Vishny, 1993; Rose-Ackerman, 1997) that come with corruption. Anoruo and Braha (2005) found that corruption slows economic growth in Africa directly by lowering the productivity of 0.87 percent and indirectly through investment (down 4.69 percent). Guetat (2006) and Gymiah-Brempong (2002) confirm the negative impact, respectively, for the case of the Middle East and North Africa region and Africa.

For transition countries, corruption is the most important determinant of investment. In the Middle East and North Africa region, low investment decisions depend poor governance (Aysan et al., 2007). The vast majority of academic literature examines the extent to which cross-country variations in aggregate investments can be explained by differences in cross-country corruption. The general finding is that corruption deters aggregate investments. Asiedu and Freeman (2009) found that the effect of corruption on investments varies significantly across regions: corruption has a negative and significant effect on investment growth for firms in transition countries, while it has no significant impact for firms in Latin America and Sub-Saharan Africa. According to Baliamoune-Lutz and Ndikumana (2007), there is a positive effect of corruption on public investment, while it has a negative effect on private investment. Discouragement of private investment is explained by the fact that corruption increases the cost of doing business while increasing uncertainty about expected returns on capital. Consequently, corruption undermines growth. Many studies have focused only on the corruption and investment links, such as Mauro (1997) and Brunetti et al. (1998). The latter authors provide evidence of a statistically significant negative effect of corruption on growth, investment, and government expenditure.

As regards for foreign direct investments, analyzing the bilateral flows Wei (2000) demonstrate a negative impact of corruption. Smarzynska and Wei (2000)

argue that host country corruption induces foreign investors to favor joint ventures over wholly owned firms. Lambsdorff and Cornelius (2000) highlight the negative impact of corruption on foreign direct investments in African countries. Wei and Wu (2001) argue that corruption impacts on the composition of capital inflows in a way that reduces foreign direct investments, and increases the countries' reliance on bank loans. This makes the country in question more vulnerable towards financial/currency crises. Analyzing the impact of corruption on foreign direct investments and local investments, Habib and Zurawicki (2001; 2002; 2005) show that corruption has a stronger negative impact on foreign direct investments than on local investments. Asiedu (2006) study the relationship between foreign direct investments and the characteristics of the country. The main result is that natural resources and large markets attract foreign direct investments. However, low inflation, good infrastructure, an educated population, openness to foreign direct investments, a low level of corruption, political stability, and a reliable legal system also have a similar effect. The author demonstrates that countries lacking in natural resources can attract foreign direct investments by improving their institutions and the political environment. Therefore, corruption is an obstacle to capital inflows, especially in small countries.

According to academic literature, foreign direct investments have a significant positive effect on economic growth. In this regards, the nexus between corruption and economic growth has been widely analyzed, and there is still contrasting evidence both in the causal relationship and the impact between the two variables. According to Mauro (1995) private investment and the growth of a country are negatively correlated with the level of corruption. Nevertheless, Brunetti et al. (1998), Li et al. (2000), Abed and Davoodi (2000) found no significant results between private investment and the growth. For the latter authors, there even exist positive marginal effects of corruption, but this is possible only in countries with strong institutional deficiency (Houston, 2007; Aidt et al., 2008; Aidt, 2009; Méon and Weill, 2010). According to Mauro (1997) and Paldam (2002), the relationship between corruption and economic growth through investment is significantly low. Dreher and Herzfeld (2005), Pellegrini and Gerlagh (2004), and Everhart et al. (2009), find that the direct effect of corruption appears insignificant with respect to growth in GDP per capita.

In particular, Akai et al. (2005) show that the effect of corruption on economic growth is negative and statistically significant in the middle- and long-term, but insignificant in the short-term, so the policymakers and economists care more about the middle- and long-term consequences of corruption than about the short-term effects. Paldam and Gundlach (2008) suggest that long-run causality is from GDP to corruption, as a country gets richer corruption vanishes; they find long-run interaction, but only in one direction. Lisciandra and Millemaci (2015)

show a significant negative impact of corruption on long-term growth in all specifications. They provide a within-country analysis of the impact of corruption on economic growth using a panel of Italian regions from 1968 to 2011 through a robust measure of corruption. This measure is averaged over 5-year periods to reduce short-run fluctuations and to reduce probable delayed effects, which are typical for latent phenomena such as corruption. Corruption may not have a significant direct impact on growth: notably, there are some gaps in theoretical approaches, which relates corruption to growth rates.

On the contrary, this paper investigates the impact of corruption on economic growth in Albania using a panel data set over the period from 2005 to 2014. Despite the brief time interval taken into consideration for capturing the dynamics of the causal relationship, the originality of the research consists in the statistical comparison of the results obtained from the use of two different proxies for measuring corruption. Even if this issue has been highly debated in academic literature, few scholars have raising doubts about that.

Data

As has previously been stated, corruption in its many forms adversely impacts the economies and societies of affected countries. No country has been able to completely eliminate corruption, but some research shows that the level of corruption in countries with emerging market economies is much higher than it is in developed countries. However, how can be defined the level of corruption? Measuring absolute levels of corruption is very complex, and almost all known models for the measurement of corruption are based on perceptions of some categories of the population. Among the different proxies, the Corruption Perception Index is the most used, which measures the perceived levels of public sector corruption worldwide. It has been widely credited with putting the issue of corruption on the international policy agenda.

Therefore, the accuracy of corruption perceptions is also important because of their ubiquitous use by international institutions and academics to measure corrupt activity. For example, corruption perceptions used extensively within countries as well to assess governance at the sub-national level. Perception indices have also been widely used in academic research on the determinants of corruption. Indeed, they are often considered the only consistent measure in the absence of more direct or objective proxies. Measuring beliefs about corruption rather than corruption itself represents the inherent difficulties involved in measuring corruption directly. It raises the question of how those being surveyed form their beliefs in the first place, and how accurate those beliefs actually are. Therefore, perception indices

may heavily depend on the momentary public opinion and the media coverage of specific criminal cases.

In this research, in addition to the Corruption Perception Index, are considered the statistics on corruption on the basis of criminal proceedings by the judiciary in Albania as a proxy for corruption. This proxy includes all crimes related to corruption and abuse of office while exercising a public function. Del Monte and Papagni (2001) used a proxy of corruption that they define as the official number of crimes against the public administration divided by the total number of employees. Glaeser and Saks (2006) used the number of public officials convicted for corrupt practices by the federal justice department in the U.S. Dong (2011) and Dong and Torgler (2013) derived corruption data from the number of annual registered cases on corruption in procurator's office by region. Lisciandra and Millemaci (2015) consider the number of all corruption-related crimes reported by each Italian region, over the period from 1968 to 2011, to prosecution departments.

Even if it can be considered a measurement of crime detection, this proxy can be criticized because it may underestimate qualitatively the underlying phenomenon. For example, the number of detected crimes may be affected by the different quality of the prosecution agencies, the underreporting or reduced investigations, across the country rather than the actual level of corruption (Treisman, 2007). The official statistics of the Judiciary and the Ministry of Justice in the Republic of Albania present some problems, which affect the quality of statistical research for this group of offences. Not all annual statistical reports of the Judiciary and the Ministry of Justice provide data on offences according to a specific article. In particular, there are no data for the articles where different offences are foreseen for different subjects that vary with a subject exercising a state duty or public function.

Therefore, the problem of measuring corruption still remains highly debatable. Likewise, also GDP is not an optimal measure, despite the fact that is one of the most commonly used measurements, and considered by many to be extremely useful in economics and politics. GDP is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. It is calculated without making deductions for depreciation of fabricated assets or for depletion and degradation of natural resources. However, GDP does not include some important factors that affect the economy, such as public debt, employment rate, and inflation. Among the significant criticisms, it is not an accurate measure of economic efficiency. GDP does not include the informal sector, which is any economic activity not officially recorded. This includes illegal activity, paying illegal immigrants (or anyone else paid under the table), or anyone who works in their home and does not report the income to the government. A related critique is found in the fact that GDP also includes in its calculations economic waste as if it were growth.

As a matter of fact, sometimes downright negative events may have a positive effect on GDP. In the case of corruption, for example, some researchers suggest that corruption may lead to a positive effect on economic growth, while others do not find a significant negative dependence between corruption and growth. In this research, are used data published by the World Bank of annual percentage growth rate of GDP per capita based on constant local currency over the period from 2005 to 2014—aggregates are based on constant 2005 U.S. dollars. GDP per capita is gross domestic product divided by midyear population. GDP at purchaser's prices is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. It is calculated without making deductions for depreciation of fabricated assets or for depletion and degradation of natural resources.

As already mentioned, the research includes a relatively brief time period, from 2005 to 2014, and Albania is the country that has been sampled. Baseline data are limited by the fact that data on corruption are limited available—Transparency International begin to publish data by countries since 1995, while Open Data Albania only since 2004.

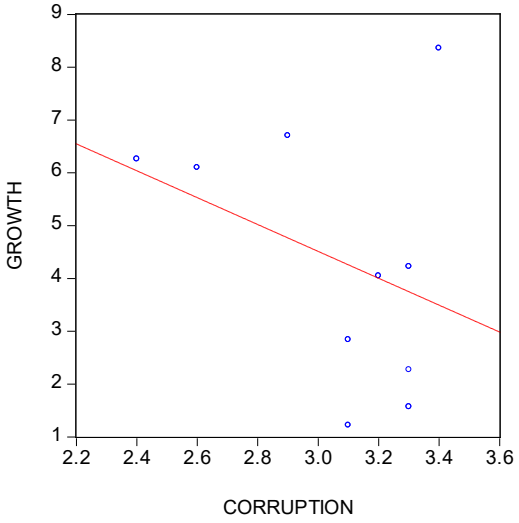
Methodology

In this section, it is tested how corruption affects economic growth in Albania. Following other studies on this issue, it is used a panel data set consisting over the period from 2005 to 2014. The dependent variable is the annual percentage growth rate of GDP per capita, while the independent variables of interest are 1) the Corruption Perceptions Index and 2) the corruption-related criminal proceedings. Note that these two variables are tested separately. In addition, are considered other variables, such as the annual population growth rate, gross capital formation, and gross national income (GNI) per capita based on purchasing power parity (PPP). Finally, the Global Competitiveness Index measures the set of institutions, policies, and factors that set the sustainable current and medium-term levels of economic prosperity. This index is composed of twelve pillars of competitiveness, and attempts to take into account countries' different stages of economic development, and organizes the pillars into three sub-indexes (basic requirements, efficiency enhancers, innovation, and sophistication factors).

To determine the extent to which corruption affects the economic growth rate of Albania, it is used a statistical methodology formed by Pearson's correlation, regression analysis or panel analysis—depending on whether Ramsey's test has p-Value higher or lower than 0.05. The processing of descriptive statistics allows to define exactly the sample and to identify particular situations. As already

mentioned, note that initially is tested the Corruption Perceptions Index, and later the corruption-related criminal proceedings.

TEST 1: Corruption Perceptions Index



Heteroskedasticity Test: Breusch-Pagan-Godfrey				
F-statistic	1.869088	Prob. F(1,8)		0.2088
Obs*R-squared	1.893882	Prob. Chi-Square(1)		0.1688
Scaled explained SS	1.355799	Prob. Chi-Square(1)		0.2443
Test Equation: Dependent Variable: RESID^2 Method: Least Squares Sample: 2005–2014 Included observations: 10				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-24.70503	21.56083	-1.145829	0.2850
CORRUPTION	9.582725	7.009291	1.367146	0.2088
R-squared	0.189388	Mean dependent var		4.618106
Adjusted R-squared	0.088062	S.D. dependent var		7.280965
S.E. of regression	6.952991	Akaike info criterion		6.893077
Sum squared resid	386.7526	Schwarz criterion		6.953594
Log likelihood	-32.46539	Hannan-Quinn criter.		6.826690
F-statistic	1.869088	Durbin-Watson stat		2.172551
Prob(F-statistic)	0.208756			

H_0: $E(u^2Ix) = \sigma^2$
H_a: $E(u^2Ix) \neq \sigma^2$

p = 0.2 > 0.05

It means that we cannot reject the null hypothesis.

Dependent Variable: GROWTH Method: Least Squares Sample: 2005–2014 Included observations: 10				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	12.14709	7.450422	1.630389	0.1417
CORRUPTION	-2.544794	2.422085	-1.050662	0.3241
R-squared	0.121255	Mean dependent var		4.360020
Adjusted R-squared	0.011412	S.D. dependent var		2.416458
S.E. of regression	2.402630	Akaike info criterion		4.767862
Sum squared resid	46.18106	Schwarz criterion		4.828379
Log likelihood	-21.83931	Hannan-Quinn criter.		4.701475
F-statistic	1.103891	Durbin-Watson stat		0.894572
Prob(F-statistic)	0.324113			

Durbin-Watson = 0.89

– The estimated equation: $\hat{y} = 12.15 - 2.545\ x$

So: Growth = 12.15 – 2.545 Corruption. It means that if 1 point increases in corruption perceptions, decrease the economic growth of 2.545%.

– $R^2 = 0.12$

12% of the sample variation in y is explained by x.

– Prob(F-statistic) = 0.324 > 0.05

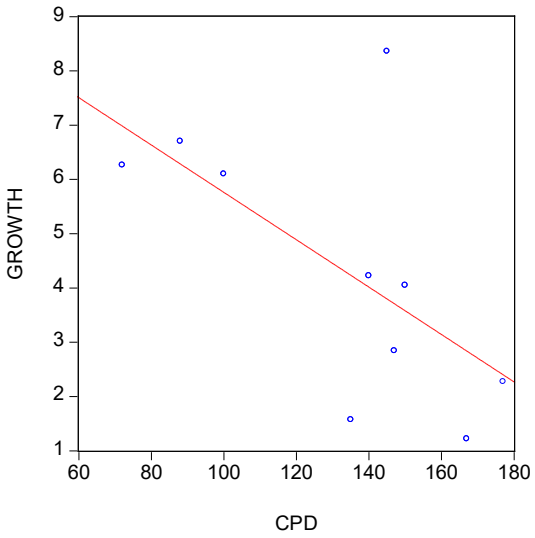
It means that the independent variable does not affect the dependent variable. Therefore, other factors could affect the economic growth more than the Corruption Perceptions Index.

Ramsey RESET Test				
F-statistic	3.279533	Prob. F(2,6)		0.1090
Log likelihood ratio	7.386834	Prob. Chi-Square(2)		0.0249
Test Equation: Dependent Variable: GROWTH Method: Least Squares Sample: 2005–2014 Included observations: 10				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-2745.933	1188.061	-2.311273	0.0602
CORRUPTION	660.3325	284.6126	2.320110	0.0594
FITTED^2	54.68382	24.05489	2.273293	0.0634

FITTED^3	-3.758109	1.696827	-2.214787	0.0687
R-squared	0.580186	Mean dependent var		4.360020
Adjusted R-squared	0.370279	S.D. dependent var		2.416458
S.E. of regression	1.917579	Akaike info criterion		4.429178
Sum squared resid	22.06266	Schwarz criterion		4.550212
Log likelihood	-18.14589	Hannan-Quinn criter.		4.296404
F-statistic	2.764016	Durbin-Watson stat		1.322787
Prob(F-statistic)	0.133744			

H_0: The functional form is appropriate
H_a: The functional form is not appropriate
$p = 0.1090 > 0.05$
It means that we cannot reject the null hypothesis.

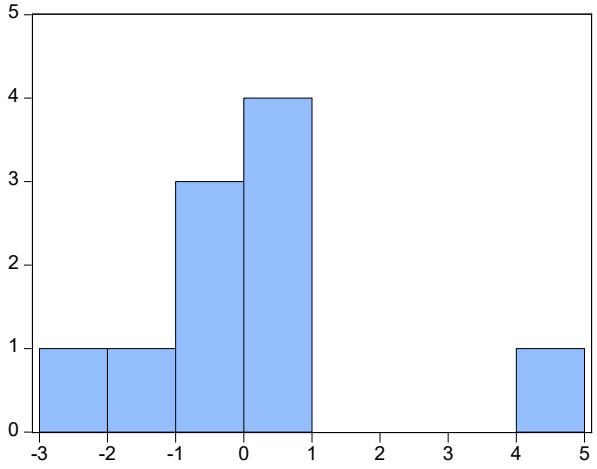
TEST 2: Corruption-related criminal proceedings



Dependent Variable: GROWTH Method: Least Squares Sample: 2005–2014 Included observations: 10				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	10.12547	2.657657	3.809924	0.0052
CPD	-0.043645	0.019534	-2.234296	0.0559
R-squared	0.384240	Mean dependent var		4.360020
Adjusted R-squared	0.307270	S.D. dependent var		2.416458

S.E. of regression	2.011227	Akaike info criterion	4.412224
Sum squared resid	32.36029	Schwarz criterion	4.472741
Log likelihood	-20.06112	Hannan-Quinn criter.	4.345837
F-statistic	4.992078	Durbin-Watson stat	1.322294
Prob(F-statistic)	0.055921		

From the output, the probability p = 0.0559 > = 0.05, which means: the variable CPD is not statistically significant. In this case, the result is better than the first test—with Corruption Perceptions Index as the independent variable—but again not statistically significant. Indeed, the number p = 0.0559 must be smaller than 0.05 to be significant the variable.



Series: Residuals
Sample 2005 2014
Observations 10

Mean	-9.69e-16
Median	0.041302
Maximum	4.561293
Minimum	-2.663409
Std. Dev.	1.896203
Skewness	1.219072
Kurtosis	4.688455
Jarque-Bera	3.664762
Probability	0.160032

Breusch-Godfrey Serial Correlation LM Test:				
F-statistic	0.373854	Prob. F(2,6)		0.7030
Obs*R-squared	1.108091	Prob. Chi-Square(2)		0.5746
Test Equation: Dependent Variable: RESID Method: Least Squares Sample: 2005–2014 Included observations: 10 Presample missing value lagged residuals set to zero.				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.274319	2.927024	-0.093719	0.9284
CPD	0.002054	0.021473	0.095664	0.9269
RESID(-1)	0.337513	0.410675	0.821848	0.4426
RESID(-2)	-0.007857	0.430554	-0.018249	0.9860
R-squared	0.110809	Mean dependent var		-9.69E-16
Adjusted R-squared	-0.333786	S.D. dependent var		1.896203

S.E. of regression	2.189919	Akaike info criterion	4.694781
Sum squared resid	28.77447	Schwarz criterion	4.815815
Log likelihood	-19.47390	Hannan-Quinn criter.	4.562007
F-statistic	0.249236	Durbin-Watson stat	1.947685
Prob(F-statistic)	0.859232		

Heteroskedasticity Test: Breusch-Pagan-Godfrey				
F-statistic	0.252696	Prob. F(1,8)		0.6287
Obs*R-squared	0.306198	Prob. Chi-Square(1)		0.5800
Scaled explained SS	0.361407	Prob. Chi-Square(1)		0.5477
Test Equation: Dependent Variable: RESID^2 Method: Least Squares Sample: 2005–2014 Included observations: 10				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-1.176294	9.040124	-0.130119	0.8997
CPD	0.033401	0.066445	0.502689	0.6287
R-squared	0.030620	Mean dependent var		3.236029
Adjusted R-squared	-0.090553	S.D. dependent var		6.551086
S.E. of regression	6.841269	Akaike info criterion		6.860680
Sum squared resid	374.4237	Schwarz criterion		6.921197
Log likelihood	-32.30340	Hannan-Quinn criter.		6.794293
F-statistic	0.252696	Durbin-Watson stat		2.319152
Prob(F-statistic)	0.628727			

Ramsey RESET Test:				
F-statistic	0.093747	Prob. F(2,6)		0.9118
Log likelihood ratio	0.307706	Prob. Chi-Square(2)		0.8574
Test Equation: Dependent Variable: GROWTH Method: Least Squares Sample: 2005–2014 Included observations: 10				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	24.09023	163.1231	0.147681	0.8874
CPD	-0.119654	0.813079	-0.147161	0.8878
FITTED^2	-0.194583	4.289054	-0.045367	0.9653
FITTED^3	0.001515	0.312572	0.004845	0.9963
R-squared	0.402899	Mean dependent var		4.360020
Adjusted R-squared	0.104348	S.D. dependent var		2.416458

S.E. of regression	2.286909	Akaike info criterion	4.781453
Sum squared resid	31.37970	Schwarz criterion	4.902487
Log likelihood	-19.90727	Hannan-Quinn criter.	4.648679
F-statistic	1.349517	Durbin-Watson stat	1.348307
Prob(F-statistic)	0.344252		

Conclusions

Talking about corruption in Albania, it should be noted that it is a problem that takes up many different forms and occurs at different levels, and it is also closely linked with organized crime. Corruption affects the daily lives of Albanian ordinary people in their dealings with public administration. Although there are notable variations between the Albanian regions, a considerable number of Albanian citizens have been exposed to a bribery experience with a public official. Moreover, bribes are almost exclusively given in the form of cash payments, while payments in kind are not used. In accordance with Transparency International and the 2013 Global Corruption Barometer, Albanians believe that the level of corruption over the past years has been increased a lot, and the judiciary, health, education, and politics sectors are considered the most corrupted institutions in the country. Corruption is considered one of the most problematic factors for establishing business in Albania. Like other country economies that are afflicted by a high level of corruption, Albania cannot prosper as fully as those with a low level of corruption. Corrupted economies are just not able to function properly because corruption prevents the natural laws of the economy from functioning freely. As a result, corruption in a country's political and economic operations causes its entire society to suffer.

This empirical investigation has aimed to test how corruption affects economic growth in Albania over the period from 2005 to 2014, carrying out the researches with the use of two measurements of corruption, i.e. the Corruption Perceptions Index and the corruption-related criminal proceedings. In the first test, it was found that the independent variable (Corruption Perceptions Index) does not affect the annual percentage growth rate of GDP per capita, which is the dependent variable. In the second test, it was found that the independent variable (the corruption-related criminal proceedings) is not statistically significant. Even if it is not statistically significant, the results of the second test are better than the first ones.

Therefore, according to these results, seems that other factors could affect the economic growth more than corruption. However, a possible interpretation of these results could be that corruption certainly affects negatively the economic growth

of a country like Albania, but it cannot be shown clearly analyzing a short period, as done in this research. In fact, the lack availability of a long panel data set did not allow analyzing how corruption affects the economic growth in the long term. Furthermore, another important factor for these results was undoubtedly the choice of the independent variable, i.e. the measurement of corruption. In this case, emerges a clear and obvious fact: the Corruption Perceptions Index is not sufficiently adequate to measure corruption, although most academics consider it very important in this regard. The reasons for which is not statistically significant have already been described above. However, it should be added that in this research the criminal proceedings concern all cases related to corruption and abuse of office while exercising a public function. Then, although the choice of this variable is statistically more significant, it would not be exhaustive for the purposes of the research conducted here.

Therefore, the results of this research suggest that in the future it would be necessary to carry out an analysis of long period (at least a twenty-year period), adopting as measurement of corruption a proxy statistically more significant than perception-based indices, such as Corruption Perceptions Index. Perception-based indicators are not completely reliable and should be used with more caution because of lack of transparency and definition problems, especially for understanding how corruption is associated with GDP growth rate. Finally, it could also be interesting carrying out a comparative analysis between Albania and other countries of Southern Europe, particularly the Western Balkans, to test how corruption is statistically relevant as endemic factor of the regional economies.

References

Abed, G.T., & Davoodi, H.R. (2000). Corruption, Structural Reforms, and Economic Performance in the Transition Economics. International Monetary Fund – Working Paper, 00/132.

Aidt, T. (2009). Corruption, institutions, and economic development. Oxford Review of Economic Policy, 25, 271–291.

Aidt, T.S. (2003). Economic analysis of corruption: A survey. The Economic Journal, 113(491), F632–F652.

Aidt, T.S., Dutta, J., & Sena, V. (2008). Governance Regimes, Corruption and Growth: Theory and Evidence. Journal of Comparative Economics, 36, 195–220.

Akai, N., Horiuchi, Y., & Sakata, M. (2005). Short-run and long-run effects of corruption on economic growth: Evidence from state-level cross-section data for the United States. Asia Pacific School of Economics and Government – Working Papers, 05-5, 1–30.

Anoruo, E., & Braha, H. (2005). Corruption and economic growth: The African experience. Journal of Sustainable Development in Africa, 7(1), 43–55.

Asiedu, E. (2006). Foreign Direct Investment in Africa: The Role of Natural Resources, Market Size, Government Policy, Institutions and Political Instability. World Economy, 29(1), 63–77.

Asiedu, E., & Freeman, J. (2009). The Effect of Corruption on Investment Growth: Evidence from Firms in Latin America, Sub-Saharan Africa, and Transition Countries. Review of Development Economics, 13(2), 200–214.

Aysan, F., Nabli, K., & Veganzones-Varoudakis, A. (2007). Governance institutions and private investment: An application to the MENA. Developing Economies, 45(3), 339–377.

Baliamoune-Lutz, M., & Ndikumana, L. (2007). Corruption and Growth in African countries: Exploring the Investment Channel. African Economic Conference 2007 – UNECA Working Papers, 1–19.

Bardhan, P. (1997). Corruption and development: A review of issues. Journal of Economic Literature, 35(3), 1320–1346.

Brunetti, A., Kisunko, G., & Weder, B. (1998). Credibility of Rules and Economic Growth: Evidence from a World Wide Private Sector Survey. The World Bank Economic Review, 12(3), 353–384.

Del Monte, A., & Papagni, E. (2001). Public expenditure, corruption and economic growth: the case of Italy. European Journal of Political Economy, 17(1), 1–16.

Dong, B. (2011). The Causes and Consequence of Corruption. Ph.D. thesis, Queensland University of Technology, Brisbane, Australia.

Dong, B., & Torgler, B. (2013). Causes of corruption: Evidence from China. China Economic Review, 26: 152–169.

Dreher, A., & Herzfeld, T. (2005). The Economic Costs of Corruption: A Survey and New Evidence, EconWPA Papers, 0506001, 1–33.

Everhart, S., Martinez-Vazquez, J., & McNab, M. (2009). Corruption, Governance, Investment and Growth in Emerging Markets. Applied Economics, 41(13), 1579–1594.

Glaeser, E.L., & Saks, R.E. (2006). Corruption in America. Journal of Public Economics, 90, 1053–1072.

Guetat, I. (2006). The effects of corruption on growth performance of the MENA countries. Journal of Economics and Finance, 30, 208–221.

Gyimah-Brempong, K. (2002). Corruption, Economic Growth and Income Inequality in Africa. Economics of Governance, 3, 183–209.

Habib M., & Zurawicki L. (2002). Corruption and foreign direct investment. Journal of International Business Studies, 33(2): 291–307.

Habib, M., & Zurawicki, L. (2001). Country-level investments and the effect of corruption-Some empirical evidence. International Business Review, 10(6), 687–700.

Habib, M., & Zurawicki, L. (2005). Corruption and its effect on trade and FDI. In Global Corruption Report 2005 (pp. 305–307). Berlin, Germany: Transparency International.

Houston, H. (2007). Can Corruption Ever Improve An Economy?. Cato Journal, 27(3), 325–342.

Jain, A.K. (2001). Corruption: A review. Journal of Economic Surveys, 15(1), 71–121.

Lambsdorff, J.G., & Cornelius, P. (2000). Corruption, Foreign Investment and Growth. In The Africa Competitiveness Report 2000/2001 (pp. 70–78). Oxford, United Kingdom: Oxford University Press.

Li H., Xu C.L., & Zou H. (2000). Corruption, income distribution and growth. Economics and Politics, 12, 155–182.

Lisciandra, M., & Millemaci, E. (2015). The Economic Effect of Corruption in Italy: A Regional Panel Analysis. MPRA Paper, 62173, 1–24.

Mauro, P. (1995). Corruption and growth. Quarterly Journal of Economics, 110(3), 681–712.

Mauro, P. (1997). The effects of corruption on growth, investment, and government expenditure:

a cross-country analysis. In K.A. Elliot (Ed.), Corruption and the Global Economy (pp. 83–107). Washington, D.C.: Institute for International Economics.
Méon, P. G., & Weill, L. (2010). Is Corruption an Efficient Grease?. World Development, 38(3), 244–259.
Murphy, K.M., Shleifer A., & Vishny R.W. (1991). The Allocation of talent: Implication for growth. Quarterly Journal of Economics, 106(2): 503–530.
Olken, B.A. (2009). Corruption perceptions vs. corruption reality. Journal of Public Economics, 93(7-8), 950–964.
Paldam, M. (2002). The cross-country pattern of corruption: Economics, culture and the seesaw dynamics. European Journal of Political Economy, 18(2): 215–240.
Paldam, M., & Gundlach, E. (2008). Two views on institutions and development: The grand transition vs the primacy of institutions. Kyklos, 61, 65–100.
Pellegrini, L., & Gerlagh, R. (2004). Corruption's Effects on Growth and its Transmission Channels. Kyklos, 57, 429–456.
Rose-Ackerman, S. (1975). The Economics of Corruption. Journal of Public Economics, 4(2), 187–203.
Rose-Ackerman, S. (1997). The political economy of corruption. In K.A. Elliot (Ed.), Corruption and the Global Economy (pp. 31–60). Washington, D.C.: Institute for International Economics.
Sergi, B., D'Aleo, V., & Morabito, G. (2015). Eurasia vs the Balkans: a comparison between two economic blocs. SEER Journal for Labour and Social Affairs in Eastern Europe, 2, 251–261.
Sergi, B.S., & Morabito, G. (2016, April). The Decline of FDI and Migrant Remittances in the Western Balkans. What Future for Albania?. Paper presented at the DSSH Ditët e Studimeve Shqiptare 2016, Tirana, Albania.
Shleifer, A., & Vishny, R.W. (1993). Corruption. Quarterly Journal of Economics, 108, 599–617.
Smarzynska, B.K., & Wei, S.J. (2000). Corruption and Composition of Foreign Direct Investment: Firm-level Evidence. NBER Working Papers, 7969, 1–23.
Treisman, D. (2007). What have we learned about the causes of corruption from ten years of cross-national empirical research?. Annual Review of Political Science, 10, 211–244.
Wei, S.J. (2000). How taxing is corruption on international investors?. Review of Economics and Statistics, 82(1), 1–11.
Wei, S.J., & Wu, Y. (2001). Negative Alchemy? Corruption, Composition of Capital Flows, and Currency Crises. NBER Working Paper, 8187, 1–51.