

Research Article / Araştırma Makalesi

**THE INVESTIGATION OF RELATIONSHIP BETWEEN CORRUPTION
PERCEPTION INDEX AND GDP IN THE CASE OF THE BALKANS***

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ABSTRACT

One of the issues considered important by investors is the concept of security. Investors want to continue their commercial activities in areas, where protection of rights, risks can be predicted, and profitability is high. It is thought that in the regions, where these elements were determined, commercial activities widen and they positively affect GDP of the invested country. Depending on this forecast, the relationship between the annual data of Corruption Perception Index, prepared by Transparency International, and the GDP data of the Balkan countries will be investigated. In this Study, panel causality analysis of Balkan countries will be made by using the annual GDP, foreign direct investments, and Corruption Perception Index data for 2008-2016 and the results obtained will be discussed.

Keywords: Balkan States, Corruption Perception Index, GDP.

**BALKANLAR ÖZELİNDE YOLSUZLUK ALGI ENDEKSİ VE GSYİH
ARASINDAKİ İLİŞKİNİN İNCELEMESİ**

ÖZET

Yatırımcılar tarafından önemli görülen konuların başında güvenlik kavramı gelmektedir. Yatırımcılar ticari faaliyetlerini, hakların savunulduğu, risklerin öngörülebildiği ve karlılığın yüksek olduğu bölgelerde sürdürmek isteyeceklerdir. Belirtilen bu unsurların bir araya geldiği bölgelerde ticari faaliyetler genişleyerek, yatırım yapılan ülkenin GSYİH' sine olumlu yönde etki edeceği düşünülmektedir. Bu öngörüye bağlı olarak Uluslararası Şeffaflık Örgütü tarafından yıllık olarak hazırlanan Yolsuzluk Algı Endeksi'nin verileri ile Balkan ülkelerinin GSYİH verileri arasında ilişkinin varlığı araştırılacaktır. Araştırmada Balkan ülkelerinin 2008-2016 arası yıllık GSYİH doğrudan yabancı yatırımlar ve Yolsuzluk Algı Endeksi verileri üzerinden panel nedensellik analizi gerçekleştirilecek ve elde edilen sonuçlar tartışılacaktır.

Anahtar Kelimeler: Balkan Ülkeleri, Yolsuzluk Algı Endeksi, GSYİH.

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1. Introduction

The shortest and clearest definition of corruption is the definition made World Bank. According to this definition, corruption is the abuse and exploitation of public authorization for private benefits (Nguyen, et al., 2017). What is wanted to be expressed with saying of private benefit is that individual forms an interest for his/her own benefit and makes action in this direction (Ackerman, 1999: 2). Corruption can form through that several groups coming together with the same aims sometimes make actions in the direction of interest not only individually (Vito, 1998: 2). It shows that the concept of corruption is so important with social priority that is not protected and with movements of individual or groups forming dominance and interest against others for the sake of arranging social process.

Bribery and debit as well as seizure, fraud, favoritism, being stolen of every sorts of government property, engrossing, and manipulation, synonymously referred to corruption, can be considered corruption (Andving, et al., 2000). The social equivalent or reaction of these terms depends on providing social order and becoming established of social culture. In the countries whose social status is high, while the individuals hesitate in the face of this reaction, in the countries, where social order cannot be provided, as a result of that individual does not adequately face to social reaction, this illegal values that increase impede and retard social togetherness to strengthen. Moreover, the increase of corruption and similar actions brings together a collapse in moral and cultural meaning.

Although public area mostly comes into mind when mentioned about corruption, retrogression and degeneration that will occur of making decisions of private agencies as well as public institutes should be also expressed as corruption. In private sector, especially bidding and recruiting processes, corruption actions are seen (Gillanders & Neselevska, 2018)

Corruption is also a social and economic problem. In socialization process, it comes into our face as a problem impeding individuals to fairly and equally live and bringing to a standstill the function of the cultural, political, and economic elements of the society. Corruption, utilising competitive power, reduces and destruct economic and social development as a result of struggle individuals make for their own favours to obtain more rent rather than utilizing . (Stapenhurst, 2000: 9-10)

Historical and cultural values of the countries and their relationships with the close and away other countries regionally that are effective in the formation of these relationships will determine the attitude of society against corruption. The region used in the study is Balkan countries, which have the historical and cultural pasts, carry similarities from the cultural, moral, and traditional point, which have economic qualities to each other, and the relationship of corruption with economic magnitudes specific to Balkan states was tried to be examined.

2. Corruption Perception Index

The literature review made show us that corruption forms contradiction with the concepts such as economic growth, GDP, and development and harms to the general economic policies. All over the world, in the studies and discussions on impeding corruption, many new programs and strategic targets are presented. International acceptable political entities such as Organization of Economic Cooperation and Development (OECD), United Nations (UN) and

European Union (UN) develop conventions and principles to provide improvement –aimed reform as prioritized targets in this area about struggle with corruption and targets on forming a corruption –preventive culture through creating international public opinion, reducing corruption, and becoming widespread good governance.

One of the organizations working for reducing to reduce corruption to inimum leverl and worlwide appreciared due to its corruption preventive studies is also Trransparency International. This organization considers corruption as the most important problems of comtemporary world and suggests that corruption negatively affects the economic development of the society; that it impedes the effective use of public resources and public policies; that it harms to the development of private sector: and that it has negative effects on the people, who struggle to survive economically (Lučić et al., 2016).

Making corruption-free of all sectors of the society will be possible through a transparent, fair, and accountable state structure. Transparency International, established in actionn plan of making free the undesirable effects of corruption on the society and acting with the wide mass, in order to achieve this target, accounts for Corruption Perception Index every year and, subjecting it to country basis, examines the relationship of countries to corruption (Ulman, 2014: 440)

This index, the dimension of relationship of countries with corruption, shows that how transparent and how democratic management they exhibit. This case is important in terms of that countries show the quality of livable countries intern to all over the world. Also when also looked at economic point of view, this index, an indicator of democratic and transparent management, increasing the trustworthiness of the country, raises its credibility and is used as a credit standard that also increases the power to be able to attract foreign capital. That the countries whose index score is good is the leading countries in international trade is the most important indicator of this.

The index, first started in 1995, attracted interest in international arena and was accepted in the short time. The organization, whose original target is to prevent corruption via transparency and accountability and reassurance, was appreciated from this point of view (www.transperency.org./cpi). In the new age, it is known that without having these values, global policies suggested for global crises will be under risk.

When looked at all over the world, there is a serious corruption problem in 68% of the countries (www.transperency.org./cpi). For being able to implement strategic aims against corruption and make reforms, first of all, it is necessary to identify corruption in the real meaning. But it is not easy to clearly identify and measure corruption. Then, in this case, how does Corruption Perception Index work and what is made it trustable?

While Transparency International forms this index, the evaluations made by the independent and credible institutes and view survey are utilized. These surveys and evaluations include the questions related to giving a bribe to public officials, withdrawals from public biddings, charging public funds to debit, and effectiveness of efforts to struggle with corruption (Rose & Mishler, 2010). Since corruption is a secret activity that is largely difficult to measure, the perceptions are used to come over this difficulty. The data obtained since the first years when index has been formed have proved that perceptions are reliable corruption prediction.

3. The Case of Balkan Countries According to Corruption Perception Index

Balkans meaning steep and forestry range of mountains in lexical meaning take place in southeast part of the continent Europe and the west and northwest of Anatolia (Vasileva, 2017: 34). Before collapsing of East Bloc, Balkan states consisted of Albania, Bulgaria, Romania, Turkey, Greece, and Yugoslavia. Together with collapse of East Bloc, Yugoslavia diintegrated and Bosna- Herzegovna, Serbia, Croatia, Kosovo, Macedonia, Montenegro, and Slovenia were included in Balkan states. At the present day, there are 12 states qualified as Balkan States.

Our study studies, according to the data of transparency index of Balkan countries, whether or not there is a relationship between foreign direct investment and GDP. From this point of view, in the following table, the ranks of Balkan countries in the world according to Corruption Perception Index between the years of 2008-2018 are given.

Table 1: The Ranks of Balkan Countries in the World According to Corruption Perception Index Between the Years of 2008-2018

	08	09	10	11	12	13	14	15	16	17	18
Albania	85	95	87	95	113	116	110	88	83	91	99
Bosnia-Herzegovina	92	99	91	91	72	72	80	76	83	91	89
Bulgaria	72	71	73	86	75	77	69	69	75	71	77
Croatia	62	66	62	66	62	57	61	50	55	57	60
Greece	58	71	78	80	94	80	69	58	69	59	67
Kosovo	-	-	110	112	105	111	110	102	95	85	93
Macedonia	72	71	62	69	69	67	64	66	90	107	93
Romania	70	71	69	75	66	69	69	58	57	59	61
Slovenia	26	27	27	35	37	43	40	34	31	34	36
Serbia	85	83	78	86	80	72	78	71	72	77	87
Turkey	58	61	56	61	54	53	64	66	75	81	78
A total numb. of countries	180	180	178	183	176	177	175	168	176	180	180

Source: www.transparency.org/cpi former information

The results of Corruption Perception Index, prepared in the light of information given by at least 3 international institutes was formed by measuring the perceptions of the specialists, non-governmental organizations, and representatives of business world regarding the corruption in public sector.

In the table, ranking of 12 Balkan countries according to the years and the number of country participating in Corruption Perception are given. Among Balkan countries, Slovenia, the country whose corruption perception index is the lowest, is in the 36th position. The countries, in which this index is the highest, are Kosovo and Albania. When generally regarded to, according to Corruption Perception Index, world ranking range approximately the same.

The state of Balkan countries that are present in middle ranks in corruption perception was evaluated by using the data of 2016, when the most healthy data were drawn for every country and the following table was formed.

Table 2: Balkan Countries (Population, GDP and DFI)

	Population*	%	N	GDP**	%	N	DFI***	%	N
Romania	19,699,312	13.9	2	187,592,037,839.97	12.66	3	5,372,961,305.3	17.38	2
Greece	10,770,521	7.61	3	192,690,813,126.86	13.01	2	3,060,785,236.6	9.90	3
Bulgaria	7,127,822	5.03	4	53,237,882,472.71	3.59	4	1,179,040,000	3.81	7
Croatia	4,174,349	2.95	6	50,714,957,390.54	3.42	5	1,864,321,647.9	6.03	5
Slovenia	2,065,042	1.46	10	44,708,598,648.86	3.02	6	1,461,635,215.7	4.73	6
Serbia	7,058,322	4.98	5	38,299,854,688.13	2.58	7	2,300,135,289.1	7.44	4
Bosnia &Herzeg.	3,516,816	2.48	7	16,910,277,133.65	1.14	8	272,521,285.27	0.88	10
Albania	2,876,101	2.03	8	11,863,865,978.09	0.80	9	1,044,184,334.8	3.38	8
Macedonia	2,081,206	1.47	9	10,899,583,154.65	0.74	10	549,371,101.55	1.78	9
Kosovo	1,816,200	1.28	11	6,649,888,888.89	0.45	11	239,338,811.22	0.77	11
Turkey	79,814,871	56.4	1	863,721,731,068	58.29	1	13,343,000,000	43.16	1
Total	141,622,865	100		1,481,663,617,603	100		30,913,960,820	100	

*Population, total 2016, **GDP (current US\$)2016, ***Foreign direct investment, inflows (BoP, current US\$)2016
Source: <https://data.worldbank.org/country/>

Among Balkan Countries, the country, which has a remarkable advantage in terms of population, GDP, and foreign direct investment, is Turkey. In the same values, the country that has the lowest values is Kosovo. But in order to make better analysis, the ranking of Balkan countries were formed in the table. When looked at this ranking, the effective country in terms of GDP direct foreign investment according to its population is Slovenia. Although Slovenia is the last rank in terms of population, in terms of GDP and foreign direct investment is in the 4th order. Again, while Serbia and Croatia also are seen to be in the better rank in terms of foreign direct investment according to their populations, when evaluated in terms of GDP and foreign direct investment according to the population, the countries that are in the worst position are Bosnia- Herzegovina and Bulgaria. When regarded to the averages of Bulgaria and Bosnia Herzegovina in terms of Population, it is seen that the rankings in Balkan Countries attracting foreign direct investments are in more behind.

4. Literature Review Related to Corruption Perception Index and Macroeconomic Magnitude

The presence of the studies carried out related to perception index and macro variables show that corruption perception index is an academically important indicator. In the literature studies carried out, generally, it comes to our face that the variables such as GDP, income distribution, employment, foreign direct investments, national income, and welfare level are used.

In the study carried out by Damania et.al, the relationship between income and corruption was tried to be identified. According to Damania et al., per capita national income forming in a society increases, as corruption decreases. In other words, there is a negative directional relationship between income and corruption (Mani et al., 2004)

In the study carried out by Ugur and Dasguptan, the effects of corruption perception index on economic growth in lower and higher income countries were studied. According to the findings they obtained, corruption negatively affects economic growth in both country group. The indirect effects of corruption on economic growth (the effects forming human capital and public finance) are higher its direct effects. In addition, in the lower income groups, the effect of the decrease in corruption on economic growth becomes more effective compared to high income groups (Uğur & Dasgupta, 2011)

Another variable associated with corruption is income distribution. According to Paldam, one of economic variables affecting corruption in the countries is income distribution. In the countries, in which there is skewed income distribution, illegal earning becomes attractive (Paldam, 2002: 8) Paldam (2002), in the countries, where Gini coefficient is high, depending on income injustice, claims that corruption will also rise. In order to support this saying of him, in the case, in which the value that will be obtained by Gini coefficient show income injustice, using Gini coefficient, disorder that will realize in income will significantly increase corruption (Paldam, 2002)

Paldam (2001), in anotjer study, he identified that corruption perception was high and that corruption perception decreased as countries enriched. In addition, as inflatin increase, corruption level increases. Paldam, in the same study, corruption level increases, as inflation increases. Paldam, in the same study, except economic variables, identified that the religion and moral values had effects on corruption (Paldam, 2001)

Gurgur & Shah (2014), in the study they carried out, studied the relationship between management style and corruption. It was identified that in a decentralized management system, corruption decreases and, increase in unitary system. Gurgur and Shah point out that increase of welfare level in a country will decrease corruption (Gurgur & Shah, 2014)

Nazar Mustapha (2014), in the study he carried out, studied the relationship between corruption and national income per capita. In the direction of the data between 2003 and 2011, Mustapha that makes panel data analysis identified that there was significantly negative on per capita income (Mustapha, 2014)

Also in a study Thach et al (2017) carried out, corruption and economic growth were compared In a study by using the data of 19 Asian countries covering the period of 2004-2015, the effect of corruption on economic was analyzed. The study results show that corruption forms an impediment on economic growth of Asian countries. Together with corruption, it was found that institutional quality, developedness of democracy, and economic freedom played important role in economic growth (Thach et al., 2017)

In the studies Rothstein and Holberg (2011) with the data belonging to World Bank and obtained from the various countries of the world, it is shown that as corruption levels of countries increase, their GDP, economic growth, and individual incomes decrease (Sören & Rothstein, 2011)

In the studies, carried out by Tazi and Daoodinin, individual leading to corruption will result in the increase of public investments. But this increase will not increase effectiveness. The reason for this is that investments are high-cost. Also, public output is of poor quality good and service (Tanzi & Davoodi, 2000)

5. Methodology and Dataset

In the study carried out, the effects of the transparency levels Balkan countries have on their economic growth and the levels of foreign direct investment realized from the other countries to these countries were studied. Since the universe of the study is Balkan Countries, transparency indices of the countries shown in Table 3, GDP, and sums of foreign direct investments, and the data between 2000-2017 were used. Of course, although in the region specified there are 12 countries, due to the fact that the data of Montenegro belonging to the past years are not present, panel data analyses were made on 11 countries.

Table 3: Transparency Index Values of Balkan Countries

	2010	2011	2012	2013	2014	2015	2016	2017
Albania	33	31	33	31	33	36	39	38
Bosnia - Herzegovina	32	32	42	42	39	38	39	38
Bulgaria	36	33	41	41	43	41	41	43
Croatia	41	40	46	48	48	51	49	49
Greece	35	34	36	40	43	46	44	48
Kosovo	28	29	34	33	33	33	36	39
Macedonia	41	39	43	44	45	42	37	35
Romania	37	36	44	43	43	46	48	48
Slovenia	64	59	61	57	58	60	61	61
Serbia	35	33	39	42	41	40	42	41
Turkey	44	42	49	50	45	40	41	40
Balkan Average	38.73	37.09	42.55	42.82	42.82	43.00	43.36	43.64

As seen in Table 3 average transparency values of Balkan Countries stays below 50 in all study periods and, according to this, it reveals that Balkans region develop themselves. However, in return to this negative situation, it is a case that has to be stated that the average values of Balkan Countries show a continuous improvement toward the last periods. It is understood that the country becoming in the best positions in terms of transparency values is Slovenia, and the countries having the lowest value are Macedonia and Kosova

The examination of Balkan Countries in terms of their economic sizes was made in Table 4, and in the direction of these data, it is understood that the largest economic structure of the country is Turkey and this is followed by Greece, while the weakest countries from economic point of view are Kosovo, Macedonia, and Albania.

Table 4: Economic Sizes of Balkan Countries

x Million \$	2010	2011	2012	2013	2014	2015	2016	2017
Albania	11927	12890.9	12319.8	12776.3	13228.2	11335.3	11863.9	13039.35
Bulgaria	50610	57418.4	53903	55758.7	56732	50199.1	53237.9	56831.52
Bosnia - Herzegovina	17176.8	18644.7	17226.8	18178.5	18558.3	16209.7	16910.3	18168.58
Greece	299361.6	287797.8	245670.7	239862	237029.6	195541.8	192690.8	200288.20
Croatia	59665.4	62236.8	56485.3	57769.9	57080.4	48921.9	50715	54849.18
Serbia	39460.4	46466.7	40742.3	45519.7	44210.8	37160.3	38299.9	41431.65
Slovenia	48013.6	51290.8	46352.8	48116.3	49904.9	43072.4	44708.6	48769.66
Turkey	771876.8	832546.3	873981.8	950595.3	934167.8	859794.2	863711.7	851102.40
Kosovo	5829.9	6649.3	6473.7	7072.1	7386.9	6440.5	6649.9	7128.69
Macedonia, FYR	9407.2	10494.6	9745.3	10817.7	11362.3	10051.7	10899.6	11337.83
Romania	167998.1	185362.9	171664.6	191549	199493.5	177911.1	187592	211803.3

As also stated in introduction section, foreign direct investments are considerably important for the countries, which have insufficient capital. In this context, the countries, in order to be able to accelerate their economic developments and solve the unemployment problem, make many attempts. Balkan countries are not exception of this state. However, when we generally regard to all Balkan countries, it can be said that they remain incapable about attracting foreign capital. As seen in Table 4, in the countries included in the study, the country that was able to succeed in the most foreign capital is Turkey, while those being unsuccessful are Kosovo, Macedonia, and Bosnia - Herzegovina.

Table 5: Foreign Direct Investments

x Million \$	2010	2011	2012	2013	2014	2015	2016	2017
Albania	1090.11	1048.09	918.31	1254.27	1149.54	989.28	1044.19	1022.13
Bosnia - Herzegovina	443.84	471.61	391.98	313.30	544.87	383.09	282.75	462.73
Bulgaria	1842.90	2103.81	1788.11	1989.04	2067.54	2706.69	1655.55	1656.24
Croatia	1424.11	1417.60	1465.10	937.31	3959.86	158.97	1864.32	2040.46
Greece	533.69	1092.09	1663.33	2945.42	2696.80	1268.31	3060.79	4021.76
Macedonia, FYR	301.44	507.92	337.91	402.46	60.88	296.60	549.37	430.70

Table 5 continued

Serbia	1693.33	4929.90	1276.10	2059.70	1999.52	2345.15	2354.73	2878.82
Slovenia	319.05	875.54	33.55	103.98	1019.29	1729.44	1446.04	1081.88
Kosovo	490.16	534.97	293.20	371.51	199.79	343.26	243.73	324.80
Turkey	9099.00	16182.00	13744.00	13563.00	13119.00	18002.00	13343.00	10889.00
Romania	3213.74	2370.10	3047.57	3854.82	3869.20	4317.73	6252.04	4949.69

5.1. Methodology

As stated in the previous sections, in Balkan Countries-specific, the effect of Transparency Index (CPI) on economic size (GDP) and foreign direct investments (FDI) is the main aim of our given study. Depending on the aim of the study, the necessary panel data were formed and, for not facing the problem with unit root, natural logarithms of the data were taken. The definitive statistics of panel series is as shown in Table 6 when the definitive statistics of panel data series are examined, according to the data of Jarque-Bera, while GDP remains below 3, it is above InCPI and InCP3 value and, according to this assessment, it is understood that InCPI and InFDI series do not exhibit normal distribution, while, InGDP series exhibits normal distribution.

Table 6: Definitive Statistics

	LnCPI	LnGDP	LnFDI
Mean	0.035955	-0.003733	0.018611
Median	0.038707	0.017304	0.000000
Maximum	2.461945	0.180133	0.271934
Minimum	-3.261866	-0.192411	-0.126752
Std. Dev.	0.908968	0.086135	0.076281
Skewness	-0.749993	-0.276177	0.827891
Kurtosis	6.777221	2.351944	4.000528
Jarque-Bera	52.99319	2.326273	12.00774
Probability	0.000000	0.312504	0.002469
Sum	2.768561	-0.287438	1.433032
Sum Sq. Dev.	62.79288	0.563856	0.442225
Observations	77	77	77

In order to investigate the entity of unit root on the panel data formed, PP (Philips & Peron) and ADF (Adjusted Ducker & Fuller) unit root tests were made. For the sake of not going away from the aim of the study, reporting, in detail, of these tests whose econometric explanation is made in many article, will not be given place. The results of unit root tests were

introduced in Table 7 As will be understood from unit root results, at the level of panel data formed, there is no problem with unit root. In addition, it is predicted that the homogeneity of the data set will directly affect the test types to be selected, and the data for which the Homogeneity Delta test was applied on the data set is shown in Table 7. As a result of this test, it is accepted that the data set is not homogeneous.

Tests	Statistics	Prob.
Delta T.	168.524	0.0000
Delta T _{adj}	170.282	0.0000

Depending on these results obtained, the presence of possible relationship through panel data of transparency index, GDP, and panel data of foreign direct investment of Balkan countries will be tested by FMOLS, panel co-integration test, if there is a relationship, the direction of this relationship will be tried to be determined by Granger Causality Test.

Table 7: In CPI, In GDP, Ln FDI

Method	In CPI	In GDP	Ln FDI	Probability	Statistic Values	Probability
	Statistic Values	Probability	Statistic Values			
PP-Fisher Chi-square	558.539	0.0001	558.539	0.0001	136.787	0.0000
PP-Choi Z-stat	-432.664	0.0000	-432.664	0.0000	-7.594	0.0000
ADF-Fisher Chi-square	505.766	0.0005	505.766	0.0005	67.623	0.0000
ADF-Choi Z-stat	-283.829	0.0023	-283.829	0.0023	-5.746	0.0000

5.1.1. FMOLS Test

Predictors of panel Least Squares (LS), Dynamic Least Squares (DOLS), and Full Modified Least Squares (FMOLS), developed by Kao & Chiang (1998); panel DOLS predictor and predictors, developed by Mark & Sul (2003) are commonly used methods in the literature. The FMOLS method corrects the deviations in standard fixed effect estimators (caused by problems such as autocorrelation and variance). The DOLS method, on the other hand, is a method that can eliminate the deviations in static regression (especially caused by endogeneity problems) by including dynamic elements in the model (Kök et al., 2010: 8). The FMOLS method developed by Pedroni allows considerable heterogeneity between individual sections, taking into account the existence of possible correlation between the constant term, the error term and the differences of the independent variables. Pedroni (2000), also investigated the power of FMOLS method in small samples and calculated that the performance of t statistics in small samples is compatible with Monte Carlo simulations "(Kök and Şimşek, 2006: 7-8; Gülmez, 2015: 24).

In this study, the panel FMOLS estimation methods developed by Pedroni (2000; 2001) were considered, considering the inhomogeneity of the data set and other advantages. Panel

FMOLS Pedroni (2000) panel FMOLS method developed by Pedroni (2000; 2001) is based on the following panel regression model:

$$y_{it} = \alpha_{it} + \delta_{it} + \beta x_{it} + \mu_{it} \tag{1}$$

$$x_{it} = x_{it-1} + e_{it} \tag{2}$$

In these equations, under the assumption that there is no dependence between cross sections forming the panel, y_{it} represents dependent variable, x_{it} , independent variable. In Equation (1), error terms is a stationary process and, if y_{it} first degree integrated, there is long term co-integration relationship between y_{it} and x_{it} . β 's indicates that long term co-integration vector (coefficient) that is necessary for prediction (Nazlıoğlu, 2010; Koçak & Nisfet, 2018).

According to panel co-integration test, whose results are given in the Table 8, since the null hypothesis of Balkan countries that there is no CPI and GDP is $P=0.000$ an $P < 0.05$, it must be rejected. According to this implication, it is accepted that the alternative hypothesis that there is a panel co-integration between CPI and GDP

Table 8: Panel Co-Integration Test between GDP and CPI (FMOLS)

	Coefficient	Std. Deviation	t-Statistics	Probability
LNCPI	0.344100	0.071628	4.803	0.0000
R-squared	0.186822	There is Mean dependent	-0.002621	
Adjusted R-squared	0.021174	There is S.D. dependent	0.088560	
S.E. of regression	0.087617	Sum squared resid	0.414545	
Long-run variance	0.001470			

When the coefficients of co-integration emerging between CPI and GDP of Balkan countries are examined, in return to the 1% increase of CPI of Balkan Countries, it is estimated that 0.34% of increase will be experienced in GDP. This value identified is quite large and important quantity in terms of economic growth.

The presence of co-integration relationship between CPI and FDI in Balkan countries was examined in a distinct model from the model formed and its results were introduced in Table 9 according to co-integration test of the model formed, rejecting that the null hypothesis that there is no co-integration between CPI and FDI, it was accepted that there was a co-integration between the variables specified.

Table 9: Panel Co-Integration Test between FDI and CPI (FMOLS)

	Coefficient	Std. Deviation	t-statistics	Probability
LNCPI	4.604654	1.591860	2.892626	0.0068
R-squared	0.184304	There is Mean dependent		0.054651
Adjusted R-squared	-0.656882	There is S.D. dependent		0.904304
S.E. of regression	1.164020	Sum squared resid		43.35815
Long-run variance	0.153210			

In Balkan countries –specific, after identification of co-integration between FDI and CPI, when the effect of CPI on FDI through the co-efficient formed is interpreted, in return to the 1% increase of CPI, it is estimated that there will be an increase in FDI at the rate of 4.60. In the light of this information obtained, it is easily accepted that CPI will have positive and relatively large on both GDP and FDI. However, although positive relationship was identified between the variables, it will not be possible to say that which variable affects to each other without Granger Causality Analysis. In order to examine causality structures of the variables that are subject of analysis, using Panel Granger Causality Analysis was approved, and analysis results were given in Table 10.

Table 10: The Results of Panel Granger Causality Analysis

Null Hypothesis:	F-Statistic	Prob.
lnGDP does not Granger Cause lnCPI	0.06640	0.7975
lnCPI does not Granger Cause lnGDP	453.782	0.0371
lnCPI does not Granger Cause lnFDI	9.88201	0.0025
lnDI does not Granger Cause lnCPI	1.29832	0.2588

When the Table-10 is examined, in Balkan Countries –specific, the hypothesis that GDP is not Granger cause of CPI is accepted; in the same analysis, the hypothesis that CPI is not Granger cause of GDP is rejected. According to this result obtained, in Balkan countries, CPI affects GDP but GDP does not affect CPI. Depending on this, for Balkan Countries to increase their economic growth, it emerges that the countries have to increase their transparency degree. Through the same table, while the hypothesis that FDI is not Granger cause of CPI is accepted, the hypothesis that CPI is not Granger cause of FDI is rejected. Depending on this result, transparency structure of Balkan Countries affects foreign direct investments and, for being able to attract more foreign direct investment, it emerges that Balkan countries have to improve their transparency structures

6. Conclusion

After disintegration of Union of Soviet Socialist Republic, large changes emerged all over the world and, especially socialist countries called Iron Curtain countries were much more affected from this case. In Balkans region, Yugoslavia, Bulgaria, Romania, and Albania are among these countries specified. These countries, in addition to that the regime changes they experienced, large scaled changes experienced in their borders. After especially disintegration of Yugoslavia, many new countries emerged and this case formed rather large chaotic structures. However, it is unavoidable that every chaotic structure consequently transforms into stable economic structure, and depending on this heavy efforts in this region, a stable economic structure could be provided. Certainly, the region has many problems and, for coming over these problems, transparency comes into face as an important factor. In order to identify transparency problem of regional countries and the effects of this problem on economic growth and utilizing international finance resources, the current study was made. As a result of the study carried out, the identifications given in items below emerged.

In Balkan countries, positive co-integration relationship between CPI and GDP and the affecting rate of CDI GDP was calculated as 0.34.

- The direction of causality between CDI and GDP was identified from CDI to GDP and, according to this, the hypothesis that CDI is the cause of GDP was accepted.
- In Balkan Countries, it was identified that there was a positive directional co-integration between CPI and FDI and the affecting rate of CDI the FDI was calculated as 4.60.
- The direction of causality between CDI and FDI was identified from CDI to FDI and, according to this, the hypothesis that CDI is the cause of FDI was accepted.
- Raising CPI values that are at low level (reducing corruption) will make significantly contribution to the economic structures of Balkan countries.

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