

# Corruption Perception Index (CPI), as an Index of Economic Growth for European Countries

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## Abstract

Corruption is a political, economic, cultural and moral problem and it is considered as a universal phenomenon that exists in all developed and developing countries, in public and private sectors, as well as in non-profit and charity organizations. The aim of this study is to investigate the phenomenon of corruption in relation to the economic development and growth in European countries in general and specifically in the European Economic Area, the European Union, the Euro-zone and the non-European Union countries in Central and Eastern Europe, including Turkey. Our objective is specifically the examination of the relationship between corruption and per capita GDP, and between changes in corruption and per capita GDP growth rate. The survey shows that there is a strong inverse relationship between the level of corruption and the per capita GDP of almost all European countries, with the exception the non-European Union countries in the Central and Eastern Europe, including Turkey. Additionally, there is a positive linear relationship between the per capita GDP growth rate and the reduction in corruption levels for all categories of European countries.

## Keywords

Corruption, Corruption Index, Economic Growth, GDP Per Capita, Per Capita GDP Growth Rate, European Countries

## 1. Introduction—Measuring Corruption Perception

The corruption perception is based on subjective experiences of individuals or groups. Therefore, the measurement of corruption is carried out by specialized

business groups through appropriate questionnaires. The survey results are measurable in the form of simple or composite indicators [1]. Some of them are:

- The *Corruption Perception Index* (CPI), which is a composite index, has measured annually by the international non-governmental *Transparency International*<sup>1</sup> organization, since 1995, and records the level of perceived corruption in the public sector by citizens and specific organizations.
- The *Control of Corruption Index* (CCI), which is a composite index, has released every six months by the *World Bank*<sup>2</sup>, since 1996, and focuses on public corruption, using survey data from individuals and organizations outside the World Bank.
- The index of *Business International* (BI), which is measured from data for corruption, collected from around the world by the *Economist Intelligence Unit*<sup>3</sup>, starting these measurements during the time period 1981-1983.
- The *Global Corruption Barometer* (GCB), which explores public opinion about corruption and is published annually by the international non-governmental *Transparency International*<sup>4</sup> organization since 2003.
- The *Bribe Payers Index* (BPI), which is based on surveys of senior business and banking executives, is issued by the international non-governmental *Transparency International*<sup>5</sup> organization and reveals the ability of large companies to bribe public sector and institutions in less developed countries.
- The *International Country Risk Guide* (ICRG), which analyzes political and financial risk for more than 140 countries and is published monthly by the *Political Risk Services Inc*<sup>6</sup>.

The Corruption Perception Index (CPI) is the result of the recorded perceptions of the business community and individuals for corruption and is based on 12 sub-indices of specific entities which are listed in **Table A1** of the Appendix. At least three surveys are used for each country and currently these surveys cover more than 175 countries. It is considered as a composite index, which is mainly based on the perception of the people or specific institutions about corruption. Starting from 2012, the index takes values from the interval [0, 100], 1 wherein the value of 0 indicates the maximum corruption, while the value of 100 indicates the sense that there is no corruption at all in the country. This specific index of corruption perception will be used in this paper. However, the use of this index may create some problems when used as an important criterion for the actual levels of corruption in a country [2]:

- Problems due to research methodology, resulting from the lack of a precise

<sup>1</sup>Transparency International, (2016) "Corruption Perception Index 2015", URL: <http://cpi.transparency.org/cpi2015/>.

<sup>2</sup>TheWorld Bank, (2016), "Control of Corruption Index", URL: <http://www.worldbank.org/>.

<sup>3</sup>Economist Intelligence Unit, (2016), "Business International", URL: <http://www.eiu.com/>.

<sup>4</sup>Transparency International, (2016), "Global Corruption Barometer 2015", URL: [http://www.transparency.org/research/gcb/gcb\\_2015\\_16](http://www.transparency.org/research/gcb/gcb_2015_16).

<sup>5</sup>Transparency International, (2016), "Bribe Payers Index", URL: <http://www.transparency.org/bpi2011>.

<sup>6</sup>Political Risk Services Inc., (2016), "International Country Risk Guide", URL: <https://www.prsgroup.com/about-us/our-two-methodologies/icrg>.

definition of corruption internationally, while the measured final index is the result of a set of sub-indices expressing different forms of corruption.

- Problems due to provision of information from different sources in each country, and biased expression of opinion of individuals.
- Problems of countries ranking by corruption according to the value of the measured index, which often is not comparable with previous years.

## 2. Relating Corruption with Per Capita GDP & Per Capita GDP Growth

The per capita GDP growth rate is considered as the best indicator of economic growth. However, apart from the per capita GDP growth rate of a country ( $i$ ), it is also of particular significance whether the per capita GDP ( $y_i$ ) *converges* at some level, determined either by some internal criteria, set by the internal country economic policy, or by some acceptable external criteria set for this country. The basic condition for convergence is the negative relation of the per capita GDP growth rate ( $g_{yi}$ ) of country ( $i$ ) and the per capita GDP ( $y_i$ ) of the same country ( $i$ ). This relationship as a function has the form:

$$g_{yi} = f(\log y_i) \tag{1}$$

where:

$g_{yi}$  = The per capita GDP growth rate of country ( $i$ );

$y_i$  = The per capita GDP of country ( $i$ ).

For a constant growth rate ( $g_{yit_2}$ ), Equation (1) is written as:

$$y_{it_2} = y_{it_1} e^{g_{yit_2} \Delta t} \tag{2}$$

where:

$g_{yit_2}$  = The mean per capita GDP growth rate of country ( $i$ ), during the period of time;

$\Delta t$  (where  $\Delta t = t_2 - t_1$ );

$y_{it_1}$  = The initial per capita GDP of country ( $i$ ) at time ( $t_1$ );

$y_{it_2}$  = The final per capita GDP of country ( $i$ ) at time ( $t_2$ ).

And in logarithmic form:

$$g_{yit_2} = (\ln y_{it_2} - \ln y_{it_1}) / \Delta t \tag{3}$$

For ( $t_1 = t$ ) and ( $t_2 = t + 1$ ), *i.e.* for a period of time of one year, then  $\Delta t = 1$  and Equation (3) is written as a logarithmic difference for the estimation of the annual per capita GDP growth rate:

$$g_{yit(t+1)} = \ln y_{i(t+1)} - \ln y_{it} \tag{4}$$

[3], in order to include socio-economic factors in the calculation of economic growth rate, used an empirical form of Equation (4), which includes a group of socio-economic variables such as schooling, health systems, etc. His equation has the following form [4]:

$$g_{yit_2} = a \log y_{it_1} + cX + d \tag{5}$$

where:

$X$  = A group of variables which include socio-economic effects;  
 $a, c, d$  = Constants ( $a < 0$  for the cases of economic convergence).

Using data of the BI corruption index for 67 countries for the time period 1980-1983, Mauro [5] examined the effect of corruption on economic growth rate and investment. He found that there is a positive relationship between low-level corruption and high annual growth rate average during the period 1960-1985. Using empirical data he showed that the improvement of the corruption index by one degree leads to an increase in investments by 5% of GDP and an increase in the annual growth rate of per capita GDP by 0.5%. Mauro (1995, 1996) extended Barro equation (Equation (5)) for the per capita GDP growth, in order to include the corruption factor as follows [4]:

$$g_{yit_2} = a \log y_{it_1} + bCor_{it_1} + cX + d \quad (6)$$

where:

$Cor_{it_1}$  = Corruption index of country ( $i$ ) at time ( $t_1$ );  
 $X$  = A group of variables which include socioeconomic effects;  
 $a, b, c, d$  = Constants ( $a < 0, b > 0$ ).

Mauro [6] [7] used the ICRG index for the time period 1982-1995, and the BI index for the time period 1980-1983, for a sample of 106 countries, in order to examine the effect of corruption on growth and investment. He considered the average per capita GDP growth rate and the average investment rate of the time period 1960-1985 for each country as dependent variables. The results showed that the improvement in the corruption index of a country by a single unit causes an increase of more than 4% in the rate of investment and an increase of more than 0.5% in the per capita GDP growth rate.

Moreover, Ehrlich [8] studied the effects of corruption on economic growth, based on data for 152 countries for the time period 1960-1992. They found that the higher the level of corruption, the lower the rate of growth, while it became clear that the impact of corruption on economic growth in developed countries is lower.

Similarly, Akçay [4] studied the effect of corruption on growth for 54 developing and developed countries for the time period 1960-1995, using the equation of Mauro (Equation (6)) with a group of eight ( $X$ ) variables (increase of population, inflation, general government expenditure as a percentage of GDP, ratio of students to teachers, ratio of gross domestic investment to GDP, etc.), and the corruption index ICRG. The results of this study showed that there is a significant positive relationship between low corruption and high economic growth.

### 3. Specifying a Correlation between CPI & GDP Per Capita

Using elements of corruption perception index CPI and the per capita GDP of 90 to 140 countries for the time period 2001-2005, Shao *et al.* [9] suggested that there is a positive relationship between index ( $CPI$ ) and the GDP per capita ( $y$ ),

expressed by:

$$CPI \sim (y)^\mu \quad (7)$$

The positive exponent ( $\mu$ ) confirms that countries with high per capita GDP are less corrupted, while the per capita GDP of a country may be indicative of the corruption level existing in this country. Shao *et al.* found that if two countries have a wide difference in their CPI values, then these countries should have similar differences in their per capita GDP, *i.e.* the higher the value of CPI the higher the per capita GDP. The exponent ( $\mu$ ) takes a general value of  $0.27 \pm 0.02$ . Furthermore, Shao *et al.* studied the relationship between the CPI and the per capita GDP growth rate of four groups of countries according to their per capita income, following the income classification of the World Bank. They found that countries with low corruption (*i.e.* high values of CPI), show high rates of economic growth (high values of per capita GDP growth rate).

Similarly, Podobnik [10] suggested that the functional dependence can be fit by a power law:

$$CPI = N (y)^\mu \quad (8)$$

where:

$N$  = Coefficient ( $N > 0$ ).

Using 2006 data, Podobnik [10] found that the value of exponent ( $\mu$ ) was about 0.23, while the coefficient ( $N$ ) was found 0.56, using the [0, 10] scale of CPI.

Furthermore, in order to analyze the dispersion diagrams of the relationship between the average per capita GDP annual growth rate ( $g$ ) during the five year period 1999-2004 and the change in the value of CPI for the same period of time, [10] used the following relationship:

$$g_{y_{i_1 t_2}} = m \Delta (CPI_{i_1 t_2}) + u_i \quad (9)$$

where:  $u_i$  = Constant.

It was found that for almost all countries in the world, the straight line showed a positive slope ( $m$ ) equal to 0,09, which means that the increase of the [0, 10] scale of CPI by one unit causes an increase in the average per capita GDP annual growth rate ( $g$ ) by 1.7%. To estimate the average per capita GDP annual growth rate ( $g$ ), [10] used Equation (4).

Finally, Vlachos [11] studying the relevant scatter diagram for 172 countries, found that the apparent linear relationship on a log-log scale provided exponent values ( $\mu$ ) of Equation (8), equal to 0.21 for the period of time 1993-2012. He also found that for low income countries there is no positive exponential relationship between CPI and the average per capita GDP ( $y$ ). Additionally, for the period of time 2003-2012, and for a total of 119 countries he found that the linear trend line of Equation (9) showed a positive slope ( $m$ ) equal to 0.149 for all countries, while for the group of high and upper-middle income countries he found a positive slope equal to 0.173 and for the group of lower-medium countries and low-income countries he found a small positive slope equal to 0.042.

#### 4. Examining the Relation of CPI & Per Capita GDP in European Countries

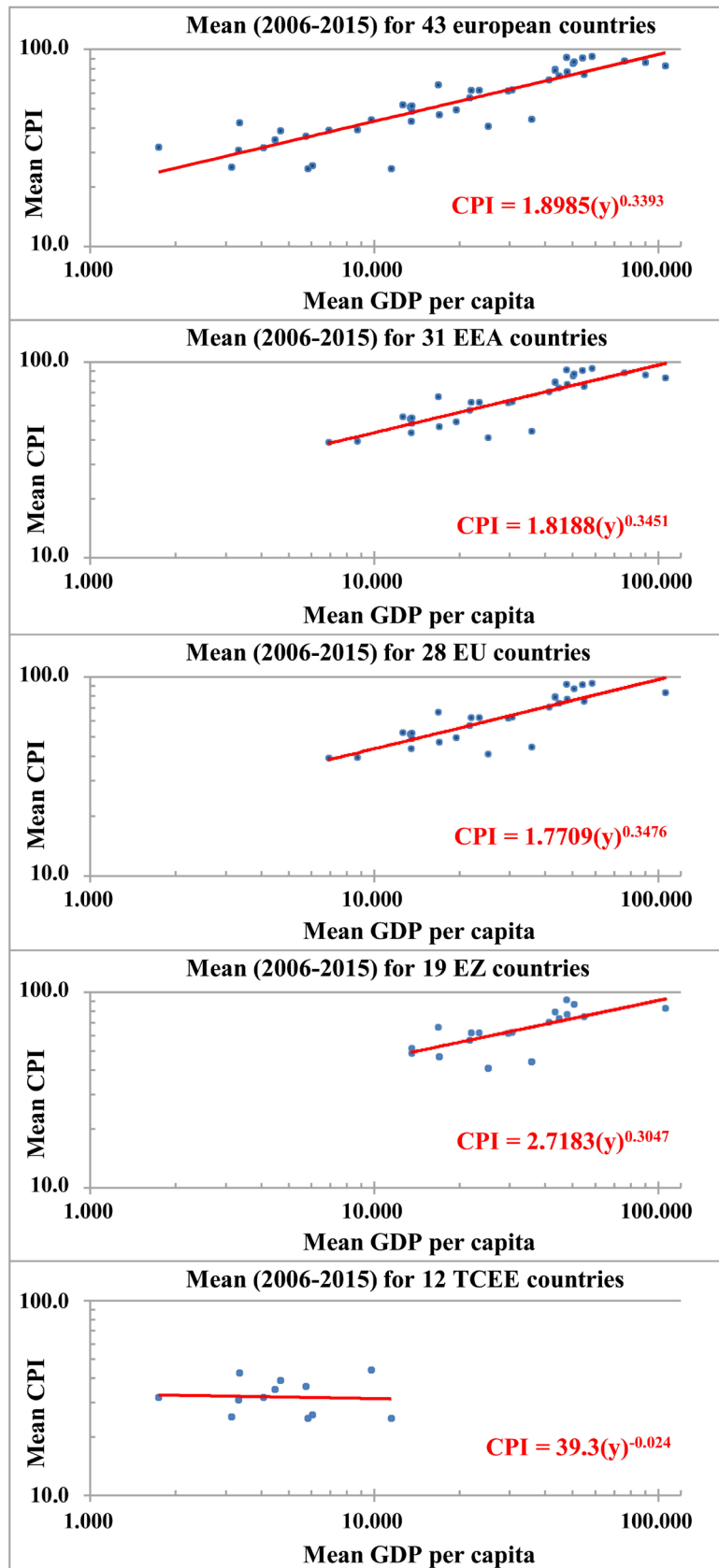
In the present study we examined the relationship between corruption and income levels in Europe for the decade 2006-2015. Specifically, we studied i) the relationship between the average per capita GDP ( $y$ ) at current prices, in \$ U.S. and the average corruption perception index ( $CPI$ ), during the mentioned time period, and ii) the relation between the average per capita GDP growth rate ( $g$ ) and the change of the average corruption perception index [ $\Delta(CPI)$ ] during the same time period. The source of the values for per capita GDP was the World Bank, while source of the values of CPI was the Transparency International organization. For the purpose of this survey Equations ((8) and (9)) were used, while all used values of CPI before 2012, having values of [0, 10] scale, were converted to [0, 100] scale in order to obtain compatibility for our analysis.

The groups of European countries used were:

- 43 European countries (all European countries).
- 31 countries member states of the European Economic Area (EEA-31).
- 28 countries member states the European Union (EU-28).
- 19 countries member states of the Euro-zone (EZ-19).
- 12 countries including Turkey and Central and Eastern Europe countries, which are not members of the EU (TCEE-12).

As it is shown in **Figure 1** and **Table 1**, there is generally a positive relationship between the level of corruption ( $CPI$ ) and the per capita GDP ( $y$ ), for all European countries, expressed by the value of exponent ( $\mu$ ), which is equal to 0.3393. This value for the 31 countries of EEA is 0.3451, for the 28 countries of EU is 0.3476 and for the 29 countries of EZ is 0.3047. Generally, it became clear that if two countries within the EEA, the EU or the EZ, differ in the value of CPI, then these countries should differ also in their per capita GDP, so that the country having a higher CPI value (lower perceived corruption), it has also a higher per capita GDP. It was confirmed that there is a statistically significant positive exponential relationship between average CPI and the average per capita GDP, for the majority of European countries. However, for the 12 countries including Turkey and Central and Eastern Europe countries, which are not members of the EU, the exponent values ( $\mu$ ) is almost 0 (zero), meaning that for these countries, representing the lower income countries of Europe, the level of corruption is not related to the level of per capita GDP.

Concerning the relation between the average per capita GDP growth rate ( $g$ ), and the change in the average corruption perception index [ $\Delta(CPI)$ ], as it is shown in **Figure 2** and **Table 1**, there is a positive linear relationship between the average per capita GDP growth rate and the change in the level of corruption, for all European countries, expressed by the slope of a straight line ( $m$ ) which is 0.0186. This means that an increase of CPI value by one unit in the [0, 100] corruption scale, will cause an increase in the average per capita GDP annual growth rate by 1.86%. The corresponding values for the 31 countries of



**Figure 1.** Relation between CPI and GDP per capita.

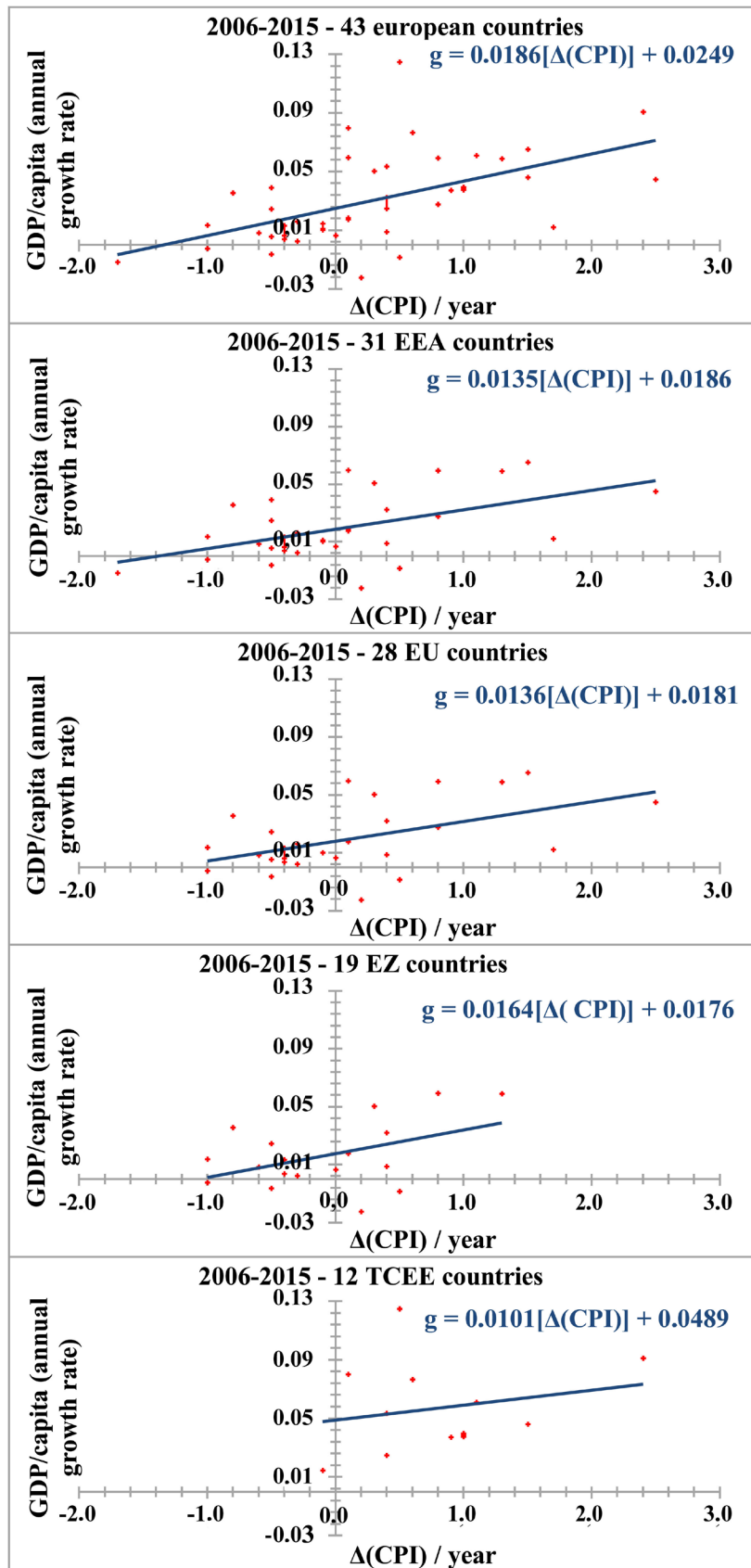


Figure 2. Relation between per capita GDP annual growth rate and  $\Delta(\text{CPI})/\text{year}$ .



**Table 1.** Summarized results of survey.

Group of countries	Exponent $\mu$ (Equation (8))	Slope $m$ (Equation (9))
43 European countries	0.3393	0.0186
31 EEA countries	0.3451	0.0135
28 EU countries	0.3476	0.0136
19 EZ countries	0.3047	0.0164
12 non-EU TCEE countries	-0.0240	0.0101

EEA is 1.35%, for the 28 countries of EU is 1.36% and for the 19 countries of EZ is 1.64%, showing that there is a statistically significant positive dependence between the per capita GDP growth rate and the change in the CPI. Finally, for the 12 countries including Turkey and Central and Eastern Europe countries, which are not members of the EU, an increase of CPI value by one unit will cause an increase in the average per capita GDP annual growth rate by 1.01%, although the result for the last case is not statistically significant.

## 5. Conclusions

From the previous analysis, we may conclude that there is a positive relationship between the level of corruption and the per capita income, for almost all European countries, with the exception of the non-EU countries of Central and Eastern Europe, including Turkey. This shows that if two countries differ in the value of CPI, then these countries should differ also in their per capita GDP, so that the country having a higher CPI value (lower perceived corruption), it also has a higher per capita GDP.

Additionally, the analysis showed that there is a positive linear relationship between the per capita GDP growth rate and the change in the level of corruption, for all groups of European countries. This leads to the interesting conclusion that reducing the level of corruption in a country causes a significant increase of GDP and wealth of this country.

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## Appendix Tables

### Appendix 1

**Table A1.** Sub-indices for the estimation of corruption perception index (CPI).

Code	Description
AFDB	African Development Bank—Governance Ratings
BF (SGI)	Bertelsmann Foundation—Sustainable Governance Indicators
BF (BTI)	Bertelsmann Foundation—Transformation Index
IMD	IMD World Competitiveness Yearbook
ICRG	Political Risk Services—Country Risk Guide
WB	World Bank—Country Performance and Institutional Assessment
WEF	World Economic Forum—Executive Opinion Survey
WJP	World Justice Project—Rule of Law Index
EIU	Economist Intelligence Unit—Country Risk Assessment
GI	Global Insight—Country Risk Ratings
PERC	Political and Economic Risk Consultancy—Asian Intelligence
FH	Freedom House—Nations in Transit

Source: Transparency International (2016).

### Appendix 2. Corruption Perception Indices of European Countries

**Table A2.** Corruption perception indices of all European countries for years 2005-2015.

Country	Code	CPI										
		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Albania	ALB	24.0	26.0	29.0	34.0	32.0	33.0	31.0	33.0	31.0	33.0	36.0
Armenia	ARM	29.0	29.0	30.0	29.0	27.0	26.0	26.0	34.0	36.0	37.0	35.0
Austria	AUT	87.0	86.0	81.0	81.0	79.0	79.0	78.0	69.0	69.0	72.0	76.0
Azerbaijan	AZE	22.0	24.0	21.0	19.0	23.0	24.0	24.0	27.0	28.0	29.0	29.0
Belarus	BLR	26.0	21.0	21.0	20.0	24.0	25.0	24.0	31.0	29.0	31.0	32.0
Belgium	BEL	74.0	73.0	71.0	73.0	71.0	71.0	75.0	75.0	75.0	76.0	77.0
Bosnia & Herzegovina	BIH	29.0	29.0	33.0	32.0	30.0	32.0	32.0	42.0	42.0	39.0	38.0
Bulgaria	BGR	40.0	40.0	41.0	36.0	38.0	36.0	33.0	41.0	41.0	43.0	41.0
Croatia	HRV	34.0	34.0	41.0	44.0	41.0	41.0	40.0	46.0	48.0	48.0	51.0
Cyprus	CYP	57.0	56.0	53.0	64.0	66.0	63.0	63.0	66.0	63.0	63.0	61.0
Czech Republic	CZE	43.0	48.0	52.0	52.0	49.0	46.0	44.0	49.0	48.0	51.0	56.0
Denmark	DNK	95.0	95.0	94.0	93.0	93.0	93.0	94.0	90.0	91.0	92.0	91.0
Estonia	EST	64.0	67.0	65.0	66.0	66.0	65.0	64.0	64.0	68.0	69.0	70.0
Finland	FIN	96.0	96.0	94.0	90.0	89.0	92.0	94.0	90.0	89.0	89.0	90.0

## Continued

France	FRA	75.0	74.0	73.0	69.0	69.0	68.0	70.0	71.0	71.0	69.0	70.0
Georgia	GEO	23.0	28.0	34.0	39.0	41.0	38.0	41.0	52.0	49.0	52.0	52.0
Germany	DEU	82.0	80.0	78.0	79.0	80.0	79.0	80.0	79.0	78.0	79.0	81.0
Greece	GRC	43.0	44.0	46.0	47.0	38.0	35.0	34.0	36.0	40.0	43.0	46.0
Hungary	HUN	50.0	52.0	53.0	51.0	51.0	47.0	46.0	55.0	54.0	54.0	51.0
Iceland	ISL	97.0	96.0	92.0	89.0	87.0	85.0	83.0	82.0	78.0	79.0	79.0
Ireland	IRL	74.0	74.0	75.0	77.0	80.0	80.0	75.0	69.0	72.0	74.0	75.0
Italy	ITA	50.0	49.0	52.0	48.0	43.0	39.0	39.0	42.0	43.0	43.0	44.0
Kazakhstan	KAZ								28.0	26.0	29.0	28.0
Kosovo	KSV						28.0	29.0	34.0	33.0	33.0	33.0
Latvia	LVA	42.0	47.0	48.0	50.0	45.0	43.0	42.0	49.0	53.0	55.0	55.0
Liechtenstein	LIE											
Lithuania	LTU	48.0	48.0	48.0	46.0	49.0	50.0	48.0	54.0	57.0	58.0	61.0
Luxembourg	LUX	85.0	86.0	84.0	83.0	82.0	85.0	85.0	80.0	80.0	82.0	81.0
Macedonia FYR	MKD	27.0	27.0	33.0	36.0	38.0	41.0	39.0	43.0	44.0	45.0	42.0
Malta	MLT	66.0	64.0	58.0	58.0	52.0	56.0	56.0	57.0	56.0	55.0	56.0
Moldova	MDA	29.0	32.0	28.0	29.0	33.0	29.0	29.0	36.0	35.0	35.0	33.0
Montenegro	MNE			33.0	34.0	39.0	37.0	40.0	41.0	44.0	42.0	44.0
Netherlands	NLD	86.0	87.0	90.0	89.0	89.0	88.0	89.0	84.0	83.0	83.0	87.0
Norway	NOR	89.0	88.0	87.0	79.0	86.0	86.0	90.0	85.0	86.0	86.0	87.0
Poland	POL		37.0	42.0	46.0	50.0	53.0	55.0	58.0	60.0	61.0	62.0
Portugal	PRT	65.0	66.0	65.0	61.0	58.0	60.0	61.0	63.0	62.0	63.0	63.0
Romania	ROU	30.0	31.0	37.0	38.0	38.0	37.0	36.0	44.0	43.0	43.0	46.0
Russia	RUS	24.0	25.0	23.0	21.0	22.0	21.0	24.0	28.0	28.0	27.0	29.0
Serbia (& Montenegro)	SRB	28.0	30.0	34.0	34.0	35.0	35.0	33.0	39.0	42.0	41.0	40.0
Slovakia	SVK	43.0	47.0	49.0	50.0	45.0	43.0	40.0	46.0	47.0	50.0	51.0
Slovenia	SVN	61.0	64.0	66.0	67.0	66.0	64.0	59.0	61.0	57.0	58.0	60.0
Spain	ESP	70.0	68.0	67.0	65.0	61.0	61.0	62.0	65.0	59.0	60.0	58.0
Sweden	SWE	92.0	92.0	93.0	93.0	92.0	92.0	93.0	88.0	89.0	87.0	89.0
Switzerland	CHE	91.0	91.0	90.0	90.0	90.0	87.0	88.0	86.0	85.0	86.0	86.0
Turkey	TUR	35.0	38.0	41.0	46.0	44.0	44.0	42.0	49.0	50.0	45.0	42.0
Ukraine	UKR	26.0	28.0	27.0	25.0	22.0	24.0	23.0	26.0	25.0	26.0	27.0
United Kingdom Data Not a	GBR vailabl	86.0e	86.0	84.0	77.0	77.0	76.0	78.0	74.0	76.0	78.0	81.0

Source: Transparency International (2016).

### Appendix 3. GDP per capita of European Countries

**Table A3.** GDP per capita of all European countries for years 2005-2015 (current U.S. \$).

Country	Code	GDP per capita										
		2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Albania	ALB	2.709	3.005	3.603	4.371	4.114	4.094	4.438	4.248	4.412	4.569	3.945
Armenia	ARM	1.625	2.127	3.081	3.920	2.916	3.125	3.417	3.566	3.717	3.862	3.489
Austria	AUT	38.242	40.431	46.587	51.386	47.654	46.660	51.124	48.334	50.505	51.323	43.775
Azerbaijan	AZE	1.578	2.473	3.851	5.575	4.950	5.843	7.190	7.394	7.812	7.886	5.496
Belarus	BLR	3.126	3.849	4.736	6.376	5.176	5.819	6.306	6.722	7.722	8.025	5.740
Belgium	BEL	36.967	38.852	44.404	48.425	44.881	44.383	47.700	44.741	46.508	47.347	40.324
Bosnia & Herzegovina	BIH	2.928	3.352	4.108	4.975	4.586	4.475	4.861	4.495	4.748	4.852	4.249
Bulgaria	BGR	3.853	4.456	5.933	7.296	6.956	6.843	7.814	7.378	7.675	7.853	6.993
Croatia	HRV	10.224	11.363	13.547	15.894	14.157	13.509	14.542	13.236	13.575	13.481	11.536
Cyprus	CYP	25.324	27.170	31.387	35.391	32.106	30.818	32.234	28.951	27.908	27.341	23.243
Czech Republic	CZE	13.318	15.159	18.334	22.649	19.698	19.764	21.717	19.730	19.916	19.745	17.548
Denmark	DNK	48.817	52.041	58.501	64.182	57.896	57.648	61.304	58.125	60.362	61.331	51.989
Estonia	EST	10.338	12.595	16.586	18.095	14.726	14.639	17.454	17.422	19.030	19.941	17.119
Finland	FIN	38.969	41.121	48.289	53.401	47.107	46.205	50.788	47.416	49.638	49.888	42.311
France	FRA	34.880	36.545	41.601	45.413	41.631	40.706	43.807	40.838	42.571	42.697	36.206
Georgia	GEO	1.530	1.873	2.492	3.175	2.707	2.964	3.725	4.143	4.274	4.430	3.796
Germany	DEU	34.697	36.448	41.815	45.699	41.733	41.788	45.936	44.065	45.688	47.903	41.313
Greece	GRC	22.552	24.801	28.827	31.997	29.711	26.919	25.915	22.243	21.875	21.674	18.002
Hungary	HUN	11.162	11.39	13.843	15.669	12.967	13.026	14.049	12.834	13.614	14.118	12.364
Iceland	ISL	56.446	56.09	68.345	55.230	40.362	41.620	45.971	44.259	47.493	52.037	50.173
Ireland	IRL	50.887	54.32	61.388	61.235	51.984	48.541	52.564	49.231	52.035	55.503	61.134
Italy	ITA	31.959	33.41	37.699	40.640	36.977	35.852	38.332	34.814	35.370	35.365	29.958
Kazakhstan	KAZ								12.387	13.891	12.807	10.510
Kosovo	KSV						3.283	3.737	3.601	3.890	4.074	3.562
Latvia	LVA	7.559	9.668	14.044	16.349	12.219	11.330	13.798	13.799	15.033	15.710	13.649
Liechtenstein	LIE											
Lithuania	LTU	7.863	9.241	12.298	14.962	11.837	11.989	14.367	14.343	15.692	16.490	14.147
Luxembourg	LUX	79.494	88.68	104.841	112.851	101.222	103.267	113.240	105.447	113.727	116.613	101.450
Macedonia FYR	MKD	3.064	3.351	4.064	4.822	4.566	4.561	5.080	4.710	5.220	5.453	4.853
Malta	MLT	15.835	16.67	19.376	21.929	20.676	21.088	22.957	22.082	24.057	25.125	22.596
Moldova	MDA	831	951	1.230	1.696	1.526	1.632	1.971	2.047	2.244	2.245	1.848
Montenegro	MNE			5.957	7.326	6.698	6.682	7.319	6.587	7.187	7.378	6.406
Netherlands	NLD	41.577	44.45	51.241	56.929	51.900	50.341	53.537	49.475	51.574	52.157	44.300
Norway	NOR	66.775	74.11	85.129	96.881	80.018	87.646	100.575	101.564	102.910	97.005	74.400

**Continued**

Poland	POL	8.021	9.041	11.260	14.001	11.528	12.600	13.893	13.145	13.781	14.342	12.555
Portugal	PRT	18.785	19.82	22.780	24.816	23.064	22.540	23.195	20.577	21.619	22.124	19.222
Romania	ROU	4.676	5.829	8.214	10.136	8.220	8.297	9.200	8.558	9.585	10.020	8.973
Russia	RUS	5.323	6.920	9.101	11.635	8.563	10.675	14.228	15.042	15.552	14.052	9.093
Serbia (& Montenegro)	SRB	3.528	4.130	5.458	6.702	5.821	5.412	6.423	5.659	6.354	6.200	5.235
Slovakia	SVK	11.669	13.13	16.058	18.650	16.513	16.602	18.186	17.275	18.192	18.595	16.088
Slovenia	SVN	18.169	19.72	23.841	27.502	24.634	23.439	24.984	22.486	23.150	24.021	20.727
Spain	ESP	26.511	28.48	32.709	35.579	32.333	30.738	31.832	28.648	29.371	29.719	25.832
Sweden	SWE	43.085	46.25	53.324	55.747	46.207	52.076	59.594	57.134	60.283	59.180	50.580
Switzerland	CHE	54.798	57.34	63.223	72.120	69.672	74.277	88.003	83.164	84.659	85.815	80.945
Turkey	TUR	7.117	7.727	9.309	10.382	8.624	10.111	10.539	10.539	10.801	10.304	9.126
Ukraine	UKR	1.829	2.303	3.069	3.891	2.545	2.965	3.570	3.855	4.030	3.105	2.115
United Kingdom	GBR	41.524	44.01	49.949	46.523	38.010	38.709	41.243	41.538	42.407	46.412	43.876

Source: World Bank (2016). The World Bank, (2016), "GPD per capita, (current US\$)", URL: <http://data.worldbank.org/indicator/NY.GDP.PCAP.CD>.