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ECONOMIC CONSEQUENCES OF CORRUPTION IN TRANSITION ECONOMIES

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ABSTRACT

Background: Corruption is one of the perturbing issues that has manifested itself in almost every part of the globe. Its impact through direct and indirect means does not only affect a person but the entire population which can further extend to generations. Many scholars in light of its undesirable effect have undertaken studies to create awareness of the degree of the impact corruption is causing or can cause, both socially and economically. However, countries with transition economies have been vulnerable to corruption due to factors like privatization and restitution during the transition process. As such, Czech Republic, Hungary, Slovakia and Poland which are European countries with transition economies were studied with regards to the economic consequence of corruption. **Methods:** The goal of this paper is to assess whether the level of corruption differs significantly among the four countries and to ascertain the effect of corruption on economic growth of the selected countries. A quantitative research method was employed in the research design and the analyses of this paper. To achieve the first specific objective, that is, to assess whether the level of corruption differs significantly among the four countries, the Kruskal Wallis test was used. Also, to achieve the second specific objective, the data for the socio-economic variables were visualized using descriptive graphs and then correlation and multiple linear regression were used. **Results:** The analyses revealed that the level of corruption was significantly different among the countries for the selected period of years 2008-2017. The economic consequences were evident in the level of Foreign Direct Investment, Gross National Expenditure and GDP growth. **Conclusions:** As clearly highlighted in the analysis, corruption has a tremendous devastating effect on socio-economic fortunes of a countries. Arguably, it can reasonably be concluded that the level of developments of certain countries could have been much better if corruption was reduced.

INTRODUCTION

KEY WORDS
Corruption, transition economies, public officials, transmission channels, economic impact, private gain.

Corruption has become an ancient canker that continues to manifest in generations. According to Wells and Hymes, corruption is not a new phenomenon to human life as primary evolutions and civilizations show records of corrupt activities [26]. For example, Egwemi describes corruption in general context to have no regard for a particular race, ethnicity, creed or even geographical settings [10]. Corruption assessment and ratings have found all countries guilty, with under-developed and developing countries dominating. It does not suffice to consider corruption as a canker of only underdeveloped or developing countries. Corruption has become an uncompromised subject of nations and institutions since every country is prone to it. Globally, countries are in unanimous position that corruption to some extent is, and has been a constraint to their political, economic and social development for which optimum urgent attention is required. As such, there is almost no single country in the world where corruption is not discussed [34].

Economic transition has paved the way for several cases of corruption in countries and institutions. Instances of corruption were reported during the economic transition of China with consequences on their social and economic growth [31]. According to Hellman et al., the Soviet Union and its economic system collapsed with the revolutionary changes. This paved the way for new level of economic management [11]. The policy shift resulting from the economic transitions translated into a huge boost within many sectors and facets [13]. Nonetheless, the emergence of new dimensions of economic management also came with its problems due to improper channeling of resources [8]. Ideologies to describe the changes and further fix the challenges faced by the Soviet Union and Eastern European countries were lacking, as scientists were unprepared for the windfall and corruption was an inevitable problem. Transition economies are more vulnerable to corruption due to privatization, where state officials demand bribes and kickbacks from interested private agents for state-owned business [12]. Hence, the main aim of this paper is to analyze the economic consequences of corruption in selected transition economies in period 2008-2017.

Although, corruption as a term has negative connotation and implications yet some authors consider it as a necessary component under certain circumstances to yield significant positive economic effect. Lui argues that corruption can reduce the amount of time spent in queues during economic processes [17]. Leff also believes that corruption is able to enhance growth by allowing individuals to pay bribes in order to evade inefficient rules and bureaucratic delays that retards productivity [16]. This ensures resources are available at the appropriate place and time for smooth production processes. Leff further believes that governments generally become reluctant to actively support economic activity when focus on economic pursuits or innovation is missing [16]. Huntington also points out that if corruption is reduced without corresponding changes to eliminate inefficient rules, business activities and economic growth may slow down [14]. Moreover, corruption positively impacts economic growth where the existence of insufficient and ineffectiveness of institutions facilitate and nourishes the process. Efficiency in allocating resources is maintained as corrupt officials give contracts to the highest bidder in bribes [4]. Because payment of highest bribe is one of the major criteria for contract or resource allocation, the urge to collect revenue

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becomes prior under corruption. The above is empirical support of the positive impact corruption has on an economy.

However, more negative impacts have been highlighted by other authors. Shleifer and Vishny argue that empowering individuals with veto power over approval for projects will certainly increase corruption and slow economic growth [22]. To enlighten this point, Myrdal reports that irrelevant barriers will be created by corrupt officials to take more bribes when offered arbitrary powers which would rather cause additional service delays and economic harm [19]. Also, corruption introduces uncertainties into the economic environment that can affect private firms [20]. The onus of most corruption usually falls on the poor in society since they cannot afford to recompense the necessary bribes for their ward's education, quality healthcare or other public services such as proper sanitation, potable water supply, electricity etc. The most common negative economic impacts are outlined and discussed below [29].

Bureaucratic Inefficiency is pronounced in countries with high level of corruption. Empirical evidences describe the relationship between the extent of bribery and the increasing time entrepreneurs or business people spend with public officials for favors. Dimant and Tosato posit from a game theory perspective that, corruption and bureaucratic inefficiency to be viscous cycle where beneficiaries of the inefficient due to corruption system, have no incentive to streamline it [9].

Low Foreign Direct Investment is another effect of corruption. Arguments on the effect of corruption on a country's economic growth through investment prevails. Dimant and Tosato report that such situation can result from inefficient public investment where although investment levels may increase in absolute terms inefficient allocation of funds may reduce absolute productivity [9]. They again report that corruption can also lead to lower levels of infrastructure, thus deteriorating the investment climate of a nation. These claims had support from early empirical evidence found in a paper that uses data from 69 countries in the period 1980–1983 [24].

High government spending leading to high fiscal deficit results. Theoretically, it has been argued that as corruption reduces public income (lower levels of growth, higher levels of inequality) and increases public expenditure (more inefficient spending), it thus follows that it will also increase fiscal deficits. Jain opines that corruption leads to resource misallocations when investment of public funds or approval of private investments are based on decisions that generates higher personal returns to public officials rather than general economic or social value [15], [28].

There is **low Gross Domestic Product growth rate** in countries with high corruption. Murphy et al. suggest that corruption can make people shift from productive to unproductive rent-seeking activity [18]. This shift in attitude creates gaps in productive environment that reduces economic development. The frequency and magnitude of corruption leads to lower levels of investment, higher levels of indirect taxation, misallocation of resources due to distorted incentives, low consumption of local products due to approval of inferior products and high government spending affects the Gross Domestic Product (GDP) of a country [29]. There is low economic growth rate as this depends on the GDP growth rate [32]. There is a significant relationship between the allocation of unproductive activities and corruption, as well as higher levels of indirect taxation and corruption, thereby reducing growth rates [24]. Also, Aidt reports that evidence for the “grease the wheel hypothesis” is very weak, and that there is a very strong negative correlation between wealth per capita and corruption, and that the effect of corruption on GDP per capita will lead to unsustainable development [1].

MATERIALS AND METHODS

The main aim of this article is to analyze the economic consequences of corruption in Czech Republic, Slovakia, Hungary and Poland who exhibit transition economies. Based on the main aim and the theoretical review, this research is structured to achieve the following specific objectives:

1. To assess whether the level of corruption differs significantly among the four countries.
2. To ascertain the effect of corruption on economic growth of the selected countries.

Tasar [2018] applied a similar approach in their research [30]. To achieve the first specific objective will require the test of hypothesis. The statement of the null and alternative hypothesis respectively is:

H_0 : the level of corruption is the same among the four country

H_1 : the level of corruption is different for at least any two different countries.

The Corruption Perception Index (CPI) was chosen for analyzing the country's rate of corruption. In 2012, the CPI's rating scale was revised (it was previously from 0 to 10, now it is from 0 to 100). Due to the need for longer-term comparisons, the actual rating on the previous scale of 0 to 10 – where 0 represented a

very corrupt country and 10 indicated a country without corruption – has been converted for data analysis using the post-2012 corruption rating.

The economic impact of corruption was explored using three variables which were Gross Domestic Product measured through real GDP growth (GDP growth), Net Foreign Direct Investment (NFDI) and Government spending also measured through the Gross National Expenditure (GNE). These variables were chosen based on the literature search conducted above [30].

The data was analyzed using Statistical Package for Social Science (SPSS). Assessment of the normality of data is a prerequisite for many statistical tests especially for parametric statistical tests where normality of the data is an underlying assumption. The Shapiro-Wilk test was used to check for normal distribution of the data. It has high power to produce good results even with small observation size. Since the sample size was less than 50 for each variable under study, it was used to check for the normality of the data especially for all the economic variables and that of CPI. The economic variables were all quantitative with parametric methods applicable and that, to check for the normality of their data were necessary, unlike those for the social variables which are perception based or categorical.

To achieve the first specific objective, which is to assess whether the level of corruption differs significantly among the four countries, the Kruskal-Wallis test was used to test for the hypothesis highlighted in previous text of this chapter. The Kruskal-Wallis test which is the non-parametric version of Analysis of Variance (ANOVA) tests whether the median CPI scores are significantly the same across the countries over the selected periods or not. The Kruskal-Wallis test is appropriate to test for equal means of several populations of a variable under study when assumptions underlying ANOVA, like the populations from which the samples are drawn are normally distributed with equal variances are unmet, or when the data for analysis consist only of ranks.

Also, to achieve the second specific objective, the data for the socio-economic variables were visualized using descriptive graphs and then correlation and multiple linear regression were used. Correlation analyses were also used to assess the strength and direction of linear association CPI and the socio-economic variables. Test for association between sample pair of data was done using the Spearman Rank correlation coefficient. Generally, correlation coefficients fall within -1 and +1 inclusively. A negative value indicates a reverse relationship and vice versa. A correlation coefficient closer to +1 or -1 indicates strong positive or negative linear association respectively and it is considered moderate when it falls at or around -0.5 or +0.5 [2].

Finally, to check for how much effect can be explained in a variable by other variables the regression analysis is required. A multiple linear regression was used to model the variables included. A multiple linear regression establishes a linear equation or relation between one variable called the response or dependent variable and two or more variables called predictor or independent variables, where the independent variables explain the variation in the response variable. A multiple linear regression model involves coefficients called regression parameters and the variables in the form of an equation.

The general form of a multiple linear regression model is: [3] $\hat{Y} = B_0 + B_1x_1 + B_2x_2 + B_3x_3 + \dots + B_nx_n + \varepsilon_i$ for $i = 1, 2, 3, \dots, n$ where

\hat{Y} is the dependent variable,

B_i for $i = 0, 1, 2, 3, \dots, n$ is the regression parameters

x_i for $i = 1, 2, 3, \dots, n$ is the independent variables and

ε_i for $i = 1, 2, 3, \dots, n$ being the error term

RESULTS

The corruption ratings countries are explored first. Table-1 shows that Poland rated on average as the least corrupt country over the selected period with a value of 56.8. Apart from 2008 and 2009, Poland performed better each year in CPI scores. It is again apparent from table 5 that Poland's minimum CPI score since 2012 to 2017 which is 58, is the highest CPI score of the remaining countries from 2008 to 2017. Moreover, Poland recorded the highest rank of 29 both in 2015 and 2016. This tells a probable effort by Poland to consistently improve or maintain their ratings along the years. From 2009 to 2014, Hungary rated better than both Czech Republic and Slovakia. However, Czech Republic whose ratings fell behind Hungary from the period 2009 to 2014 showed improvement from 2015 to overturn the trend between it and Hungary. Comparing the average CPI score over the study period shows that Czech Republic has performed better than Hungary with a value of 57.0 and 55.0 respectively. It can be seen that whilst countries have shown improvement from 2012 to 2017, Hungary on the other hand declined in ratings. Hungary failed to

attain the global average of 50 in both 2017 and 2016. This signifies a current widespread of corruption in Hungary than the other selected countries.

Table-1: CPI scores of the countries from 2008 to 2017

Country	Poland		Czech Republic		Hungary		Slovakia	
	CPI score	Rank	CPI score	Rank	CPI score	Rank	CPI score	Rank
2008	46	58	52	45	51	47	50	52
2009	50	49	49	52	51	66	45	56
2010	53	41	46	53	47	50	43	59
2011	55	41	44	57	47	54	40	66
2012	58	41	49	54	55	56	46	62
2013	60	38	48	57	54	47	47	61
2014	61	36	51	53	54	48	50	54
2015	63	29	56	38	51	50	51	50
2016	62	29	55	47	48	57	51	54
2017	60	36	57	42	45	66	50	54

Due to the periodic changes in CPI ratings among the countries, there was the need to check if the average CPI scores were significantly different among the four countries for the selected period. The result for the check for normality of the CPI scores at 0.05 significance test is found in Table-2. The result showed that, all CPI scores for all the countries were normally distributed as their p-values which were all more than 0.05. The CPI scores as measured through perceptions will at most be at the ordinal measurement scale. As such, the Kruskal Wallis test which is the non-parametric version for ANOVA was used to test the median scores of the countries at 0.05 significance level. With ties adjusted for in the ranks, the Kruskal Wallis test with 3 degrees of freedom produced a test statistic of 12.95. The test statistic had a p-value of 0.005 which was statistically significant at 0.05 significance level. There was enough evidence at 0.05 significance level to conclude that the median CPI scores were different for at least any two different countries for the chosen period under consideration.

Table-2: Descriptive statistics of CPI scores of the countries

	N	Minimum	Maximum	Mean	Std. Deviation
Poland	10	46.00	63.00	56.8000	5.63323
Czech Republic	10	44.00	57.00	50.7000	4.32178
Hungary	10	45.00	55.00	50.3000	3.43350
Slovakia	10	40.00	51.00	47.3000	3.77271

The linear relationship among the economic variables and their CPI scores over the chosen period were investigated within each country to see what level corruption associates with each other. For example, Rose-Ackerman reports that studies on investment show highly negative association with corruption and hence reduces the rate of economic growth [21]. The direction, strength and significance of these associations are explored in this section. Spearman rank correlation coefficients were computed since the level of measurement of the CPI data was at most at the ordinal measurement scale. These correlations were then evaluated at 0.05 and 0.01 significance levels to check for any statistically significant correlation among the included variables. The result of the correlation analysis is shown in Table-3.

For **Hungary**, there was a very weak positive linear relationship between CPI and GNE. This indicates a direct linear relationship where an increase in CPI increases GNE weakly and vice versa. Also, there was very weak negative correlation between CPI and both NFDI and GDP growth. This implies a very weak inverse linear relationship where both NFDI and GDP growth decrease with increase in CPI and vice versa. These

correlations were not statistically significant at both 0.01 and 0.05 significance levels. There was insufficient evidence at both 0.01 and 0.05 significance levels to conclude that there is mutual independence between CPI and the economic variables.

For **Poland**, there was a strong negative correlation between CPI and GNE where an increase or decrease in CPI respectively decreases or increases GNE. This situation looks contradictory at first thought, but it is likely that, higher corruption leaves less revenue to the country to make more expenses. Also, there was a very weak positive correlation between CPI and NFDI where high corruption tends to increase investments. CPI had a weak negative linear association with GDP growth for which GDP growth decreases with increasing level of rated corruption and vice versa. However, only the correlation between CPI and GNE showed statistical significance at 0.01 significance level.

For **Slovakia**, there was a weak negative linear relationship between CPI and both GNE and NFDI. That is, higher corruption reduces government spending and vice versa whilst NFDI also decreases with increasing CPI and vice versa. GDP growth tends to increase weakly with increasing CPI and vice versa. This could mean more as investment and consumption activities increase, the chances to undertake corruption become high and more. These correlations were, however, statistically insignificant both at 0.01 and 0.05 significance levels.

Correlation results for **Czech Republic** show a moderate negative linear association between CPI and GNE, weak positive correlation between CPI and NFDI and strong positive correlation between CPI and GDP growth. Increase in investments and GDP growth increases corruption in Czech Republic and vice versa. Also, GNE decreases as CPI increases and vice versa. However, there was enough evidence at 0.05 significance level to conclude only that the mutual dependence between GDP growth and CPI were significant.

Multiple linear regression was employed to determine the extent at which selected independent variables affect and explain the changes in the selected dependent variable due to their interaction through the linear model. Since GDP growth is an indicator to measure economic growth, it was selected as the dependent variable. As such, CPI scores, NFDI and GNE were the independent variables. A fixed model which assumes that the independent variables are known and fixed was adopted for the multiple linear regression. The range of values for NFDI and GDP growth was negative for some countries. Since negative data cannot be used in the multiple linear regression, a linear transformation was done to these variables. Since these values are in percentages, 2% was added to the NFDI data for all countries whilst 7% was added to the GDP growth data which transformed all values into positive. Linear transformations only affect the values of the constant in the model. This was not problematic since the focus of this thesis was on how much corruption affects economic growth amid other economic variables. The transformed values as used for the multiple regression is presented in the appendix. However, the result of the multiple regression is shown in Table-4.

Table 4 indicates no multicollinearity among the variables as the Variance Inflation Factor (VIF) were all less than 10. There is insignificant correlation among the predictor variables in the regression models.

With emphasis on the effect of CPI on the GDP growth, the result shows that CPI have negative effect on GDP growth in Poland and Hungary whilst it has positive effect on GDP growth in Slovakia and Czech Republic. For Poland, GDP growth changes by 0.096 (9.6%) on average for a unit change in CPI when GNE and NFDI are held constant. Also, for Hungary, GDP growth changes on average by 0.101 (10.1%) for a unit change in CPI when GNE and NFDI are held constant. Czech Republic had an average change of 0.341 (34.1%) in GDP growth for a unit change in CPI when GNE and NFDI are held constant. Finally, there is an average change of 0.283 (28.3%) in GDP for Slovakia for a unit change in CPI when GNE and NFDI are held constant. However, all these effects proved statistically insignificant at 0.05 significance level since the p-values of the parameters were all more than 0.05.

Table-3: Result of the correlation analysis of CPI and economic variables

		CZECH REPUBLIC			
		CPI score	GNE	NFDI	GDP growth
CPI Scores	Correlation Coefficient	1.000			
	Sig. (2-tailed)	.			
GNE	Correlation Coefficient	-0.620	1.000		
	Sig. (2-tailed)	0.056	.		
NFDI	Correlation Coefficient	0.152	-0.333	1.000	
	Sig. (2-tailed)	0.675	0.347	.	
GDP growth	Correlation Coefficient	0.717	-0.406	-0.030	1.000
	Sig. (2-tailed)	0.020	0.244	0.934	.

SLOVAKIA					
		CPI score	GNE	NFDI	GDP growth
CPI Scores	Correlation Coefficient	1.000			
	Sig. (2-tailed)	.			
GNE	Correlation Coefficient	-0.258	1.000		
	Sig. (2-tailed)	0.471	.		
NFDI	Correlation Coefficient	-0.178	0.176	1.000	
	Sig. (2-tailed)	0.622	0.627	.	
GDP growth	Correlation Coefficient	0.314	0.467	0.515	1.000
	Sig. (2-tailed)	0.377	0.174	0.128	.
POLAND					
		CPI score	GNE	NFDI	GDP growth
CPI Scores	Correlation Coefficient	1.000			
	Sig. (2-tailed)	.			
GNE	Correlation Coefficient	-0.869**	1.000		
	Sig. (2-tailed)	0.001	.		
NFDI	Correlation Coefficient	0.280	0.139	1.000	
	Sig. (2-tailed)	0.434	0.701	.	
GDP growth	Correlation Coefficient	-0.116	0.200	-0.030	1.000
	Sig. (2-tailed)	0.751	0.580	0.934	.
HUNGARY					
		CPI score	GNE	NFDI	GDP growth
CPI Scores	Correlation Coefficient	1.000			
	Sig. (2-tailed)	.			
GNE	Correlation Coefficient	0.037	1.000		
	Sig. (2-tailed)	0.919	.		
NFDI	Correlation Coefficient	-0.167	-0.261	1.000	
	Sig. (2-tailed)	0.645	0.467	.	
GDP growth	Correlation Coefficient	-0.142	-0.612	0.321	1.000
	Sig. (2-tailed)	0.696	0.060	0.365	.

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

Table-4: Result of multiple regression analysis of CPI and the economic variables

POLAND	Dependent variable: GDP growth R-Sq = 7.0% N=10				
Model	GDP growth = 23.4 - 0.096 CPI - 0.085 GNE + 0.233 NFDI				
Predictor	Coef	Predictor	Coef	Predictor	Coef
Constant	23.44	52.86	0.44	0.673	
CPI	-0.0961	0.2274	-0.42	0.687	7.489
GNE	-0.0847	0.4222	-0.2	0.848	7.246
NFDI	0.2326	0.7999	0.29	0.781	1.428
CZECH REPUBLIC	Dependent variable: GDP growth R-Sq = 28.1% N=10				
Model	GDP growth = - 6.0 + 0.341 CPI - 0.021 GNE - 0.201 NFDI				
Predictor	Coef	Predictor	Coef	Predictor	Coef
Constant	-6.01	79.85	-0.08	0.942	
CPI	0.3412	0.3006	1.14	0.3	1.669
GNE	-0.0207	0.7262	-0.03	0.978	1.672
NFDI	-0.2005	0.6877	-0.29	0.78	1.018
HUNGARY	Dependent variable: GDP growth R-Sq = 24.3% N=10				
Model	GDP growth = 46.6 - 0.101 CPI - 0.387 GNE + 0.75 NFDI				

Predictor	Coef	Predictor	Coef	Predictor	Coef
Constant	46.61	48.56	0.96	0.374	
CPI	-0.1006	0.3409	-0.3	0.778	1.052
GNE	-0.3867	0.4683	-0.83	0.441	1.217
NFDI	0.75	1.368	0.55	0.603	1.247
SLOVAKIA					
Dependent variable: GDP growth R-Sq = 35.6% N=10					
Model					
GDP growth = - 1.6 + 0.283 CPI - 0.053 GNE + 0.932 NFDI					
Predictor	Coef	Predictor	Coef	Predictor	Coef
Constant	-1.55	49.27	-0.03	0.976	
CPI	0.2828	0.2964	0.95	0.377	1.245
GNE	-0.0529	0.4287	-0.12	0.906	1.33

Also, the variation in GDP growth as explained by the independent variables (R-square) for Poland, Czech Republic, Hungary and Slovakia were respectively 7.0%, 28.1%, 24.3% and 35.6%. Corruption though affects GDP growth in the countries but statistically considered as insignificant at the chosen test level.

DISCUSSION

The analyses of this paper proved that low corruption resulted in high GDP in Hungary and Poland. This situation differs for Slovakia and Czech Republic where high corruption result into high GDP growth. Monies accrued from the activities of corruption and other underhand means cannot be accorded legitimacy with respect to the source. It illegally exempts itself from the tax net, investing such monies is also rare and most often does not happen in the host country since its source is dubitable and suspicious. Simply, in the words of Yousaf et al. : *“such tainted monies do not add value to the GDP, and it is utilized in non-economical transactions such as; purchasing precious items that are easily transferable with a high possibility of being kept in personal possession”* [27]. Yousaf et al. further posited that the situation is even sadly dire in developing countries where there exist laxities in the taxation system coupled with weak law enforcement bodies, the money is easily transferred to other countries [27]. The impacts of such unpalatable circumstances have a direct bearing on the growth of the GDP, since it reduces the amount of money circulating in the economy, lowers investment levels drastically, by threatening contemplating investors, has negative fallout on the welfare of the county, rises poverty and upsurges the rate of unemployment. All these factors possess in them the propensities to shrink or stifle the growth of GDP. When the monetary dividends of goods and services produced in the country does not reach the treasury of the government but diverted into individual hands, considering the importance of GDP as a reliable reserve for creating more goods and services, the government can hardly live up to its mandate of creating jobs and services for the betterment of the social and economic being of the country. To put into simple terms, the higher the GDP the higher the tendency for goods and services to be created, with the dividend raked back onto the GDP, and so if the estimated monies do not reach the government’s reserve, then evidently, more goods and services cannot be created and if more goods and services are not created the GDP, either stagnates, stunts or plummets and it goes on in such a cyclical orbit.

Šumah et. al report from a study that, corruption affects public finances and increases public expenditure [23]. Corruption redirects the composition of public expenditure from the expenditure necessary for basic functioning and maintenance to expenditure on new equipment. An empirical study showed that corruption leads to deviations from the optimal public expenditure structure, reducing growth and thus public income [6]. More evidence provided in a later study which uses data from Italian public works during the period 2000–2005, shows that public contracts execution is more inefficient in areas with higher corruption, thus increasing government expenditure [5].

The analyses found that corruption goes hand in hand with government expenditure in Hungary and Czech Republic. It was however a contrasting result in Poland and Slovakia where high corruption goes with low government expenditure and vice versa. The latter can be explained that, as corruption becomes high, the government likely reduces spending to reduce the possible execution of corruption among the countries. However, the correlations of CPI and GNE was statistically significant for only Poland.

This analysis also found both results depending on the countries. Corruption tends to increase NFDI in Czech Republic and Poland but reduces NFDI in Slovakia and Hungary. Investment can also be described as a transmission channel through which corruption negatively affects economic growth. A negative

relationship between corruption and investment exists because of the uncertainty and heightened risk of failure because corruption agreements are unenforceable. It is possible however to find positive effects of corruption on [9]. This situation could simply be established under the fact that, since monies that are illegally diverted from the public kitty to private pockets in the form of kickbacks and unofficial gratuities from prospective foreign direct investors are unaccounted for and could not possibly be factored in the calculation of the GDP of the country. Given the magnitude of monies unaccounted for by government, lead to the slow pace of the economic and social development and therefore the markets of the country directly, impact hugely on wealth accumulation [7]. Also, the analyses show irregular investment patterns across the study periods. Though, corruption as a notorious phenomenon deters foreign direct investment, however, foreign investors are often motivated by the galore of natural resources which make them take risk to maximize returns. As such, the statistical relation between corruption and direct investment based on the analysis is unclear.

The analysis is consistent with the conclusions of a number of authors on the impact of corruption on economic variables (e.g. 5-8, 11, 12, 14, 27 and others). The conclusions on whether corruption affects the economic performance of countries positively or negatively are not entirely uniform even in the analyzed countries of the Visegrad Four. Also, with the focus on low R-square of the carried out regression analysis, it should be noted that a number of factors affect the economic performance of countries. Thus, the fight against corruption is not a panacea and a clear "recipe" for the countries' higher economic performance. Given the proven impact of corruption on many (not only) economic variables, it is, however, more than an appropriate instrument of economic policy.

CONCLUSION

It was ascertained that the CPI scores were significantly different for at least any two selected countries for any given period. This indicated that the level of corruption within the countries are different which manifest itself in various secretive ways.

It was also observed that high corruption resulted in low GDP growth in Hungary and Poland. This situation was otherwise for Slovakia and Czech Republic where high corruption led to high GDP growth. The impact of the level of corruption on GDP growth was higher in Czech Republic (34.1%), followed by Slovakia (28.3%), Hungary (10.1%) and lastly by Poland (9.6%). Corruption was found to go hand in hand with expenditure in Hungary and Czech Republic but inversely related to expenditure in Poland and Slovakia. Over the study period, Poland spent the highest value on average and this was followed by Slovakia. The least expenditure on average was recorded by Hungary. However, the spending amount was more varied for Poland and least varied for Slovakia. It was also found that investment patterns among the countries were irregular. The impact of corruption took different directions and magnitude depending on the time and the country. Corruption related directly with NFDI in Czech Republic and Poland but inversely in Slovakia and Hungary.

As clearly highlighted in the findings in corroboration with the popular view of the numerous literatures reviewed, corruption has a tremendous devastating effect on socio-economic fortunes of a countries. Arguably, it can reasonably be concluded that the level of developments of certain countries could have been much better if corruption was reduced. For effective and efficient economic growth in these countries to be achieved, citizens interest in the political process was vital, strict adherence to the provisions in their constitution regarding identifying and combating corruption is crucial in that direction. Governments' commitment to fortifying and strengthening states' institutions will go a long way to check the growth and development of corruption, drastically.

The article shows that corruption can still be a problem in some countries of the Visegrad Group, even though it has been a long time since the collapse of the Communist regime. A common feature of the V4 countries is the frequent conflict of interest of public officials and problems in public procurement. Another problem is influencing independent institutions, which is more pronounced especially in Poland and Hungary. There is also an effort to influence the independence of the media, which is very important for maintaining democracy in the state. All countries are facing this problem, but the area is most at risk in Hungary.

CONFLICT OF INTEREST

There is no conflict of interest.

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None.

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