

# THE EFFECT OF CORRUPTION ON GOVERNMENT EXPENDITURE ALLOCATION IN OECD COUNTRIES

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## Abstract

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This paper empirically examines the effect of corruption on the allocation of government expenditures by function. Equations using pooled panel dataset for 21 OECD countries between 1998 and 2011 were tested, and the findings show that government expenditure on defense and general public services increase, while government expenditures on education, health, recreation, culture and religion decline with higher levels of corruption. This paper presents new results and new evidence on the link between corruption and allocation of government expenditures in OECD countries.

Keywords: effect, corruption, government, expenditure, allocation, growth, countries, equation, panel

## INTRODUCTION

Available literature provides the proofs that the corruption has a negative impact on economic development of a country. Many studies are available, that evaluate the relation between corruption and economic growth. The studies' conclusion varies and in some cases they have conflicting results. The opinions of politicians and economists to this problematic remain polarized.

Main idea stream states that corruption generates unfavorable impacts on long-term economic growth and sustainable development. Among many defenders of this opinion belong many researches and international organizations. Specifically Murphy (1993), Amaro-Reyes (1983), Mauro (1995), United Nations (1997), Wei (1997), World Bank (2000), Mo (2001), Podobnik *et al.* (2008), Pulkok (2010) etc. As a result of corruption it comes to the increase of production cost, decrease of national and foreign investment, inefficient allocation of national sources, increase of inequality and poverty in the society, or uncertainty in the decision making. In all world countries, including the developing ones, the corruption is considered as harmful for government efficiency. Corruption limits bud-

getary balance, lowers efficiency of government spending and disturbs the budget allocation among individual budgetary functions (Delavallade, 2006). These negatives present transmission mechanisms of unfavorable effects of corruption on economic growth. Nevertheless, the real impact of corruption on economic growth including its transmission mechanism can be solved only empirically.

One of transmission channels of corruption impact on economic growth, which is in current literature rather ignored, is the government spending. Specifically it is the corruption impact on allocation of government spending. Due to the growth of public expenditures in the few decades the growing significance of this channel can be assumed and therefore the attention to it can be justified. Main aim of this paper is to empirically research the relation between the corruption and allocation of government spending in the OECD countries.

## MATERIALS AND METHODS

Corruption is a term by which is called the specific act of a human. It is a phenomenon which is the result of human action. Therefore any note about

corruption in any form can be identified with the choice of a single person. Person is doing corruption because the corruption behavior brings him/her some utility (Otáhal, 2010).

Transparency International (TI) defined corruption as *abuse of entrusted power for private gain*. The World Bank has defined corruption as *the abuse of public office for private gain*. Generally, we can define corruption as „*the breaking of a rule by a bureaucrat (or an elected official) for a private gain. This definition includes the most obvious type of corruption. A bureaucrat taking an overt monetary bribe to bend a rule, thereby providing a service to someone that he was not supposed to*“ (Banerjee, Hanna, Mullainathan, 2012). It is necessary to realize that very wide definition of corruption can lead to different results, as from the view of theory or empiric. Actually, various definitions of corruption show different various aspects of corruptions. An example can be the difference between big (grand), or political corruption and minor corruption. Korneliussen (2009) states, that “*High level or “grand” corruption takes place at the policy formulation and at the end of politicians. It refers not so much to the amount of money involved as to the level at which it occurs – where policies and rules may be unjustly influenced. The kinds of transactions that attract grand corruption are usually large in scale – and therefore involve more money than bureaucratic or “petty” corruption*“. As a result, different kinds of corruption can have a different impact on e.g. economic growth and they can also influence economic growth through different channels.

This paper is aimed at the examination of corruption impact on the government spending allocation. Due to this we will be interested in the corruption division on political corruption and administrative corruption. The creation and execution of state budget goes through wide and complex decision making management. Therefore it is highly probable, that the decisions pertaining to the scope and allocation of government spending is very propitious for various forms of corruption. “*When public decisions are paid for during the preparation phase of the budget, they are called political corruption. The execution phase of the budget is related to another form of corruption, that is administrative or bureaucratic corruption*“ (Delavallade, 2006). While, it comes to the administration corruption, when the economic and administrative decisions prevail, political corruption directly influences the decisions about the amount and allocation of government spending, where political decisions usually take place. Both the administrative and political corruption has a direct impact on the amount and allocation of government spending into various areas of economy. Because of this paper's aim we consider only political corruption which has the aforementioned direct impact on government spending allocation.

„*Political corruption has particularly damaging effects on the allocation of resources because it will produce an allocation that will be different from the one that would have been arrived at through a corruption free process. In other words political corruption occurs when political decision-*

*makers independently, or in collusion with corrupt officials, will divert public resources in a way that will reduce the welfare of society or will be contrary to public interest*“ (Garamfalvi, 1997).

### Measuring Corruption

Currently, few institutions exist that are dealing with the corruption measurement in the world. However, the corruption is a variable, which cannot be directly measured. Nevertheless, the amount of indexes which measure corruption has been growing. Among the organizations which deal with measuring corruption belongs e.g. TI, World Bank or PRS Group.

Every year since 1995 TI publishes so called Corruption perception index (CPI). Each year TI score countries on how corrupted their public sectors seem to be. E.g. in the year 2013 corruption perceptions index measured the perceived levels of public sector corruption in 177 countries and territories. The CPI ranks countries on a zero to ten (from 1995 to 2011) scale, with a score of zero representing very high corruption. Since 2012 the countries have been evaluated on a scale 0 to 100, where 0 represents the highest corruption.

World Bank publishes so called World Bank's worldwide Governance Indicators (WGI) report. They mention in the report summary and individual indicators for 212 countries in a total of 6 dimensions of governance. It is voice and accountability, political stability, absence of violence, government effectiveness, regulatory quality, rule of law, and control of corruption. In the summary indexes the opinions of large number of companies, citizens and experts' research from developed and developing countries are combined. Individual sources of data based on which are the summary indexes derive from wide number of various researches of private, non-profit organizations, international organizations etc. (Hashem, 2014).

Established in 1979, The PRS Group is among the earliest commercial providers of political and country risk forecasts. The International Country Risk Guide (ICRG) rating comprises 22 variables in three subcategories of risk: political, financial, and economic. A separate index is created for each of the subcategories. The Political Risk index is based on 100 points, Financial Risk on 50 points, and Economic Risk on 50 points. The total points from the three indices are divided by two to produce the weights for inclusion in the composite country risk score. The composite scores, ranging from zero to 100, are then broken into categories from Very Low Risk (80 to 100 points) to Very High Risk (zero to 49.9 points). Corruption index is a part of ICRG and ranges between 0 to 6 across the political spectrum (Kotlánová, Kotlán, 2012).

### Literature Review

Mauro (1998) states, that in a world in which governments do not always act in their citizens' best interest, corrupt politicians may be expected

to spend more public resources on those items on which it is easier to levy large bribes and maintain them secret.

*“The rationale behind a corruption-induced distortion of the public budget is that bribe-maximizing politicians and/or bureaucrats prefer to shift resources to areas with the best opportunities to be bribed”* (Hessami, 2010).

More precisely said, the politicians and officials have, under the influence of bribe (corruption), the tendency increase the ratio of public spending which are spent on “high-tech” goods, which is produced at oligopoly markets. Oligopoly market structure is the guarantee of high difficulty to reveal the bribery, because prices on the markets of innovation goods cannot be compared easily and moreover they enable the politicians and bureaucrat to accept higher bribery due to the reason of higher expected profits which are at stake. Based on the aforementioned facts it can be stated that higher bribery will be available at the markets with goods where the competition is low. On the other hand unlawful character of corruption and the need to keep it secret will lead to the fact that corrupted politician or official will chose goods, which value is difficult to control. Due to this the goods that are especially high tech will be demanded.

Hines (1995) states that international trade with army planes, goods with a high level of technology, is operated only by a limited number of oligopoly companies. Due to this, this sector is highly prone to corruption behavior. Therefore the corruption impact on government spending volume on defense can be expected. On the contrary, basic education can be mentioned; it requires technology which can be provided by a large number of suppliers. Based on these thoughts it can be stated that it is easier to accept bribery for big projects in the area of infrastructure and highly sophisticated army defense equipment than for a textbooks or teachers’ salaries. Therefore the corruption should have an opposite impact on government spending on education then in the case of government spending on defense.

Specifically we can assume that legislation decision making organ not influenced by corruption would approve state budget expressed by the following formula (Garamfalvi, 1997):

$$G = Q1F1 + Q2F2 + Q3F3 + \dots QnFn, \quad (1)$$

where Q1 represents the amount of resources allocated to public expenditure function F1.

Now, let’s assume that due to corruption behavior of politicians budget expressed by the following formula will be approved (Garamfalvi, 1997):

$$G = Q'1F1 + Q'2F2 + Q'3F3 + \dots Q'nFn, \quad (2)$$

where

$$\begin{aligned} Q'1F1 &< Q1F1, \\ Q'2F2 &< Q2F2, \\ Q'3F3 &> Q3F3. \end{aligned}$$

Let’s assume that represents e.g. number of healthcare, represents the budget in the area of education and represents the budget for a public labor. Based on the aforementioned facts it is evident that due to the corruption behavior it will come to a partial diversion of spending from social area to public labor area. It can come to e.g. contracting misleading construction projects in selected regions in order to increase politic prestige, acquiring rather high financial rewards from privileged suppliers who in return expect to circumvent the law for receiving the contract.

Mauro (1996, 1998) provides the first cross-country evidence that corruption does indeed affect the composition of government expenditure. He examined the relation between corruption and government spending on a sample of 100 countries where he had used the corruption index and other institutional independent variables from the databases of Political Risk Service private firm which publishes the International Country Risk Guide, described in the chapter dealing with corruption measurement. Initially, he divides government expenditure into four major categories. The categories are education, defense, transfer payments and social insurance and welfare payments. By OLS regression of average values of variables in period from 1970 to 1985 as their ratio on GDP he came to a conclusion that Government spending on education as a ratio to GDP is negatively and significantly correlated with corruption. Assumption that corruption impacts government spending composition, specifically corruption decreases the volume of government spending allocated into education was confirmed.

Delavallade (2006) researched the impact of corruption on government spending structure according to individual sectors. Specifically, the author tested the system of nine equations, where every equation represents certain sector of government spending as a part of total function of government spending considering the level of corruption and other controlled variables. Dependent variables are the individual sectors of government spending as a per cent ratio on total government spending. Independent variables are corruption indicators of World Bank and other controlled variables (e.g. level of urbanization, GDP per person, population percentage between 0 to 14 years of age, etc.). By using three-phase method of least squares the author found out that within 64 countries in the years 1996 and 2001 the corruption deforms the government spending structure in a way that it limits the volume of government spending aimed at social area (Social protection, health, and education) and on the other hand it contributes to the growth of government spending volume allocated in the sector public services and order, fuel and energy, culture and defense.

Moreover the author differentiates between the supply and demand side of corruption. At the demand side, after the bribery the corrupted

agents can be found who influence decisions within state budget in favor of government spending allocation to the areas where they expect to receive the highest bribery and where the decisions are taken in a “secret” environment. At the supply side are the companies that can be invited to bribery of foreign officials in order to export weapons, army equipment, gas or fuel. Apart from this the author mentions that in sector such as e.g. defense, energy or public order, every project includes the need of higher volume of public investment. It is probable that these projects bring the producers higher rent. Finally Delavallade (2006) states that expenditure on fuel and energy, culture and public services and order involve a higher of public procurement. This type of spending gives more freedom of action, hence more opportunities for corruption, than social spending which involves more predetermined spending.

Korneliussen (2009) in her thesis empirically researched the effect of corruption on a certain part of government spending, specifically the spending on education and healthcare. The author supplemented the research of this relation by theory which assumes the relation between corruption and decentralization and relation between decentralization and government spending. Korneliussen (2009) states that if corruption and decentralization are correlated, and in addition decentralization affects government spending, then omitting decentralization might cause biased results. Due to this, the author specifies three version of linear regression model which is estimated by the method of least squares. In the first version of the model the author estimates the relation between corruption and government spending without the decentralization. Second version of the model is widened by including decentralization as the independent variable. In the third version of the model is moreover included the period of interaction between corruption and decentralization. Consequently, specified models are estimated by using various dependent variables representing government spending on education and healthcare. Main independent variables are two indices of corruption. First index is the perception of corruption and second index acquired from International Country Risk Guide, which is published by private company Political Risk Service, Inc. Among the other independent variables the author includes dummy variables (dummy for whether a company is classified as federal or not and measure of the sub-national share of expenditures and the sub-national share of revenues) and selected controlled variables (GDP per citizen, population aged 5 to 14 as the share of total population and other controlled variables that are likely to affect government spending on education and health). The results confirm the fact that a higher level of corruption negatively affects the amount of spending allocated into the education and healthcare. By widening the model

by decentralization it was found that in case of government spending on healthcare it is happening especially in decentralized countries.

Hessami (2010) dealt with the relation between corruption and the structure of government spending within the 26 OECD countries in period 1996 to 2008. In his paper he analyzes the question: “How does corruption influences the structure of government spending”? Firstly the author derived a two-stage rent seeking model with endogenous rent-setting which captures both the “political corruption” and “bureaucratic corruption”. The model indicates in what way can the differences among individual sectors, which are caused by different level of competition and the difficulty to hide bribery, influence the allocation of government spending. As the dependent variable, the author uses individual groups of government spending (according to their function) as a ratio on total government spending. Main independent variable is the Index of corruption perception acquired from the TI Database. Another independent variable the author uses the unemployment rate, urbanization rate, real GDP growth rate, etc. Based on found results the author comes to the conclusions that the shares of spending on health and environmental protection increase, while the shares of spending on social protection and recreation, culture and religion decline with higher levels of corruption.

Hashem (2014) was another one who has researched the corruption impact on government spending structure; specifically he dealt with the relation in the case of 13 selected Arabian countries in the period 1998 to 2008. Firstly the author summarized available theoretical literature, which points out the relation between corruption and government spending. Consequently he empirically tested this relation by simple regression mode. He has used three main categories of government spending for the estimation: expenditure on defense, education and healthcare. The study included five different dependent variables in the regressions: Government expenditure on education, defense and health as % of GDP and Government expenditure on education and health as % of total government expenditure. The only one independent variable was the CPI by TI. The result of paper shows that when CPI increases or the level of corruption decreases there is a significant increase in government expenditures on education and health. Hashem (2014) states, that corruption appears to modify the structure of government expenditures in favor of defense and energy at the expense of social sectors like education and health.

Hanousek and Kočenda (2011) focused their study on the impact of corruption and economic freedom on public finance and public investment in the new EU member states (Czech Republic, Estonia, Cyprus, Latvia, Lithuania, Hungary, Malta, Poland, Slovak Republic and Slovenia) from 1995 to 2008. The authors assumed that the reduction of corruption and increase in economic freedom

are usually associated with a decrease in public investment. Further authors assumed that the increase in public investment leads to increase in the level of corruption. Given that during the period under review was economic development in the new EU member states characterized by the presence of structural breaks, the authors used endogenous break test to detect the presence of these structural breaks in the data. Data analyzed by authors were then used in the second stage of their calculation. The second stage was estimation of the impact of corruption and regulation on public finance and public investment via the ordinary least squares method. In this study quarterly data were used. As a variable representing public investment, the share of gross fixed capital formation to GDP was elected. As a representative of public finance share of the budget deficit and public debt to GDP was used. Also index of Economic Freedom (IEF) and the Corruption Perceptions Index (CPI) was used. The results point to the fact that the increase in economic freedom is associated with an increase in public investment. The impact of perceived corruption in this case is problematic and can be characterized by both growth and decline of public investment. Improvement of the environment of corruption is in the area of public finances accompanied by a reduction of the budget deficit and debt. On the other hand economic freedom contributes to increase, but also to reduce the budget deficit, which, however, are very rare. Hanousek and Kočenda (2011) conclude that steps taken to reduce the extent of corruption and economic regulation should lead to an improvement in the fiscal position of most of the new EU countries.

**Data and Methodology**

For empirical analysis based on panel model were used several variables. Specifically it is the CPI, GDP per capita in common prices, ratio of total tax incomes on GDP, ratio of urban population on total population and ratio of individual groups of government spending on a total volume of government spending. Yearly data for 21 OECD countries for period 1998 to 2011 were used. Only 21 countries from a total of 34 member countries of this organization was selected because of the availability of data. The data about total government spending and government spending according to COFOG classification were acquired from OECD database. The data pertaining to CPI were acquired from official database of TI. Time series ends in 2011 because of the change in measurement methodology of the CPI in 2012. Data pertaining to the ratio of urban population on total population, GDP per capita and ratio of total tax income on GDP were acquired from OECD statistics and World Bank.

The model is created by 10 equations in total, form which every one of them is estimated individually. The independent variable is always the ratio of specific group of government spending according

to COFOG classification on total government spending. Main independent variable is the corruption perception index. Other controlled variables are urbanization rate, GDP per person and ratio of total tax earnings on GDP. The estimated equations can be written as:

$$L \frac{EXP_{fc}}{EXP_{tot_t}} = \alpha_1 + \alpha_2 LCPI_{it} + \alpha_3 LTAX_{it} + \alpha_4 LGDPPC_{it} + \alpha_5 LPOP_{it} + \varepsilon_{it}, \tag{3}$$

where

$L \frac{EXP_{fc}}{EXP_{tot_t}}$  ... ratio of specific government spending

according to COFOG classification on total government spending.

According to COFOG classification the government spending are divided into the following functions: General public services, Defense, Public order and safety, Economic affairs, Environment protection, Housing and community amenities, Health, Recreation; culture and religion, Education and the last on is Social protection.

$CPI_{it}$  ..... corruption perception index,

$TAX_{it}$  ..... ratio of tax income on GDP,

$GDP_{it}$  ... GDP per capita in common prices,

$POP_{it}$  ..... ratio of people living in the urban areas on total population,

$\varepsilon_{it}$  ..... standard error,

$L_{it}$  ..... natural logarithm.

Before proceeding with the estimation, each series is individually examined under the null hypothesis of a unit root against the alternative of stationary. For this purpose, a panel unit root test's like Levin, Lin and Chu (2002); Im, Pesaran and Shin (2003) and ADF a PP test's like Maddala and Wu (1999) are used to check for the existence of a unit root in the variables. The panel unit root test's showed that all levels of variables exhibit no evidence of a unit root besides government expenditures on Social protection. The variable is therefore non-stationary, which could lead to spurious regression. To overcome the non-stationary of the variable, it was necessary to convert variable at first difference. Therefore, the equation of government spending on social protection will have the following form:

$$DL \frac{EXP_{soc}}{EXP_{tot_t}} = \alpha_1 + \alpha_2 LCPI_{it} + \alpha_3 LTAX_{it} + \alpha_4 LGDPPC_{it} + \alpha_5 LPOP_{it} + \varepsilon_{it} \tag{4}$$

where

$DL$  ..... first difference of natural logarithm.

The panel data equations were estimated using "White Cross-section" estimator since heteroskedasticity of time series had to be solved. Used software was the econometric program E-views version 7. We pooled the data because

this way of input data arrangement ignores the fact that the data originate from different countries (Lee, 2000). Since we have used data for 21 OECD countries, we consider pooling the data as the correct way to modify the data series. Further the fixed effects model has been used for the estimation due to the fact that we examine the impact of variables which are changing in time (Torres-Reyna, 2007). By including fixed effect, we are controlling for the average differences across variables in any observable or unobservable predictors. The fixed effect coefficients soak up all the across-group action. What is left over is the within-group action, which is what we want. We have greatly reduced the threat of omitted variable bias.

The level of corruption cannot be considered as the only variable, which has an impact on the allocation of government spending. Many other social, economic or demographic indicators which can influence the allocation of government spending exist. Due to this there are, in this paper, included aforementioned selected controlled variables in the model. Among these variables belong the ratio of urban population on total population (Gupta *et al.*, 2001; Hessami, 2010), ratio of tax incomes on GDP (Abed and Davoodi, 2002; Delavallade, 2006) and GDP per person (Mauro, 1998; Mauro, 1996; Korneliussen, 2006; Delavallade, 2006).

The level of urbanization was included in all estimations due to the fact that demographic factors have a big influence on the structure of public budgets. Preferences regarding the providing of public goods and services probably differentiate depending on the fact if it is urban or country area. GDP per capita is included in the estimation because it represents the economic quantity. This variable represents the assumption that public sector is growing when the society is becoming richer. Hessami (2010) states that this variable influences allocation of government spending based on so called Wagner rule. This rule states that some publically offered goods, such as education, are in case of reaching some level of wealth in society becoming the luxurious goods. The estimates

further include fiscal variable represented by ratio of total tax earnings on GDP. Close link between total tax earnings and total government spending is assumed; therefore it is a kind of controlled independent variable.

## RESULTS

The essence of empirical analysis is the examination of corruption impact on government spending allocation, where this influence can be positive or negative. In the Tab. I are presented acquired results. Significant coefficients found with variable, approximating corruption are highlighted. Dependent variables which were used are the aforementioned groups of government spending such as a ratio on total government spending according to COFOG classification. Main independent variable was corruption perception index (CPI). Other independent controlled variable was used the urbanization rate (POP), GDP per person (GDPPC) and ratio of total tax earnings on GDP (TAX). Results are presented in Appendix 1 (Tab. I).

Based on the results, it can be stated that corruption affects the government spending allocation. In five from ten groups of government spending statistically significant coefficient connected with CPI was found. Significant coefficients are negative with expenditures on Defense and General public services. On the other hand significant coefficients are positive with government spending allocated on Education, Health and Recreation, culture, religion. When CPI is growing, i.e. corruption is decreasing it comes to the decrease of government spending volume allocated into the areas of Defense and General public services in favor of the area of Health, Recreation, culture, religion and Education. When CPI decreases it comes to an opposite development. Statistically insignificant was the CPI with expenditures on Social protection, Economic affairs, Public order and safety, Housing and community amenities and Environment protection.

I: Corruption impact (CPI) on government expenditure allocation; OECD countries (1998–2011)

Dependent Variable	N. of obs.	R <sup>2</sup>	log(CPI)	log(GDPPC)	log(TAX)	log(POP)
log(Defense)	293	0.97	<b>-0.348***</b>	0.0018	1.5712***	-2.270***
log(Education)	293	0.91	<b>0.110*</b>	0.004***	-0.403***	-0.936***
dlog(Social protection)	293	0.07	-0.013	-0.0046***	-0.0198	0.0110
log(Economic affairs)	293	0.81	0.047	-9.85E-0.5	-0.1881	-0.5248
log(Recreation, culture, religion)	293	0.94	<b>0.424***</b>	0.0038*	-0.4308*	0.1400
log(Public order and safety)	293	0.96	-0.025	0.0041***	-0.2567*	0.0985
log(Health)	293	0.74	<b>0.254***</b>	0.0039	-0.698***	0.9314***
log(Housing and community amenities)	293	0.68	-0.406	-0.0012	0.8086	-3.334***
log(General public services)	293	0.84	<b>-0.331***</b>	-0.0051	0.6141***	-2.159***
log(Environment protection)	293	0.92	0.011	0.0049*	-0.1376	-0.234

\*\*\* Statistically significant at 1%. \*\* Statistically significant at 5%. \* Statistically significant at 10%.

Source: Own estimations via E-views 7

## II: Items included in OECD expenditure functions (COFOG classification)

Function	Items
<b>Defense</b>	Military defense, civil defense and foreign military aid
<b>Education</b>	(Pre-)primary, (post-)secondary, tertiary education incl. subsidiary services
<b>Social protection</b>	Sickness, disability, old age, survivors, children, unemployment & housing
<b>Economic affairs</b>	Economic, commercial & labor affairs, agriculture, forestry, fishing, hunting, fuel, energy, mining, manufacturing, construction, transport, communication
<b>Recreation, culture, religion</b>	Recreational & sporting services, broadcasting & publishing services, cultural services, religious & other community services
<b>Public order and safety</b>	Police services, fire-protection services, law courts & prisons
<b>Health</b>	Medical products & equipment, outpatient, hospital & public health services
<b>Housing and community amenities</b>	Housing & community development, water supply & street lighting
<b>General public services</b>	Executive & legislative organs, financial, fiscal & external affairs, basic research, transfers between different levels of government, foreign economic aid, general services & public debt transactions
<b>Environment protection</b>	Waste management, waste water management, pollution abatement, biodiversity & landscape protection

Source: OECD, Delavallade (2006)

With almost all results there was a high level of the coefficient of determination. However, it was irrational to consider used independent variables as the only determinants of government spending individual groups. This finding can be attributed to the fact that the fixed effect, manages to explain a large proportion of the endogenous variable (due to its low variation). In addition, this high value of the adjusted R-squared should not be considered as a restriction for better specification. Remember that it is not a theoretical model that we are trying to specify here, but the significance and the impact of corruption on the allocation of public expenditure. The fact, that if the corruption level in a given country is high (low level of CPI) it comes to the increase of government spending allocated into the area of Defense or General public services, where is consequently generated higher amount of rents and higher volumes of these rents, was verified. Higher volume of money is attracted into these areas, therefore they attract higher bribery. Delavallade (2006) states, that one kilogram of weapons is the most expensive product in the world, where provisions can reach up to 15 percent of contract amount.

If it comes to the growth of CPI (corruption level decreases) it will come to the decrease of government spending on Defense (by 0.35 p.b.) and expenditures on General public services (by 0.33 p.b.). On the other hand it will come to the increase of expenditures on Health (by 0.25 p.b.), Education (by 0.11 p.b.) and Recreation, culture and religion (by 0.42 p.b.). We measure government spending according to individual functions as their ratio on total government spending. In regards to the selected controlled variables, it can be stated that some categories of government spending are significantly affected by variables from the demographic, fiscal and economic area. GDP per capita capture the wealth effect and it

gains significant and positive coefficients in case of expenditures on Education, Public order and safety, Environment protection, Recreation and culture. Growing GDP per capita has a negative effect on expenditures on Social protection. In the urbanization rate negative significant coefficient has been estimated for some groups of government spending (Defense, Education, General public services, Housing and community amenities). Significant variable with positive coefficient is the urbanization rate in case of expenditures on Health. Last controlled variable used in the regression was the ratio of total tax earnings on GDP. Increase in the budget as a result of the increase of tax earnings positively and significantly influences government spending in the sector of Defense and General public services. Negative significant coefficient has been estimated in case of several sectors (Health, Education, Public order and safety, Recreation, culture, religion).

## DISCUSSION

The fact that high-ranking public official prefer corruption in the area of Defense etc. instead of e.g. social expenditures can be given by the system of democracy. In democracy every public official tries to be re-elected, therefore he/she will not be prone to corruption behavior in the area of government spending into the social area, since its results are due to the responsibility of public official easily measurable (e.g. by mortality rate, birth rate, life expectancy etc.). Due to this the corrupter will chose e.g. expenditures on the purchase of army equipment, where the results possibly the public official efficiency of the behavior or decision are not easily measurable.

The rationale behind a corruption-induced distortion of the public expenditures is that bribe-maximizing politicians prefer to allocate resources to areas with the best opportunities to

be bribed. Governments spending on defense and general public services are very difficult areas to be monitored by people. Government spending on defense additionally comprises transactions in high technology military products and provisions of bribe-maximizing politicians are very high because of sophisticated products produced by international or domestic monopolies and oligopolies. On the other hand, government spending on education, health, recreation, culture and religion do not represent attractive opportunities for bribe-maximizing politicians. In addition offer of products in these sectors provides a large number of suppliers and price is low (compared to the defense sector). Also, these government expenditures sectors are not difficult to be monitored by people.

Among the negative effects of corruption in the area of government spending do not belong only the disruption of their allocation in favor of sectors such as defense instead of sectors important for economic growth (education), but also inefficiency caused by government failure. By this inefficiency we mean the sources allocation towards different suppliers than those that would be the most efficient. Due to this it comes to the decrease of public satisfaction as an effect of the decrease of quality and volume of public goods. The facts lead to the disillusion of voters who are consequently disgusted by executed state policies. The number of voters, voter turnout is decreasing and on the contrary the independent of politicians in decision making about government spending allocation is growing. Therefore it can

be stated that the corruption in public sectors leads to even a higher corruption in a public sector and in future it can create a big problem with a serious consequences for economic growth and development.

At the conclusion, it is necessary to realize that government spending on social area, for example education, represents significant determinant of economic growth. Therefore, it is necessary that the countries accept measures for effective fight with corruption which should any state have as one main objective. Among the main measures in fight with corruption can be mentioned e.g. ensuring functioning legal system, ensuring competitive private sector by removing barriers to enter the market and transparency when executing economic policy in the area of privatization and regulation. Next step in reducing corruption should be increasing transparency in government procurement through open competitive tenders. Among other recommended measures can be included increased supervision on executed government operations, creation of anti-corruption public awareness, support of action plans for fight against corruption or increased responsibility and sanctions for corruption behavior. The governments of individual countries should try to consistently fight the corruption and concentrate on government spending allocation into the area of education and health instead of the area of defense and other sectors less significant for economic growth and development.

## CONCLUSION

The paper deals with the corruption impact on government spending allocation according to individual functions, by which it creates a paper as an addition to available literature which deals with this problematic. The paper has proved significant impact of corruption on government spending allocation into some sectors. The aim was to find out which government spending groups are influenced by growing corruption negatively and which on the contrary positively. The empirical investigation is based on a pooled panel dataset for 21 OECD countries covering the time period from 1998 to 2011. The results suggest that worsening corruption (lower CPI score) distorts the structure of public expenditures in favor of defense and general public services, while the shares of expenditures on education, health, recreation, culture and religion decline.

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