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Detecting and Reducing Corruption Risk and Fraud in the Public Sector

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Content

Introduction

The problem of corruption is one of the most topical issues of the day. The question of corruption is reflected in a number of works by major institutions dealing with corruption (Transparency International, 2006; EU, 2013; OECD, 2009a, 2009b, 2013a, 2013b) and has also been examined by a number of authors (Ackerman and Søreide, eds., 2011; Mo, 2001; Nye, 1967; Persson, Rothstein, and Teorell, 2013). Publications which deal with the problem of corruption focus on, for example, ranking countries in terms of the perceptions of corruption (CPI) investigating corruption in public procurement (EU, 2013; Piga, 1986, 2011), and engaging in a sociological analysis of corruption (Frič, 2001, 2012; Langr, 2014; Langr and Ochrana, 2015) in terms of individual conduct (individual corruption) or systemic action (systemic corruption). There is rather significantly less emphasis on the issue of choices for anti-corruption strategies and very little has been done on the issue of reducing corruption within the contexts of identifying corruption risk and detecting fraud. It is on these areas, which until now have been neglected, that our work is targeted. He underlying motive for the work on this book is the fact that to combat corruption effectively requires a search for appropriate instruments which will detect corruption, and prevent it.

From the viewpoint of the management and leadership of the state, municipality or region (Klitgaard, 2012; Petersen and Strachota, 1991), there are two very effective tools in the fight against corruption and fraud. The first is an actual functioning system of financial control (Ramkumar, 2008). This, however, fails to capture corruption and fraud in all areas (particularly in those areas which are not related to the handling of funds or property). A second key measure to prevent corruption is risk analysis (Půček and Matochová et al., 2007). This tool is used insufficiently by the Czech public administration, or if it is used at all, it is

used just formally. Both instruments (financial control and risk analysis) are the basis for the formulation of an effective anti-corruption strategy concerning the conditions in the Czech Republic. When analyzing existing anti-corruption government documents, we discovered that their common weakness in the fight against corruption and fraud currently is an inadequate, or a completely missing risk analysis of corruption and fraud. Therefore, we have focused on this problem for this book. This publication as a whole relates to the public sector. More accurately, however, it focuses on government and its organizations. The book also offers a new perspective on investigating corruption in the contexts of waste and fraud. Corruption itself is waste and fraud (Frič et al., 1999). Waste is not necessarily associated with corruption, but it may be a signal that corruption and fraud are occurring. We will focus on this overlooked relationship in our work. Its primary objective is designed to develop the concept of corruption risk analysis and fraudulent practices, to formulate the theoretical and methodological basis for the creation of an effective anti-corruption strategy, and to detect fraud in the management of public expenditures. This objective is present in the logic of the research, and the content and structure of the publication. We endeavor to show that corruption is a complex social phenomenon, which can be examined from the perspective of various disciplines. The purpose is to show the need for an interdisciplinary analysis of corruption. The focus of the investigation and a major contribution of the book is an analysis of the factors affecting the detectability of corruption risk and the fraudulent use of public resources. Based on the analysis of FMEA (Fault Mode and Effect Analysis – see Carbone and Donald, 2004; Chen, 2007; Chrysler Corporation, 1995; Franke, 1993; Fritzsche, 2011, Lipol and Haq, 2011, Liu et al., 2012) we introduce our own approach to working with corruption risk in public administration. We develop a modified FMEA and design algorithms to uncover corruption and fraud risk in public administration regarding the handling of public resources.

1. Theoretical Framework

1.1 Public expenditures and potential threats to corruption

The theme of this publication is the issue of corruption and the fraud of resources in the public sector (with an emphasis on government). Public spending is becoming an object of corruption and waste (Kopits-Craig, 1998). Society utilizes a significant amount of public expenditures. According to Eurostat data (2015) total government expenditures in the EU-28 amounted to 49.1% of GDP in 2013. In the Czech Republic, these expenses amounted to 42.3% of GDP in 2013. By comparison, in the Slovak Republic, these expenses were 38.7% of GDP, in Poland 41.9% of GDP, Germany 44.7% of GDP, and in Austria 51.3% of GDP. Additionally, a large amount of public resources were allocated through public expenditures at the level of local governments. Total spending at the local government level (according to EUROSTAT methodology, this includes spending by "local authorities, governments" – i.e., municipalities, regions, and their organizations) in the EU-28 amounted to 11.6% of GDP in 2013 and in the Czech Republic 10.2% of GDP for the same year. By comparison, in the Slovak Republic, the expenses for local governments amounted to 6.3% of GDP, in Poland 13.1% of GDP, in Germany 7.8% of GDP, and in Austria, 8.0% of GDP[1].

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1   These differences are caused by the system of fiscal federalism, which is characteristic for the individual states. The theory of "fiscal federalism", exploring the relationships between different levels of budgets, trying to find the optimum degree of fiscal autonomy of individual levels of public budgets, in order to achieve the highest allocation efficiency. Another purpose of the theory of fiscal federalism is to improve the democratic process of decision making on finances in the budgetary system, increase transparency and public and civil control. The theory recognizes centralized, decentralized and mixed models of fiscal federalism. In practice, the most frequently applied is the mixed model. According to an analysis of corruption, corruption is more prone with the centralized model, where local governments are dependent

A significant volume of public spending creates a great temptation for corrupt actors to misuse public funds (Grochová and Otáhal, 2011; Rijckeghem and Weder, 2001). Corruption is perceived as a negative social phenomenon that causes the moral devastation of society and financial losses that can be quantified monetarily as sources that were "diverted" towards the bounty of corrupt actors[2]. Economically speaking, this loss represents a waste of public resources. A waste of public resources by means of such usage of public resources, leads to their wasteful, ineffective, and inefficient use. In the case of corruption, this conduct has the character of a conscious illegal redistribution of public resources towards corrupt actors. The size of this loss can be expressed as the "corrupt differential".

We understand the corruption differential to be the part of the public resources that are "wasted" because of deliberately wasteful, inefficient, and socially ineffective management. From an economic point of view, the corruption differential represents the social loss. Therefore:

KD = VZ − POZ
KD   corruption "differential"
VZ   actual expended public resources including corruption increases
POZ   potentially optimal expended resources

The indicator „potentially optimal expended resources" represents a level of resources that is the best possible option with respect to the objectives and the conditions. This means that the allocation of resources meets the criteria of economy, efficiency and efectiveness (3E); the lowest possible cost within the specified targets, while at the appointed time reached the expected quality and quantity of the procured goods and services. POZ above represents a volume of resources for the given circumstances and set goals is not possible to achieve any savings in resource allocation (Bailey, 1995). It's a case where all the actors meet the "allocation optimization conditions". They are honest (from a moral standpoint), and are professionally and managerially competent (from

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on subsidies from the center. Conversely, a decentralized model should be more democratic and transparent. It should also achieve greater allocative efficiency (Oates, 1998). Centralization, however, speaks to the opportunites to achieve economics of scale (Matějová, Plaček, Křápek, Půček, Ochrana, 2014). The total volume of public spending, however, depends on the extent of the public services and goods, which the state ensures.

2   To illustrate the size of definite social losses due to corruption, it is possible to use information from the indictment against the former governor of Central Bohemia D. Rath (July 2015), when in court, the total volume of corruption for a rigged procurement was 10% of the value of public procurement which was diverted to the corrupt actors.

a skill standpoint). If any of these conditions are not met, there will be a waste of resources (Ochrana and Půček, 2012).

Corruption present itself as a case of wasting public funds. It is also accompanied by an uneconomical, ineffective, and inefficient handling of resources, but this waste does have its peculiarities, however. This lack of economy, ineffectiveness and inefficiency is deliberate and is accompanied by illicit (illegal) behavior and morally-bankrupt conduct. From an institutional standpoint, it takes the form of individual corruption (Nye, 1967) or systemic corruption (Vanucci, 2009).

The expected result of corrupt conduct is a "planned loss". Its level is expressed by the corruption differential. The corruption differential is given by the difference between the amount of real ("waste") expended resources and the amount of resources, where the given allocation of resources corresponds to the optimal allocation. It is generally accepted that the amount of resources actually expended is "planned" by the corrupt actors. They consciously incorporate their expected gains from the corrupt practice into their decision-making practices, and it is from this that we use the term "corruption differential" in the given equation. Detecting corruption and having an effective strategy for eliminating corruption risks can prevent or at least minimize the size of the corruption differential.

1.2 Interdisciplinary approaches for the examination of corruption

The problem of corruption is of interest to various scientific disciplines. In this part of the publication, we will try to systemize some approaches on how to investigate corruption. The purpose of this section is not an exhaustive overview of how each discipline of science investigates corruption, nor is it to develop the issue of corruption from the perspectives of all of these approaches. The aim of this part, however, is to create a basis for analyzing the risk of corruption and fraud.

An analysis of the literature shows that corruption is a complex social phenomenon (Caiden and Caiden, 1977; Frič, 2001, 2012). Regarding this, there is no doubt. However, this does beg a series of questions such as what is the cause (s) of this effect, and what factors influence their formation. A number of responses to this problem exist in contemporary literature (Caiden and Caiden, 1977; Klitgaard et al., 2000; Piga, 2011; Person et al., 2013; Mookherjee and Png, 1995; Vanucci, 2009; Volejníková, 2007). Existing views on corruption can be clearly summed up in Figure 1.

Figure 1: Views on corruption (selected major approaches)

No.	Approach to corruption	Nature of the approach
	Naturalistic	Corruption as a phenomenon inherent in the "nature" of man
	Historical	Corruption as a social phenomenon varying depending on historical conditions.
	Psychological	Corruption as a psychological pathology
	Ethical	Corruption as a moral failure of man
	Legal	Corruption as an illegal phenomenon (the case of violating the law)
	Sociological	Search for social causes and factors causing corruption
	Pictured as the relationship of principal and agent	Corrupt warped relationship of principal and agent
	Economical	Corruption as social costs, social loss
	Managerial	Corruption as a potential risk to society
	Procedural and objective view	Corruption as speeding up the process. Financial corruption – corruption as an area (subject), to which it relates.
	Others	

Source: based on the own desk research

The Naturalistic approach is anchored in the assumption that corruption resides in "human nature," in individualism, in envy. Individualism (Hobbes, 2010) and envy (Reber and Reber, 2002), are human characteristics, which are also reflected in an immoral, reprehensible desire to gain something illegally, which belongs to someone else, even at the cost of violating morality and justice. Contemporary genetic research can comprehensively reveal the causes of pathological phenomena, among which we list corruption. If there is an "envy gene" (Dawkins, 1976), then such an approach offers a new perspective on human nature (Wilson, 1975, 1978; Wright, 1994; Williams, 1966) and on the explanations for the emergence of corruption. The question arises as to whether the "tendency towards corruption" can be encoded in the genes. Is corruption related to an envy gene? Can corruption be related to the evolution of culture, as describes Susan Blackmore (1999, 2001)? It is a question whose object of study belongs to the natural and medical sciences. Finding the answer to this question may significantly contribute to the under-