ANTIcorruption & fraud: DETECTION & MEASUREMENT

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1. CURRENT ACADEMIC RESEARCH ON CROSS-BORDER Bribing and Measuring Corruption

Lucio PICCI
University of Bologna

I present results from a research project on cross-border bribes, and on how they permit to compute new measures of corruption. The project’s results to date are reported in four papers, which are available online: https://sites.google.com/site/lucioxpicci/measure_corruption

Cross-border bribes represent a phenomenon with wide-ranging implications. They are often accompanied by other crimes, such as, illicit financial flows, which represent a serious draw of resources for many developing countries. Moreover, cross-border bribes represent a daunting policy issue, because of the intrinsic difficulties in implementing the 1999 OECD Anti-Bribery Convention, which led more than 40 countries to introduce legislation making it illegal for national firms to bribe abroad.

Interestingly, data on cross-border occurrences of corruption, which to a great extent have emerged precisely because of the introduction of the above mentioned piece of international law, present an exciting possibility to measure corruption internationally. For this reason, they provide a welcome alternative to existing, and often criticized, perception-based indicators, and to victimization statistics. The new measures of corruption, which these data allow to compute, might be seen as belonging to a broadly defined new wave of “objective measures”, which are characterized by the fact that they are based on “hard data” of one type or another.

A research project based on such data and approach has led to the following results.

1) According to the new measure, levels of corruption around the world are comparable with those which emerge from the main perception-based indicators.

2) However, the two alternative measures provide contrasting messages regarding changes in time of levels of corruption. Such fact has important implications when the purpose is to assess the effects of anti-corruption policies.

3) A new measure of the propensity of firms in a given country to corrupt abroad, also based on the new data, leads to conclusions which are at odds with those emerging from Transparency International's Bribe Payers Index. In particular, unlike that measure, the available evidence does not indicate that firms from countries characterized by higher levels of corruption, also have a higher propensity to corrupt abroad.
4) Data on cross-border occurrences of corruption also lend themselves to an analysis of the determinants of corruption, providing results which in part confirm, and in part further qualify, those that are available from a vast literature based on cross-national perception-based measures of corruption. In particular, the new approach permits for the first time to research the “relational” aspects of corruption, that is, how different concepts of distance between the countries involved may affect levels of corruption.

2. CORPORATE TAX AVOIDANCE AND OFF-SHORES DISCUSSION: CURRENT CHALLENGES

David ONDRÁČKA
Transparency International Czech Republic

David will present context of anti-corruption debate within which TI operates. Later he will brief current policy debate over beneficial ownership disclosure, anonymous ownership and examine its impact, obstacles and legislative challenges. He will present tools to overcome insufficiencies in fight against corporate tax avoidance and off-shore misuse.

3. CASE STUDIES FROM CZECH ENVIRONMENT: CAN EVIDENCE FROM STATISTICAL DATA HELP?

Jitka LOGESOVÁ, Stanislav MEČL
KINSTELLAR (Czech Republic)

According to the latest preliminary findings of the OECD working group for bribery, there are no incidents of corruption of foreign officials under investigation in the Czech Republic. Cases of domestic bribery are very rare in the Czech Republic as well. It is very difficult to prove bribery, and perpetrators are very often charged with other related crimes, such as tax fraud, misuse of official powers, breach of obligation of the duty of due care, etc. The question to address is why is this so, and what can be done to provide prosecutors with more evidence, or at least an impression of potential bribery. Statistical data indicating the specific situations where bribery is quite likely to have occurred could help. Such data could help also companies fulfil their obligation to ensure that they have established all compliance processes so as to effectively reduce bribery. However, it is unclear whether the courts would in fact accept such statistical data as evidence.
4. EVIDENCE OF MANIPULATION FROM INSPECTING DISCRETIONARY TRESHOLDS IN PUBLIC PROCUREMENT

Filip PERTOLD and Ján PALGUTA
CERGE-EI

We present evidence of how policies that create opportunities to avoid open competition in procurement lead to the manipulation of procurement values. We exploit a policy reform in which public bodies were given the autonomy to preselect potential contractors below newly defined discretionary thresholds. Manipulation is revealed through bunching of procurements just below the thresholds in construction works and services, and less so in goods. Among the manipulated contracts we document a threefold increase in the probability that procurements are allocated to anonymous firms, which can hide the final beneficiary in the procurement. This sorting violates assumptions behind regression-discontinuity designs.

5. IDENTIFYING ODOMETER FRAUD: EVIDENCE FROM THE USED CAR MARKET IN THE CZECH REPUBLIC

Josef MONTAG
International School of Economics, Kazakh-British Technical University

This paper investigates the presence of odometer fraud in the used-car market using a unique dataset of 250,000 car-sale ads from the Czech Republic. Alternative identification techniques are discussed. However, selection into the market as well as the practice of rounding odometer readings — possibly strategic yet innocent — render the standard statistical tests unusable. A modification of the last-digit test, which was previously used to detect fraud in election and accounting data, is therefore developed and employed. The results suggest that suspicious patterns are more prevalent in the segment of cars imported from abroad. I also show that this methodology can be used at the firm-level, which may be of interest to authorities and market participants.

6. LUCK OR LUXURY? POSSIBLE CORRUPTION IN THE CAR REGISTRATION PROCESS IN THE CZECH REPUBLIC

Peter BOLCHA
Anglo-American University

Jan ROVNÝ
Cass Business School, City University London, UK

Research into the detection of fraud and corruption has brought many new insights in recent decades, partly thanks to a decrease in the costs of data collection and processing. However, access to data often remains an issue, especially when fraud or corruption seems to be present.
This article applies a simple detection method focusing on possible manipulations in the car registration process in the Czech Republic, where car registration plates are allegedly assigned in random order. As access to official data was denied, we collected data in the field for a random sample of 5,000 cars, and used this to examine the existence of statistical relationships between the cars’ estimated price at registration and their registration plate numbers. The results show that cars with intuitively appealing registration plates are on average significantly more expensive than other cars. Moreover, this price difference corresponds to the relative scarcity of the given type of registration plate number, which could be a sign of discretionary behaviour in the allocation of such plates.

7. SPATIAL PROXIMITY AND A SYSTEM OF CORRUPTION

Steven GAWTHORPE
Charles University

The relationship between political influence and corruption is a significant domestic concern and contextual challenge in the Czech Republic. Despite this concern, tests of systemic corruption theories are limited in the area of quantitative research. The proposed research will expand the scope of this field by through analyzing clusters with unsupervised machine learning from the Czech public procurement sector. The empirical approach statistically distinguishes the performance differentials of awarded contracts and EU subsidies amongst firms that exhibit the characteristics of political influence from those that do not. The data suggests that patterns of political influence are a reoccurring phenomenon deeply embedded into the structure of public procurement and highly indicative of systemic corruption.

8. QUESTIONS FOR PANEL DISCUSSION AT 14:00

PARTICIPANTS (ABC): Jitka Logesová, Stanislav Mečl, David Ondráčka, Lucio Picci

☐ What kind of data are Czech officials obliged to provide? What should researchers do in order to get data from the officials? What to do if access is denied?

☐ Which are the fields of corruption studies where academic researchers should focus on? Why?

☐ What might make their inquiries useful in everyday political, legal and law enforcement process?

☐ Which forms of corruption are probably bringing the highest costs to society? How to fight against them?

☐ Which forms of corruption are on rise? How to fight against them?
9. EXPERIMENTAL EVIDENCE ON POORLY DESIGNED MODERATE LENIENCY PROGRAMS

Jana KRAJČOVÁ  
CERGE–EI

Andreas ORTMANN  
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We provide experimental evidence that supports the theoretical conjecture formulated in Buccirossi and Spagnolo (2006) that poorly designed moderate leniency programs might induce occasional illegal transactions. We also provide evidence on the potentially moderating effects of gender. While some studies of corruption and corruptibility have found no effects whatsoever (even when characteristics such as age, ability, and religiosity matter; see Armantier & Boly 2011), there is a widely shared belief (e.g., Lambsdorff & Frank 2011 or Frank, Lambsdorff, & Boehm 2011; Andreoni & Vesterlund 2011) that women are less easily corruptible and fairer. Yet another interesting facet pertaining to this issue is that of the laboratory context. Abbink & Hennig-Schmidt (2006) found that whether instructions are presented in neutral or “loaded” language does not make a difference. We present evidence that it might and that indeed the frame of instructions might trigger differences in moral behavior by men and women. Specifically, we find that men and women react quite differently to “loaded” instructions. The treatment effect becomes significant once we allow for gender-specific coefficients. Our results contribute to a longstanding debate about the micro-determinants of corruption and corruptibility and their identification under laboratory conditions.

10. ANALYSIS OF DYNAMIC RELATIONSHIP BETWEEN CORRUPTION AND FOREIGN DIRECT INVESTMENT

Tomáš EVAN  
Anglo-American University

Ilya BOLOTOV  
University of Economics, Prague

This text builds on our seminary work about the contra-intuitively weak relation between FDI and corruption. The mainstream economic thinking suggests improving transparency leads to increased FDI inflow. While economic environment without corruption is certainly value per-se, we find that given the nature of multinational corporations and FDI, it does not necessary translate to higher FDI. Multinational corporations depend on arbitrary political decisions of
home as well as host governments to offset their extra costs from doing business in multiple socio-economic environments of various countries, thus somehow increased level of corruption might be an outcome of this relationship. Following our previous theoretical research as well as of others, mainly Dunning’s eclectic model and Vernon’s obsolescing bargain model this paper finds no significant dynamic relationship between corruption and foreign direct investment. We base our conclusions on the results of a parametric test consisting of two panel Granger causality tests within a dynamic panel model framework estimated with the help of Blundell-Bond (modified Arellano-Bond) estimator, applied to data from Transparency International, the World Bank, and the International Monetary Fund for 154 countries and the years 1980–2015.

11. USING RICO TO FIGHT CORRUPTION, FRAUD AND OTHER WHITE COLLAR CRIMES: A LOOK AT WHETHER RICO IS UP TO THE TASK AND COULD PROVIDE INSPIRATION IN OTHER JURISDICTIONS.

Carollann BRAUM
Anglo-American University

This paper will look at the use of the Racketeer Influenced and Corrupt Organizations (RICO) Act to combat corruption, including bribery, money laundering and other white collar crimes, in the United States, as well as corrupt acts that occur outside of the United States. While RICO was originally intended, and has been commonly used, to combat organized crime, its design has potential for use in white collar crimes and corruption, as well. This was most recently evident in the application of RICO to the FIFA corruption case brought in 2015. Consequently, this article will analyse current evidence-gathering practices and determine whether these practices have allowed for the suitable application of RICO in criminal prosecutions or civil actions. Finally, this article look at whether elements of RICO could be incorporated into laws in other jurisdictions in order to help strengthen existing laws used to combat corruption and white collar crimes.

12. RE-THINKING THE PERVASIVENESS OF CORRUPTION IN WESTERN COUNTRIES

Pietro Andrea PODDA
Anglo-American University

This paper studies the pervasiveness of Corruption in Western societies. Corruption has often been presented as higher in developing or (former) transitional economies than in the North-West part of the world (Western Europe, North America). Internationally used ranking of

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countries classified by the level of Corruption (i.e. Transparency International, World Bank) show that most of Western countries are on the safest side. Nonetheless, there are studies (Johnston, 2005; Shaxson, 2011) highlighting that Corruption is very diffused also in these area of the world, even if the available international ranking do not necessarily show Western countries as particularly tainted by Corruption. This apparent incongruent result may be due to the forms that Corruption takes in Western societies. Administrative Corruption or blatant extortion from public officials may be less diffused than in other areas of the planet. Nevertheless, State Capture and/or Grand Corruption (these two sub-phenomena are often equivalent) are present and may take extremely sophisticated (and less visible) forms. This paper investigates on the mechanisms of Corruption in the West, rather than measuring it numerically, through case-studies. Case studies are a method which is useful to research on particular mechanisms and to shed light on relatively under-researched phenomena (Bryman, 2016).

13. HERITAGE OF THE CZECH CAPITAL MARKET FAILURES

Vladislav PAVLÁT
University of Finance and Administration

Irena JINDŘICHOVSKÁ
Anglo-American University

The goal of this paper is to analyse typical failures connected with creation of the Czech Capital Market during the transition period in 1990s. The paper also analyses the forms and impact of the past irregularities of behaviour on the present public and market participants. Setting up of the Prague Stock Exchange was one of the most promising results of the long path to the standard capital market in the CR. During the „roaring 1990s“, the Czech Capital Market suffered heavily from many scandals, caused by combination of different negative factors. The authors are trying to identify the roots of this special Czech situation, resulting primarily from the „home-made legislation“ of capital markets. This in many respects reflected the distorted way of understanding the concept of “freedom”. In Part two we are first highlighting two big scandals and subsequently we provide a brief description and analysis of the causes of long-lasting „disorder“ at the Czech Capital market during the transition period. Firstly, the Viktor Koženy funds (“the old case”) and subsequently the Key Investments (“the new” case). The analysis deals with the damages caused by corruption, financial ill-literacy of the Czech public, remnants of a non-standard situation of capital market legislation, and the failure of courts to find a way how the real tress-passers should and could be punished for their illegal activities. The preferable ways of overcoming the negative “heritage” are presented in the conclusion together with suggestions for further research, inter alia to study not only the difference between financial or economic criminality and corruption, but also the difference between lobbyism and corruption and how these factors affect institutions. In the Paper it is explained, firstly, that one of feasible ways how to limit the corruption is to upgrade financial sanctions to be paid for when
the corruption was detected, i.e. corruption should be made more costly than honest behavior. Secondly, it was explained that, corruptive practices on the capital market applied in developing markets are mostly used during the pre-trade phase (falsified documents about ownership, incorrect or falsified accounting, reports and fake auditing, etc.). Thirdly, it is proposed to draw on experience of advanced world Stock Exchanges where more powerful methods of potential corruption detection are applied (i.e. very strict regulatory measures, double-checking, high sanction as a deterrent, etc.).
SPATIAL PROXIMITY AND A SYSTEM OF CORRUPTION

Working paper

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Abstract:
The relationship between political influence and corruption is a significant domestic concern and contextual challenge in the Czech Republic. Despite this concern, tests of systemic corruption theories are limited in the area of quantitative research. The proposed research will expand the scope of this field through analyzing clusters with unsupervised machine learning from the Czech public procurement sector. The empirical approach statistically distinguishes the performance differentials of awarded contracts and EU subsidies amongst firms that exhibit characteristics of political influence from those that do not. The data suggests that patterns of political influence are a reoccurring phenomenon deeply embedded into the structure of public procurement and highly indicative of systemic corruption.

Keywords: Systemic Corruption, Public Procurement

JEL Classification: D73, K42

INTRODUCTION

Social science theories suggest explanations for why various approaches may or may not be causal features of corruption. A common argument amongst scholars purports that corruption results only in the public and private spheres (See Lennerfors 2009; Williams; 1999). Some contend that the state behaves as a predatory agent through the creation of rent-generating schemes (See Acemoglu and Verdier 2000; Banfield 1975; Krueger 1974; Tanzi and Davoodi 1997; Treisman 2000; Tullock 1996). Others contend that instances of state capture transpire from predatory behavior of private firms (Hellman et al. 1999). The Business Environment and Enterprise Performance Survey (BEEPS), developed by the European Bank for Reconstruction and Development and the World Bank, produced indicators aimed at instances of state capture with samples that included the Czech Republic. Another tradition of thinking about the causes of corruption explains a state trapped amongst corrupt networks as a result of exceedingly strong

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and predatory behavior of political parties who decide on filling all major positions in government (Pizorno, 1971). A bulk of the research on corruption treats the nature of public and private organizations as something clearly divisible, delineated, and static in the ways corrupt transactions transpire.

To push this debate forward, it is important to examine alternative perspectives beyond public-private bounds as mutually exclusive. A good body of literature moves beyond organizations as culpable for corruption throughout society and focuses instead on the prevailing systemic problems (See Caiden & Caiden, 1977; Johnston, 1998; Alam, 1989; Persson, Rothstein, & Teorell, 2013; Della Porta and Vannucci, 2011; Stefes, 2007; Frič, 2012; Stefes, 2012). Particular states with a widespread level of dysfunctional institutions give rise to instances where repetitive acts of corruption are the narrative of state and social behavior. Predatory activity by colluding networks frequently extracts state resources at the expense of the public majority. Policy and administrative processes are kept in stasis to prevent alternative participatory outlets with the government. This restriction cultivates a discordant relationship between state and society to which Caiden and Caiden (1977) refer to as an enveloping standard of “social anomie” in the population.

It is important to find out who in this corrupt triangle of bureaucrats, politicians, and private firms is in control. In the Czech Republic, it is obvious that the individual at the peak of corruption triangles create different coalitions and corruption chains. Research based on social elites finds that the power center of the Czech Republic is in conjunction with politicians and officials (Frič and Nekola 2010) who decide which businesses will gain market entry. Andrei Yakovlev (2006) further elaborates that the situation of non-formal submission to private business interests of the state is called "captive business". Business opportunities with the state are secured only through bribing representatives. However, what is true at the national level may not apply at the regional and local. Michal Klima (2013) discusses the concept of clientelist parties at the regional level, in full knowledge of a regional bosses (godparents), who are also both entrepreneurs and leaders of the party.

The aim of this project seeks to determine whether there is a “systemic corruption” phenomenon in the Czech Republic, how big it is, the particular character, and what configuration of forces in a corrupt triangle operate at different levels of the government. Are they open or closed and what other players are drawn into the protection of corrupt transactions performing acts of corruption with impunity? This analysis places the role of political influence and firm performance at the forefront. Political parties in the Czech Republic today publicly admitted that corruption scandals for their members are a general problem from political party financing. We therefore ask what role association with political parties plays in a corrupt system and what motivates them to participate in covert control of the state.

**CONCEPTUALIZING SYSTEMIC CORRUPTION**

Caiden and Caiden (1977) sought to distinguish systemic corruption from individual corruption by developing a nine-point propositional plan to further the development of hypotheses about the
characteristics of systemic corruption. Johnston (1998) diverged away from individual emphasis placing the patterns of interaction between wealth and power at the forefront. He developed four “syndromes” to capture a general set of characteristics of countries suffer from due to systemic corruption. Stefan (2012) examined systemic corruption in the region of Central and Eastern European countries. He contextually identified some institutional vulnerability that is indicative to the region from the liberalization process, communist legacy, and prevailing cultural norms. Wedel (2012) discusses the variety of means that public and private overlap involved in systemic corruption which is an essential attribute of its institutionalized and reoccurring behavior. She critiques mainstream approaches to addressing the problem is predicated on the overemphasis of single transaction component of corruption as isolated instances or loopholes in the system.

Amongst the prevailing literature on systemic corruption we can conceptually reduce systemic corruption to three distinct points: (i.) the problem core of systemic corruption is one of frequency and reoccurrence; (ii.) networks comprising of individuals and varying organizations are the primary unit of analysis; (iii.) the normative drivers reinforce the expectations of partial and impartial treatment within society.

I. Frequency and Reoccurrence of Corruption

The frequency of corruption is the core of the problem since the normative drivers that shape institutions, acceptable and unacceptable behavior, and qualification reinforce and are reinforced by regular activity. One may state that the problem is not so much that it happens as much as it continues to happen. Systemic corruption fits the necessary criteria when the role of agency has little to no impact on the overarching social dynamics. Additional criteria require that acts of corrupt exchange are not based exclusively on incidental accounts but regularly occurring patterns of behavior. When social processes accommodate the access for few and exclusion of many, then analyzing corruption at the individual level is no longer sufficient for analysis. This notion entails greater insight into the broader normative and structural drivers that perpetuate the problem.

II. Systemic Corruption Manifests through Networks

Configuration of social ties between actors ensures that expectations are secured and that the manifestations of access and exclusion are materialized. Self-organizing networks (Rhodes, 1997) extend the importance beyond individuals or strict divisions of public-private organizations. Relying on influence is important for organizational survival and the government is not the only obstacle (Bozeman, 2004). Firms must also face the ways in which influence materializes through interest groups, political parties, informal networks, and cadres of contractors with established connections and insider knowledge. Sustaining preferential treatment requires cooperation with multiple stakeholders across varying organizational types. Understanding the ways in which networks develop and sustain themselves is often unique to the system. Analyzing the clusters of groups is an important way to understand how networks form to exploit public resources.
III. Normative Drivers and the Role of Impartiality

While institutions and formal rules are important in understanding constraints on behavior, they represent a sense of permanence (Cairney, 2012) that is at odds with how social behavior reacts within the systemic conditions. Instead, prevailing norms depict a better categorical area of systemic corruption since they may bypass codified restrictions on behavior and may be a driver in “creating their own perception of what they want and how to behave in the landscape they are in” (Teisman and Klijn, 2008, p. 289). Mungiu-Pippidi argues that the root of systemic corruption is a particularistic political culture, which is defined as a system in which the government’s treatment of citizens ‘depends on their status or position in society, and people do not even expect to be treated fairly by the state; what they expect is similar treatment to everybody with the same status’ (2006, p. 82). Normative drivers within society determine who gets what and in which ways.

Figure 1 below is an image illustrating the dynamic interaction of the components of the system below:

![Diagram of Systemic Corruption](image)

**Fig. 1. Diagram of Systemic Corruption**

Ideally, political authorities exercise non-discrimination through impartial treatment of who has access to public resources (Rothstein, 2008). To gain an understanding about the prevailing levels of impartiality in the Czech Republic we can refer to Figure 2 for an illustrative comparison within Europe.
The data used in Figure 2 comes from the Quality of Governance Institute (QoG), which surveys experts within public administration (Dahlström, C., et. al, 2015). I used organized the data into quantiles ranging from most partial to most impartial. The data was combined with an ESRI Shapefile of European territorial units from the Eurostat website. France and England were removed from the graph due to low observation counts. The impartiality percentile for the Czech Republic ranges amongst the most partial (albeit not the lowest) in the treatment of access to public resources when compared to other countries across Europe. For purposes of analysis, impartiality places a specific role in determining which firm receives the lion’s share of award value and success within the public procurement sector. Scott (1972) narrows the role of political influence systemic corruption stating that, “influence is corrupt we imply that without the special consideration of kinship, bribery, or friendship the public official could not have made the same decision” (p.21).

Further analysis into the Quality of Governance data illustrates the particular nature of impartiality with respect to the Czech Republic. Figure 3 below highlights the summary of questions specifically pertaining to levels of impartiality in the following manifestations:

1. Network ties: civil servants preferential treatment to personal connections in the private sector
2. Particularistic: the intentional favorability of specific groups at the detriment of other social groups

3. State Capture: the measure by which private firms’ predatory behavior traps public officials into preferential treatment for the private sector.\textsuperscript{4}

The state capture category holds the lion’s share of the respondent’s level of abuses with the mean of 4.8 and median of 5. The network ties category is the second most important category with a mean of 4.11 and median of 5. The grey area in the background is the aggregated sum of all the responses, which serves a contrasting summary.

![Graph showing data for different categories](image)

**Fig. 3. Impartiality Survey for the Czech Republic (Author’s Calculation using QOG Data)**

The sample is indeed quite low with only 28 observations in 2012. Despite the small sample, the survey provides insight into the prevailing nature of impartiality in the region. The following section will empirically examine different categories of groups used for analysis before moving onto the empirical results of this paper.

**CATEGORIES OF FIRMS USED FOR ANALYSIS**

The identification of patterns within the data set consists of identifying three distinct groups and their respective levels of political influence in the public procurement process. The first group

\textsuperscript{4} See appendix II for the exact questions from the codebook
consists of firms that have never won a European Union subsidy and have never given a political contribution of any kind. This group represents the majority of firms within the construction sector as well as in public procurement in general. The second group, are firms that have paid political contributions but have never won an EU subsidy. They represent roughly one-third of the firms within the data set. Political contributions in the Czech Republic are relatively free regulatory restrictions and oversight. Values that exceed 50,000 CZK require additional administrative procedures and paperwork (Iksens, J., 2008). According to Skuhrovec, J. et. al (2015), the majority of the distribution falls directly on the margin of the threshold line. Since the majority of political contributions fall below legitimate oversight, the quality of the data is susceptible to flaws of self-reporting rather than actual values of contributions. For this reason, this paper treats political contributions as simply a proxy for multi-dimensional political influence. The relatively low values of the contributions make it difficult to treat this as a direct incentive to exchange a 10 million CZK contract for 50,000 CZK. What political contribution data offers, however, is a variable for political influence to distinguish amongst groups and the opportunity for further exploration into distinguishing factors between influential government contractors.

The third group is similar to the second group except that the organization has received at least one or more European Union subsidies. Organizations in this category differ from the other two groups by virtue of increased exposure to political authority and constraints accompanying the processes from EU. The constraints of political authority in the government contracting process are considerable when comparing firms strictly oriented towards the private sector. The processes and procedures a firm faces to capture EU subsidies add an additional layer of exposure to political authority. Group three is much more likely to succeed at mitigating the consequences of document preparation, protocol, and the meticulous details of procedural practice. This group is also more likely to have greater skills outside the formal requirements. Organizations within this category is likelier to have honed communication techniques to access key stakeholders. It is much more likely to have an established network to consult for collaborative opportunities or to forecast prospective government contracts. The main differences between Group Three and the others is the exposure to routinization of public sector processes. Tolbert and Zucker state that routines emerge as simplifying and stabilizing devices, but once institutionalized they take on a momentum that goes beyond any initial rationale (1983). The nature of routine interaction with political authorities can be a propelling force of systemic corruption as reoccurrence can further exacerbate exclusion of new market entrants. Group three is roughly 20% of the data set population.

THE DATA SET

The data for this analysis covers above-threshold procurement construction contracts from 2006-2012. Additional data from politickyfinance.cz provided the political contribution and EU subsidy data at firm-level covering this time period in conjunction with the contracting data. To

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5 I would like to thank zIndex.cz for assistance with the data set.
control for specific work type, only construction contracts with the common procurement vocabulary (CPV) industrial classification was used. The extensive controls for CPV values narrowed the type of contracting work and made for greater comparative analysis and no group had advantages over others in the construction sector for arbitrary work requirements in the contract. The drawback to reducing the three groups to similar CPV classification is a substantial reduction in the number of observations. The descriptive filters reduced the data set from 108,000 observations to 14,569. Other filters to the data set consist of obvious clerical errors, missing firm identification numbers (IČO), and usually low or high-awarded contract figures. Despite the considerable reduction in the sample size, it is both representative and structured for comparative analysis between groups.

**CLUSTER ANALYSIS**

K-means clustering identifies group membership by calculating a centroid for each group where each individual is assigned to the group with the nearest centroid (Crawley, 2013). The group classification is established *a priori*, which were the groups described earlier. The clustering method seeks to understand if the variables within the data set are useful taxonomic characters for the groups previously described through theoretical characteristics (Jung, Y. G, 2015).

The use of means is essentially for exploratory purposes more so than hypothesis testing. It is used for cluster analysis and belongs to the category of unsupervised algorithms (ibid, 2015). Clustering aims to split a large data set into a plurality of clusters of data, which share some trait of each subset. A cluster is therefore a collection of individual observations that exhibit similarity or dissimilarity to others within the data set. There are a number of different ways to perform a cluster analysis. The analysis in this paper uses a probabilistic approach assuming that amongst the three different groups there is a 1 in 3 chance that a clustering algorithm will assign the observation to the appropriate categorical group when performing the assignment “blind.”

The process begins by randomly selecting K number of rows at random as its starting point. It then assigns each value to its closest centroid and reiterates the process until all the centroids of all data points in a cluster can no longer be recalculated. The function returns the cluster memberships, centroids, sums of squares (within, between, total), and cluster sizes. For means clustering it is important to convert the data to z-scores so the data points can be used for comparative purposes. The variables on bid counts, awards, and award estimation were all standardized.

The results found 83.5% accuracy in assigning the individual contractors to the appropriate groups for Group 1, 2, and 3 respectively. The algorithm performed this test without prior

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6 Some contract awards were repeated entries with values close to the highest contract in Czech history and values below the first quantile (prior to filtering) were values close to $100 USD which had complex work requirements. These data points are unfortunate errors. The removal of IČO numbers was a highly unfortunate loss of data with as much as 2,000 observations. Since the main thrust of this paper is to organize contractors into groups the identity is imperative and those observations had to be removed.
programming direction about which individuals belonged to which groups. The competitiveness of bids was not found to be strong determinant of group clustering. The table of the means test can be found below:

---

7 For a visual display of how well k-mean clustering assigned individuals to groups, please refer to Figure 9 in the Appendix.
<table>
<thead>
<tr>
<th>Group</th>
<th>Cluster Means</th>
<th>Sum of Squares by Cluster</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.7039158</td>
<td>38.37139</td>
</tr>
<tr>
<td>2</td>
<td>0.3904045</td>
<td>28.74106</td>
</tr>
<tr>
<td>3</td>
<td>0.1415089</td>
<td>24.89331</td>
</tr>
</tbody>
</table>

**Fig. 4. K-means cluster for construction**

*Source: Authors’ Calculation. Between Sum of Squares/Total Sum of Squares equals 85.1%*

Figure 2, shown below, illustrates the distribution of award values to each of the groups based on quantiles. The most interesting observation from the award distribution is the low award values at the entry for procurement opportunities. The data suggests that groups with political influence are able to capture opportunities at a higher value, while Group 1 appears to be relegated to opportunities with more menial types of construction work.

**Fig. 5. Distribution of Awards Based on Quantiles for Respective Groups**
Figure 6 (above) illustrates the clustering patterns of firm award locations. This spatial image is important as a backdrop for understanding the potential location for contractors to repeatedly win awards throughout the Czech Republic. The data used for this stage of the geospatial analysis converted the registration addresses for firms and converted them into longitude and latitude coordinates using the ‘ggmap’ package in R studio from Kahle & Wickham (2013). Using Google’s API for geocoding and drive distances between firm location and government office location I was able to reach a geospatial approximation as to where cluster densities repeatedly occur throughout the Czech Republic. Figure 7 below illustrates the kernel density estimation of the awards of the influence group. As you can see the densities reoccur in regions more likely to issue contracts, such as Prague and Brno. However, there are a number of regions distinctly clustered in the figure below outside of the large metropolitan areas. These clusters are distinct from one another and depict the behavioral patterns of the group more so than the demographics of the regions themselves since the tend not to deviate into other territories for contracting opportunities.
Figure 8 below highlights the density of contract wins throughout the Czech Republic. Although the non-influence group is significantly larger in terms of the overall number of contractors there are very little comparative clusters to figure 7. The reason for this difference is that non-influence contractors move throughout the Czech Republic winning contractors in various locations as opposed to repeated wins within a small geographic radius. This behavior has an impact on the clusters in the map below which makes the density far more diffuse than in figure 7.

The following graph used an estimator to determine where private firms typically win contracts according to the size of the government offices. Figure 8 (below) shows the pattern movement as to where private firms proportionately win contacts according to corresponding size of government contract office. The scale for government office size is the same scale for private firms which is as follows: large (250+), medium (50-249), small (10-49), and micro (1-9). The pattern movement in blue refers to non-influence groups and their corresponding movement, while red refers to the influence groups’ movement.
Table one below provides the summary of the proportion of the size of the government offices that issue contacts to non-influence and influence firms. The pattern of behavior is quite interesting as there is roughly double the percentage differences for the smaller government offices for the influence group over the non-influence group. This pattern is quite interesting as the influence group relies on close proximity and consistent relationships with smaller government offices to secure stability in future transactions. The path towards larger government offices for the non-influence group exemplifies that more oversight may be more likely to transpire and reward merit for an innovative product over a personal connection. The non-influence group may seek these government offices for contracts as a form of insulation against non-competitive practices of corrupt actors. The influence groups may seek smaller government offices as they are more likely to expend little resources amongst personnel in exchange for contract opportunities.

<table>
<thead>
<tr>
<th></th>
<th>Large</th>
<th>Medium</th>
<th>Small</th>
<th>Micro</th>
<th>NA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Influence Group</td>
<td>76.98068***</td>
<td>12.21472***</td>
<td>6.862745***</td>
<td>3.747991**</td>
<td>0.8421729*</td>
</tr>
<tr>
<td>Influence</td>
<td>59.76027***</td>
<td>18.32192***</td>
<td>14.041096***</td>
<td>6.271404**</td>
<td>1.2842470*</td>
</tr>
</tbody>
</table>
Group

*P < 0.05; **P < 0.01; ***P < 0.005.

Table 1. Summary Statistics for Corresponding Government Office Size to Firm Wins
CONCLUSION

Recognizing the patterns within a system is imperative for understanding the overarching social drivers of corruption. Emphasizing the individual as the primary unit isolates the problem away from the overarching social narratives. Anti-corruption intervention strategies tend to focus on the individual more than the network (Wedel, 2015; Stefes, 2006; Perrson et al., 2013), which presses for the need to identify the endogenous modes of interaction between the state and civil society. By no means is the framework in this analysis exhaustive. The empirical analysis in this paper does not give an explicit understanding of the processes by which corruption transpires. What cluster analysis does offer is an assessment of the broader social patterns that promote preferential advantages to a select few at the disadvantage of many. Understanding these patterns are paramount for identifying the root of the problem and developing sustainable policy interventions.
APPENDIX I

Below is a graphical depiction of where k-means clustering assigned individuals to groups. The clustering means combined the award values of the contracts with the estimated value of the contracts by Czech contracting authorities. Despite Group 3 having a higher value of awards, compared to the other groups, had a lower award estimate than the others. Group 3 also had the highest number of outliers than the other groups. For this reason, the cluster analysis places Group 3 on the left side of the distribution.

Fig. 10. K-Means Cluster of Groups Based on Procurement-Related Characteristics
APPENDIX II.
Questions from the Quality of Governance codebook:

Q8. Thinking about the country you have chosen, how often would you say the following occurs today?
   Likert Scale (hardly ever) 1-7 (almost always)

Q8_h. When deciding how to implement policies in individual cases, public sector employees treat some groups in society unfairly?

Q8_i. When granting licenses to start up private firms, public sector employees favor applicants with which they have strong personal contacts?

Q8_g. Firms that provide the most favorable kickbacks to senior officials are awarded public procurement contracts in favor of firms making the lowest bid.

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EXPERIMENTAL EVIDENCE ON POORLY DESIGNED MODERATE LENDENCY PROGRAMS

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Abstract

We provide experimental evidence that supports the theoretical conjecture formulated in Buccirossi and Spagnolo (2006) that poorly designed moderate leniency programs might induce occasional illegal transactions. We also provide evidence on the potentially moderating effects of gender. While some studies of corruption and corruptibility have found no effects whatsoever (even when characteristics such as age, ability, and religiosity matter; see Armantier & Boly 2011), there is a widely shared belief (e.g., Lambsdorff & Frank 2011 or Frank, Lambsdorff, & Boehm 2011; Andreoni & Vesterlund 2001) that women are less easily corruptible and fairer. Yet another interesting facet pertaining to this issue is that of the laboratory context. Abbink & Hennig-Schmidt (2006) found that whether instructions are presented in neutral or “loaded” language does not make a difference. We present evidence that it might and that indeed the frame of instructions might trigger differences in moral behavior by men and women. Specifically, we find that men and women react quite differently to “loaded” instructions. The treatment effect becomes significant once we allow for gender-specific coefficients. Our results contribute to a longstanding debate about the micro-determinants of corruption and corruptibility and their identification under laboratory conditions.

Keywords: corruption, anti-corruption mechanisms, gender, framing

JEL classification: C91, D02, D73, K42
1 Introduction

The detrimental consequences of corruption have been documented in numerous empirical studies. For example, Mauro (1995) and Tanzi (1998) have shown a negative effect of corruption on economic growth; Hwang (2002) has demonstrated that corruption, through tax evasion, reduces government revenues; and Gupta, Davoodi and Alonso-Terme (2002) have shown that corruption increases income inequality and poverty. The design and implementation of effective anti-corruption measures therefore remains an important concern (Laibson 2015).

One promising anti-corruption measure is leniency policies. Leniency policies award fine reductions to wrongdoers who “spontaneously” report an illegal agreement and thereby help to convict their accomplice(s). They serve as an enforcement mechanism as much as a means of deterrence in that, if appropriately designed and implemented, they have the potential to undermine the trust between wrongdoers.

Leniency policies have, however, been analyzed in the literature mostly as an anti-cartel mechanism. The deterrence effect of leniency policies in the case of cartels has been analyzed and confirmed both theoretically (e.g. Spagnolo 2004) and experimentally (e.g. Apesteguia, Dufwenberg and Selten 2004; Hinloopen & Soetevent 2008; Bigoni, Fridolfsson, Le Coq and Spagnolo 2012, 2015).

Leniency policies to deter cartels are, however, not directly applicable as anti-corruption measures, since cartel deterrence is typically modeled as a symmetric and simultaneous game while strategies and payoffs of corruption measures are asymmetric and the move structure is sequential. A proper theoretical and experimental analysis is therefore called for.

To the best of our knowledge, Buccirossi & Spagnolo (2006) were the first to theoretically analyze the various effects of leniency policies in corruption settings. These authors demonstrated theoretically that poorly designed moderate leniency policies may have a serious counter-productive effect: as they may allow to punish the partner who does not respect an illegal agreement at relatively low cost, in effect providing an enforcement mechanism for occasional illegal transactions. Thus leniency programs can, contrary to their intended effect, actually induce an increase in corruption.

Buccirossi & Spagnolo’s result together with the theoretical and experimental evidence from the literature on cartel deterrence suggests that the potential of leniency policies to undermine trust between wrongdoers hinges upon proper design and implementation, and may actually hinge on subtle design and implementation details such as the timing of “regret.”

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8 For a more detailed discussion see Richmanova (2006).
9 Occasional illegal transactions are essentially one-shot transactions.
Experimental methods have been widely used, more recently also to study corruption (Dusek, Ortmann and Lizal 2005; Armantier & Boly 2012; Lambsdorff &Schulze 2015). They become especially useful when counter-factual institutional arrangements such as leniency programs need to be explored, or subtle design and implementation details: they provide relatively cheap ways to examine the effects of such arrangements in controlled environments (see, for example, Dusek et al. 2005, Apesteguia et al. 2004, Bigoni et al. 2012, 2015, and Roth 2002).

In Richmanova & Ortmann (2008) we proposed a generalization of the Buccirossi & Spagnolo (2006) model by introducing the probabilistic discovery of evidence. Our generalization adds realism to their model and renders it more readily applicable for experimental testing without changing the qualitative results that the authors derived. We used this generalization for our experimental test of leniency policies as an anti-corruption measure. Specifically, we tested the conjecture formulated in Buccirossi & Spagnolo (2006) that poorly designed moderate leniency policy might, contrary to the intention of law makers, help to implement occasional illegal transaction.

In addition, we address a methodological issue which (anti-)corruption experiments are afflicted with and for which the experimental evidence currently is scant, inconclusive, and problematic: the impact of the framing of the instructions (whether abstract or “loaded”).

Altogether, we report the results of two treatments: a benchmark, in which all instructions are presented in completely neutral language and a context treatment, in which we use the same parameterization as in the benchmark but in which instructions are “loaded” in that labels are attached to players and their actions that make the bribery scenario unmistakably clear.

The treatment is motivated by the question to what extent home-grown priors that are related to corruption might translate into moral scruples and, for example, might induce subjects to make different decisions when loaded instructions, question previously studied by Abbink & Hennig-Schmidt (2006). Completely neutral instructions would transform the experimental problem possibly into the question of whether subjects can, and do, maximize. While there is a long and quite controversial discussion currently reigning on this issue of social preferences (e.g., List 2006), we consider the question of moral scruples a different one than that of social preferences and in this case believe that in the current context it is an empirical question.

In the original model, Buccirossi & Spagnolo assume that the briber and bribee agree to produce hard evidence, which serves as a hostage. Without hard evidence being produced, the occasional illegal transaction is not enforceable. An audit, if it takes place, discovers the evidence with a probability of one. In Richmanova & Ortmann (2008), we argue that instead some evidence is created unintentionally and this can be discovered by an audit with some probability that is less than one.

We have, in addition, designed some additional exploratory treatments which we use for a robustness check of the main results. See the appendix for more details.
Importantly, we do find experimental support for the theoretical prediction that Buccirossi & Spagnolo (2006) formulated, confirming that real-world subjects can use ill-designed legal environment to enforce corruption. To the best of our knowledge, ours was the first confirmation of its kind although since we performed our experiment other researchers have provided confirmatory results (e.g. Engel et. al 2012, Abbink et. al. 2014, Schikora 2011 or Wu & Abbink 2013). Moreover, our paper is the only one we know of that offers evidence for interaction between gender and framing of the experiment. Like Abbink & Hennig-Schmidt (2006) we do not find evidence that the choice of natural or loaded instructions makes a difference in the aggregate if we do not control for gender. However, our evidence suggests strongly the possibility that once we control for gender, behavior of female and male participants differs – in line with evidence from other studies – considerably, suggesting that the aggregate null effects mask important issues. We hasten to add that our gender results are incidental in that we did not design the experiment as a clean test of gender effects (as, for example, in Ortmann & Tichy 1999) but found them through our econometric analysis. We hence like to think about the present version of this manuscript as an elaborate pilot study that would benefit from a duly modified self-replication study that in addition would have to be properly powered up (Ortmann 2017).

The remainder of the paper is organized as follows. In the next section we discuss the generalized Buccirossi & Spagnolo model in detail, and we also describe and compare the three experimental treatments. In section 3 we describe experimental implementation and in section 4 we review the results. Section 5 concludes.

2 Experimental Design

We implement experimentally the bribery game in Richmanova & Ortmann (2008). An entrepreneur has an investment possibility of net present value v, if a bureaucrat is willing to perform an illegal action, Action a. For doing so, the bureaucrat may require compensation in the form of a bribe, b.

Figure 1 summarizes the extensive form of the game and the expected payoffs. The timing of the game is as follows. First, the entrepreneur decides whether to Pay or Not Pay a bribe. If she does not pay a bribe, the game ends. If she does, the bureaucrat chooses one of three possible actions: Denounce, do Nothing,\footnote{Nothing denotes a passive action choice. For the bureaucrat, it means that he neither denounces nor respects (by providing the favor) the illegal agreement. For the entrepreneur, it means that she does not denounce in response to the bureaucrat’s action.} or perform Action a.\footnote{Action a means that the bureaucrat respects the illegal agreement and thus provides an (illegal) favor to the entrepreneur. That is, strictly speaking, not a corrupt action because it does not impose a negative externality on the}
Figure 1: Extensive form of the corruption game in the generalized model. P stands for Pay, NP for Not Pay, D for Denounce, N for doing Nothing, a for performing Action a, b for bribe, \( v \) for the value of the project to the entrepreneur, \( \alpha \) for the exogenous probability of an audit, \( \beta \) for the probability of conviction, \( F_E \) and \( F_B \) for full fines and \( RF_E \) and \( RF_B \) for reduced fines to the entrepreneur and to the bureaucrat, respectively.

If the bureaucrat chooses Denounce, an audit is carried out. The audit may (with probability \( \beta, \beta \in (0, 1) \)), or may not (with probability \( 1 - \beta \)), discover some evidence of bribery. If the bribery attempt is detected, the leniency policy guarantees that the bureaucrat will have to pay only a reduced fine whereas the entrepreneur will have to pay the full fine. In addition, bribe \( b \) is confiscated.\(^{14}\) If the bribery is not detected, the bureaucrat will enjoy bribe \( b \).

If the bureaucrat chooses Nothing or Action a, the entrepreneur has another move. In both cases, he may choose between Denounce and do Nothing.

If the entrepreneur chooses Denounce and the ensuing audit discovers evidence (which, again, happens with probability \( \beta \)), then she will have to pay a reduced fine whereas the bureaucrat will have to pay the full fine and, in addition, their illegal gains will be confiscated. If no evidence is discovered, both the bureaucrat and the entrepreneur will keep their illegal gains.

If the entrepreneur chooses Nothing then an audit may still occur with some nonzero

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\(^{14}\)Note that in this case the illegal transaction has been detected without Action a being performed and therefore there is no gain to the entrepreneur to be confiscated.
probability \( \alpha \). If the audit detects bribery (which happens with probability \( \beta \)), both parties are subject to a sanction, which consists of the confiscation of the illegal gains plus the full fine. The illegal gains include bribe \( b \) in any case and value \( v \) only in the case when the bureaucrat has chosen to perform Action \( a \).

The contribution of the generalized model lies in the introduction of probability \( \beta \). In Buccirossi & Spagnolo (2006) it is assumed that, before the illegal transaction takes place, the bureaucrat and the entrepreneur agree on the production of hard evidence. Without hard evidence being voluntarily produced by both of them the illegal transaction is not enforceable. In essence it is assumed that both involved are holding a hostage that commits each other to the desired outcome. It is furthermore assumed that, if an audit takes place, corruption is discovered and both culprits are convicted with a probability of one. Richmanova & Ortmann (2008) assume instead that some hard evidence is created unintentionally along the way and that this evidence may be discovered by an audit with probability \( \beta \in (0, 1) \). The basic structure of both, the original and the modified game, is the same except that in the original version the probability \( \beta \) is set to 1.

The generalization makes the model more suitable for experimental testing, as no additional stage is needed in which subjects would have to agree on producing a hostage. In addition, the generalized model arguably resembles real-world situations more closely.\(^{15}\)

Buccirossi & Spagnolo (2006) show that in the absence of a leniency program, occasional illegal transactions are not implementable.\(^{16}\) The result carries over into the generalized model. After the introduction of a modest leniency program\(^ {17}\) occasional illegal transactions are enforceable if the following three conditions are satisfied simultaneously. First, the no-reporting condition for the bureaucrat: the reduced fine must be such that the bureaucrat prefers performing Action \( a \) to Denouncing once the bribe has been paid. Second, the credible-threat condition for the entrepreneur: the reduced fine and the full fine must be set such that the entrepreneur can credibly threaten to report if the bureaucrat does not deliver. Third, the credible-promise condition: the entrepreneur must be able to credibly promise not to report if the bureaucrat obeys to the illegal agreement.

\(^{15}\)We realize that in such a game beliefs about the probability of detection might play an important role. However, we believe that the introduction of beliefs would make the game more complex than necessary for experimental testing. Instead, we view probability \( \beta \) as an empirical success rate, or effectiveness, of a detection technology that is known to subjects.

\(^{16}\)Facing the full fine even after reporting, the entrepreneur cannot credibly threaten to report the bureaucrat in the case when he would not deliver. Therefore, the bureaucrat would keep the bribe and not perform Action \( a \), knowing that it is not profitable for the entrepreneur to punish him. Consequently, the entrepreneur would not enter the illegal agreement in the first place.

\(^{17}\)Similarly to Spagnolo (2004), “modest” means that a leniency program does not reward for reporting, at best it cancels the fine.
These three conditions, given the value of the project together with the full and reduced fines, define a bribe range for which the occasional illegal transaction is implementable. Even though these conditions are modified in the generalized model, the qualitative result remains unaffected.

We used the generalized version of the game for experimental testing of the theoretical prediction under two different scenarios: when the occasional illegal transaction is implementable in equilibrium, and when it is not. Implementability is a function of the per-round endowment for the entrepreneur. The per-round endowment exogenously defines the value of the bribe if the entrepreneur decides to pay it.\textsuperscript{18} For each treatment we use two possible values of the per-round endowment: a low endowment that theoretically leads to a no-corruption equilibrium, and a high endowment that theoretically leads to a corruption equilibrium.

Following Abbink & Hennig-Schmidt (2006), we want to test whether loaded instructions in a bribery experiment affect the behavior of subjects in a lab. For that purpose, we designed two treatments: a Benchmark (B) and a Context (C) treatment.\textsuperscript{19}

\textbf{2.1 Parameterization}

Table 1 summarizes the parameterization chosen for the Benchmark (B) and the Context (C) treatments.

<table>
<thead>
<tr>
<th>Treatment</th>
<th>α</th>
<th>b</th>
<th>v</th>
<th>RF\textsubscript{E}</th>
<th>RF\textsubscript{B}</th>
<th>F\textsubscript{E}</th>
<th>F\textsubscript{B}</th>
<th>E\textsubscript{L}</th>
<th>E\textsubscript{H}</th>
<th>show-up</th>
</tr>
</thead>
<tbody>
<tr>
<td>B</td>
<td>0.1</td>
<td>0.2</td>
<td>100</td>
<td>0</td>
<td>0</td>
<td>300</td>
<td>300</td>
<td>20</td>
<td>40</td>
<td>300</td>
</tr>
<tr>
<td>C</td>
<td>0.1</td>
<td>0.2</td>
<td>100</td>
<td>0</td>
<td>0</td>
<td>300</td>
<td>300</td>
<td>20</td>
<td>40</td>
<td>300</td>
</tr>
</tbody>
</table>

Table 1: Experimental parameterization. α and β denote the probability of an audit and of discovering evidence of bribery, respectively; v denotes the value of the project to the entrepreneur; RF\textsubscript{E} and RF\textsubscript{B} denote reduced fines and F\textsubscript{E} and F\textsubscript{B} full fines to the entrepreneur and to the bureaucrat, respectively; E\textsubscript{L} and E\textsubscript{H} denote low and high per-round endowment, respectively; and show-up stands for the show-up fee.

The probabilities α and β were chosen such that they approximately correspond to real-world exogenous probabilities of audit and to real-world conviction rates; at the same time they

\textsuperscript{18} This way we reduce the cognitive demand on subjects: the only decision they have to make is whether they want to transfer their per-round endowment or not.

\textsuperscript{19} We also conducted two exploratory sessions of a partial context treatment (C- treatment), where we only provided context on the types of roles. In this treatment Participant X was called “Entrepreneur” and Participant Y “Bureaucrat”. All actions and realizations of random outcomes were denoted by neutral letters, as in the B treatment. We do not report these data in the main text as it is not possible to control for subjects’ interpretation of the game in this case and therefore it is hard to recognize all the possible effects in this treatment. Some results from this treatment are discussed in the appendix.
are intuitively comprehensible for subjects. The value of the project \( v \) was chosen together with full fines \( F_E \) and \( F_B \) such that subject faces a considerable gain from the investment but also severe punishment in the case of detection. We set reduced fines \( RF_E \) and \( RF_B \) equal to zero to analyze the case of full leniency programs which, according to Apesteguia et al. (2004), have promising anti-cartel properties. Endowment determines the value of a bribe to (not) be paid. The “low endowment” of 20 leads (theoretically) to no corruption, whereas the “high endowment” of 40 leads to corruption equilibrium. Finally, the show-up fee was set such that we eliminate the possibility of earning a negative total from the experiment.

![Game Tree Diagram](image)

Figure 2: Expected payoffs from the corruption game in the B and in the C treatment. Expected payoffs of Participant X’s are always in the first row and those of Participant Y’s are below. The theoretical prediction varies with the endowment and the respective branches of the game tree are bold.

The Figure 2 illustrates extended game forms together with the expected payoffs resulting from our parameterization for both the low- and the high-endowment periods. The branches identifying the equilibrium choices of risk-neutral agents are in bold font.

2.2 Instructions’ framing

The instructions for the B treatment were presented in a completely context-free fashion. Subjects were called Participant X and Participant Y, actions were denoted by neutral letters and the realization of “detection” or “no detection” as “outcome A” or “outcome B”, respectively.

In the C treatment, the roles that subjects were assigned were called “Entrepreneur” and
“Bureaucrat”; actions were called “Pay bribe”, “Not Pay bribe”, “Denounce”, “do Nothing” and “Provide the favor a”; and the realizations of random outcomes were called “corruption has been detected” and “corruption has not been detected”. Figure 3 provides a comparison of the wording for the treatments, with the neutral wording always in the upper row.

Figure 3: Neutral vs. loaded instructions wording. For each branch, the upper line provides the neutral labels of the B treatment (bold); below are the loaded labels of the C treatment.

3 Implementation

The experiment was conducted in November and December 2006 at CERGE-EI in Prague, using a mobile experimental laboratory.²⁰

Participants were recruited from the Faculty of Social Sciences of Charles University in Prague, from various faculties of the Czech Technical University in Prague and of the University of Economics in Prague. Students were approached via posters distributed on campus and via e-mail.²¹

We conducted four sessions of each treatment. Twelve participants, six in a role of Participant X – the entrepreneur – and six in a role of Participant Y – the bureaucrat – interacted in each session. In each session, all subjects participated in six rounds during which they kept the role that was assigned to them at the beginning of the first round.²² Participants were randomly

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²¹ By email, we also directly invited students who participated earlier in unrelated experiments conducted at CERGE-EI.
²² After each Participant X interacted exactly once with each of Participants Y, the roles were switched for another six rounds. Subjects were not informed about the switch of roles in advance in order to avoid a possible impact on their behavior in the first six rounds. Before the beginning of the seventh round the announcement about the switch
and anonymously re-matched after each round so that no subject was matched twice with the same co-player. This was common knowledge. The incentive compatibility of this matching scheme is discussed in Kamecke (1997).

Table 2 summarizes some of the demographic characteristics of subjects participating in the experiment. The majority of our subjects are male, reflecting the composition of the subject pools that we drew on. Mean age ranges between 20.9 and 22.9, over all sessions the minimum is 18 and the maximum is 29. We also measured subjects' risk aversion score using a questionnaire based on Holt & Laury (2002). Mean risk-aversion score ranges between 26.4 and 34.7, over all sessions the minimum is 13 and maximum 51. Average final payoffs for the B treatment ranges from 320 to 330, with the minimum for four sessions of 300 and maximum of 400; for the C treatment it ranges between 315 and 340 with the minimum being 300 and the maximum 400.

Each session began with general instructions. Afterwards, students were asked to fill in Risk-aversion and Demographic questionnaires, for which they earned their show-up fee. Then the instructions to the computerized part of the experiment were distributed. Understanding of the instructions was tested by a brief questionnaire. The computerized part of the experiment started only after every participant answered all testing questions correctly. The session concluded with a final questionnaire asking for the subject’s feedback on the experiment.

<table>
<thead>
<tr>
<th>Treatment Source</th>
<th>M/F ratio</th>
<th>mean age</th>
<th>mean RA score</th>
<th>mean final pay</th>
<th>Irreg</th>
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<td>28</td>
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<td>30</td>
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<td>CTU</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>UE</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>
| Male/Female ratio in the session. 

The decisions in the last six rounds are likely affected by subjects’ experience from the first six rounds and therefore we do not report them in the main text. A comparison of the before-switch and after-switch data is provided in the appendix. For the B treatment, we observe more transferring in the after-switch data, and also more denouncing in both the second and the third stage. In the C treatment, the differences for the second- and the third-stage data are very small.

The higher the score the more risk averse the subject is. The maximum possible RA score is 60 which, using the standard CRRA utility function x(1−r), approximately corresponds to a relative risk aversion coefficient of .17. The minimum possible RA score is 0, which approximately corresponds to a relative risk aversion coefficient of −.13. An RA score of 23 corresponds to risk-neutrality.

At that point CZK 400 corresponded to about USD 16, in purchasing power up to twice as much. Subjects were informed during recruitment that there is a chance that their final payoff from the experiment will be zero, but never negative. The non-negativity of the final payoff was ensured by the show-up fee.

This was common knowledge.

For filling this last questionnaire, subjects were paid additional 50-200 CZK (corresponds to about 2-9 USD) - the amount varied between sessions. This mechanism was used to adjust average earnings for session to the level promised during the recruitment.

For each session, subjects were pooled from one source. FSS stands for the Faculty of Social Sciences in Prague, CTU for the Czech Technical University in Prague, UE for the University of Economics in Prague. We control for imbalance of the subject pool by including the econ and gender dummies in the econometric analysis.

Male/Female ratio in the session.

This is the average final payoff after computerized part of the experiment. We did not allow for losses.

Irreg stands for a dummy variable for session irregularities. In the first B-treatment session we report 1 due to possible experimenter effect; in the second C treatment session, one of the subjects reports “building engineering” as
Table 2: Summary of demographic characteristics of subjects for all twelve sessions.

<p>| | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>B</td>
<td>FSS</td>
<td>8/4</td>
<td>20.9</td>
<td>29.7</td>
<td>320</td>
</tr>
<tr>
<td>B</td>
<td>FSS</td>
<td>10/2</td>
<td>21.75</td>
<td>28.8</td>
<td>330</td>
</tr>
<tr>
<td>B</td>
<td>CTU</td>
<td>11/1</td>
<td>22.9</td>
<td>28.7</td>
<td>330</td>
</tr>
<tr>
<td>B</td>
<td>FSS</td>
<td>9/3</td>
<td>22.3</td>
<td>26.8</td>
<td>323.3</td>
</tr>
<tr>
<td>C</td>
<td>CTU</td>
<td>9/3</td>
<td>21.9</td>
<td>33.7</td>
<td>340</td>
</tr>
<tr>
<td>C</td>
<td>UE</td>
<td>7/5</td>
<td>22.9</td>
<td>30.8</td>
<td>318.3</td>
</tr>
<tr>
<td>C</td>
<td>CTU</td>
<td>10/2</td>
<td>23</td>
<td>31.4</td>
<td>318.3</td>
</tr>
<tr>
<td>C</td>
<td>UE</td>
<td>7/5</td>
<td>21.7</td>
<td>28.1</td>
<td>315</td>
</tr>
</tbody>
</table>

All instructions were read aloud by the experimenter. As a part of the instructions subjects received a pictorial representation of the game with a minimum use of game-theoretic terminology. Probabilistic outcomes were presented in both probabilistic terms and frequency representation (see e.g. Gigerenzer & Hoffrage 1995, or Hertwig & Ortmann 2004).\textsuperscript{31}

The experiment was computerized using Z-tree software (Fischbacher 2007). At the beginning of each round, each participant was notified of her/his role. Participants X also learned their current per-round endowment. Then each pair interacted sequentially.\textsuperscript{32} Between the second and the third stage, Participants X were asked what would be their choices in each node of the third stage if they would reach either of them. After making their conditional choices, they learned the actual decision of their co-player and they were asked to confirm, or to change, their previous choice. This mechanism allowed us to collect some additional data in rounds when the third stage was not reached.

At the end of each round subjects were given feedback about their action, the action(s) of the player they were paired with, the realization of the random outcome (detection vs. no detection, or outcome A vs. outcome B) and their resulting payoff. At the end, one round was randomly chosen to determine the final payoff from the computerized part of the experiment. This mechanism was chosen in order to ensure that the decision in every round is made as if in a one-shot game. This payment procedure was common knowledge ex ante.

Participants were paid anonymously in cash right after each session. We used Czech crown as the currency unit throughout the whole experiment.

\textsuperscript{31} Originals (in Czech) of all materials that subjects received during the experiment are available at http://home.erge-ei.cz/richmanova/WorkInProgress.html.

\textsuperscript{32} Choices were made by clicking the respective buttons on the screen. Subjects were notified that once they make their choice it would not be possible to take it back.
4 Results

In this section, we start with presenting the summary data from both treatments and hypothesizing about possible treatment effects. Then we continue with standard statistical analysis testing for differences in distribution of choices. Finally we present the results of formal econometric analysis in which we estimate the treatment effects controlling for some of the subjects’ characteristics.

4.1 Summary Data

Figure 4 compares the results from low- and high-endowment periods for the two treatments. The B treatment data are in the upper rows and the C treatment data are below. The equilibrium choices for each case are in bold face.

Figure 4: Experimental results. For each branch of the extensive form of the game, the upper row always displays the frequency of the action in the B treatment, while the lower row displays the frequency of the action in the C treatment (with the corresponding percentage in parentheses). For stages E1 and E2, above the branches, we present the conditional choices subjects were asked to report before they made their actual choice. The frequencies of real choices, which depend on the preceding decision of Participant Y, are presented at the bottom part of each figure.

For both treatments the aggregate first-stage data show higher frequencies of choosing Pay in the low-endowment periods than in the high-endowment periods. This contradicts the theoretical prediction. Intuitively, subjects seem to be willing to transfer their endowment in order to get a chance of receiving a high payoff, but they are more willing to put at stake a low endowment
than a high. Instead of risking the high endowment they seem to prefer choosing the sure outcome.

Comparing B and C treatment, we observe surprisingly small differences between the two treatments in the first stage; which is not what we expected.

As for the second-stage data, only relative percentages can be compared across treatments, as different numbers of subjects actually entered this stage of the game. In the B treatment the choices are equally distributed between Denounce and Nothing while in the C treatment, choices are shifted in favor of Denounce. Arguably, in the high-endowment periods, this result contradicts the theoretical prediction, but it is in line with our conjecture – knowing the context of their action choice, reporting corruption might be more attractive for subjects.

As for the third-stage data, conditional choices provide mixed evidence. In B and C treatments, subjects seem to prefer playing Nothing. For the E1 node that contradicts the theoretical prediction, while it is in line with the theoretical prediction for the E2 node. When we look at the sequential choices, the results seem in line with the theoretical prediction for both treatments, inferring from relatively few observations.\(^{33}\) We observe essentially no framing effect for high-endowment periods. For low-endowment periods, we observe a small shift in favor of Denounce, which is in line with our expectations.

Note that for the second and third stage data we have too few independent observations (especially so for the B treatment and for the high-endowment periods)\(^{34}\) to perform a reliable formal analysis. Therefore, we only perform statistical and regression analysis of the first-stage data.

### 4.2 Analysis of the first-stage data

In the following two subsections we report the results from the formal analysis of the first-stage data in order to estimate the treatment effect. We conducted standard non-parametric tests identifying differences in the distribution of choices under the two relevant treatments. Then we also computed the effect size indices to measure the magnitude of the relevant treatment effects. Finally, we report the results from the estimation of a linear probability model in which we control for some demographic characteristics of subjects.

\(^{33}\) When we asked the subjects to make their real choices in the B treatment, only one of them changed her/his decision in the E2 node from Denounce to Nothing (after observing what Participant Y has chosen) in the low-endowment period. In the C treatment, three subjects changed her/his decision in the E2 node – from that two switched from Nothing to Denounce after Participant Y played Action a and one from Denounce to Nothing after Participant Y played Action a – and one subject changed her/his decision in the E1 node from Nothing to Denounce after Participant Y played Nothing. All four cases occurred in low-endowment periods.

\(^{34}\) Recall that Figures 4 and 5 present the aggregated data from all the relevant periods, therefore containing repeated observations for individual subjects.
Due to the panel nature of the data, we considered four different approaches to formal regression analysis: 1) clustered data analysis – data from periods 1, 3, and 5 (low-endowment) and from periods 2, 4, and 6 (high-endowment) are clustered by subject to correct standard errors for likely within-subject correlation; 2) first-period data analysis – only first-period data (for the low-endowment case) and only second-period data (for the high-endowment case) are analyzed; 3) averaged data analysis – averaged data for periods 1, 3, and 5 and for periods 2, 4, and 6 are analyzed; and 4) dominant-choice data analysis – for each endowment value (low or high) each subject makes choices in three periods, and the dominant choice is the one that is played more often.

Clustered data have the advantage of using all the available information, while the other three approaches use only a part of the available information. Therefore, in the main text we discuss the results for clustered data. The analysis of averaged, first-period, and dominant-choice data can be found in Appendix 2, part A, as a robustness check of the main results. By and large, there are no major findings in these robustness tests.

In addition to the robustness checks based on different “data handling” we also run a few additional exploratory sessions of treatments in which the experimental conditions are only slightly modified compared to the benchmark and the context treatments. The results from the analysis on the extended data set is provided in Appendix 2, part B, as an additional robustness check of the main results. By and large, there are no major findings in these robustness checks. Pooling slightly different treatments leads to noisier results, which is not very surprising.

### 4.2.1 Statistical analysis

We conduct three standard non-parametric tests, Wilcoxon rank-sum, Kolmogorov-Smirnov and Fisher’s exact test, in order to identify the differences in the distributions of choices under the two treatments. Specifically, we test the null hypothesis of no differences between two treatments using the averages of the binary transfer variable\(^{35}\) over periods 1, 3, and 5 and 2, 4, and 6.

In Table 3 we report the results for the impact of the instructions’ framing. According to all three tests, we cannot reject the hypothesis of no differences in the distributions of choices under the two treatments at the 5% significance level which confirms the results that we observed from the descriptive data.

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\(^{35}\) Transfer has a value of one if Participant X chooses Pay and a value of zero if s/he chooses Not Pay in the respective period.
To assess the magnitude of the effect for practical purposes, we in addition compute two standardized measures of effect size: Cohen’s d and odds ratio, again, using the averages of the binary transfer variable over periods 1, 3, and 5 and 2, 4, and 6. Cohen (1998) defines effect sizes of $d = 0.2$ as small, $d = 0.5$ as medium, and $d = 0.8$ as large.

The results for the full sample as well as for the male and female subsamples, are reported in Table 4 below. For the full sample, the results suggest only a small effect. However, when we look at the male and female subsamples separately, the effect size appears larger than in the full sample. It is also noticeable that the effects for the male and for the female subsamples have opposite directions, which naturally results in a very small total effect. We observe very similar results when looking at the odds ratio – the effect is smaller in the full sample than in the two subsamples. These results suggest a non-negligible gender effect.

<table>
<thead>
<tr>
<th>Periods</th>
<th>Sample</th>
<th>B</th>
<th>C</th>
<th>odds ratio</th>
<th>Cohen’s d</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,3,5</td>
<td>full</td>
<td>24</td>
<td>.528</td>
<td>.4945</td>
<td>24</td>
</tr>
<tr>
<td></td>
<td>male</td>
<td>18</td>
<td>.519</td>
<td>.4461</td>
<td>17</td>
</tr>
<tr>
<td></td>
<td>female</td>
<td>6</td>
<td>.556</td>
<td>.5018</td>
<td>7</td>
</tr>
<tr>
<td>2,4,6</td>
<td>full</td>
<td>24</td>
<td>.222</td>
<td>.3764</td>
<td>24</td>
</tr>
<tr>
<td></td>
<td>male</td>
<td>18</td>
<td>.296</td>
<td>.4105</td>
<td>17</td>
</tr>
<tr>
<td></td>
<td>female</td>
<td>6</td>
<td>0</td>
<td>0</td>
<td>7</td>
</tr>
</tbody>
</table>

Table 4: Effect-size indices for B vs. C.

Altogether, both statistical tests and effect-size measures suggest that there are only minor differences between the first-stage choices in the C and B treatments. Effect-size measures for the male and female subsamples suggest that this result might be caused by counteracting gender effects. For an interested reader, we provide an overview of the gender specific data in the

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36 Ranksum stands for the two-sample Wilcoxon rank-sum (or Mann-Whitney) test. We report the normalized z statistic and corresponding p-value below.

37 Ksmirnov stands for the Kolmogorov-Smirnov test; we report the statistic and below the corresponding p-value from testing the hypothesis that average transfer is lower in the B treatment.

38 Fisher stands for Fisher’s exact test. We report the resulting p-value.

39 A division-by-zero problem occurs, due to no variation in this subsample
appendix. The results from effect-size analysis as well as gender-specific descriptive data suggest that further analysis, which would control for gender and for other subjects’ characteristics, is called for.

### 4.2.2 Econometric analysis

In this section we report the results from econometric analysis controlling for some of the subjects’ characteristics and for the treatment effect. We also analyze the gender-specific effects for the C treatment.

During the experiment we distributed several questionnaires in order to collect basic demographic data. Specifically, we have information about subjects’ age, gender, university and field of study.\(^{40}\) We also measured each subject’s risk aversion.

For both treatments, the dependent variable was defined as a 0/1 dummy variable translog identifying Pay being chosen (value of 1) or not (value of 0) in a particular period. We estimate a clustered linear probability model. We prefer a linear probability model to other non-linear alternatives, as it does not rely on very specific distributional assumptions, the violation of which leads to inconsistent estimates if non-linear models are employed. Another advantage of the linear probability model lies in the straightforward interpretation of estimated coefficients. We run clustered robust estimation to correct standard errors for likely within-subject correlation and for heteroskedasticity.

In the appendix, we provide a discussion of the robustness checks we conducted in addition to the clustered regressions analysis. As the theoretical prediction differs for low- and high-endowment periods,\(^{41}\) these two groups were analyzed separately.

We started with a basic minimal model: \(^{42}\)

\[^{40}\text{In addition, we collected data on: size of subject’s household, number of cars in the household, and whether the subject himself has his own car and what is its approximate value, all of which serve as proxies for income. We also asked the subjects whether they considered themselves as technical types compared to their peers. We recorded the occurrence of any inconsistencies in the after-instructions questionnaire, which served as a simple test of understanding of the basic structure of the game, and in the risk-aversion questionnaire. At the end of the session we asked our subjects whether they did understand the experiment. Finally, we recorded some general information about each session – the time of day when it started and any session irregularities if they occurred. After running some preliminary regressions we, however, conclude that none of these variables is significant for explaining subjects’ decisions. The demographic and the risk-aversion questionnaires are based on Rydval (2007).}\]

\[^{41}\text{Recall that in periods 1, 3, and 5 the endowment was low and in periods 2, 4, and 6 the endowment was high.}\]

\[^{42}\text{The second approach we used in both cases was } P(\text{translog } = 1|x) = \beta_0 + \beta_1 \cdot \text{ra_score}, \text{ where ra_score is a risk aversion score computed based on data from the risk-aversion questionnaire. Preliminary analysis suggests that age, male and econ predict ra score well (all three are jointly significant at the 5% level, age and male with a negative sign on the coefficient, age with a positive; our proxy for income appeared insignificant, which is reasonable given our population sample). It was natural to consider these two sets of independent variables - one including ra_score only, and the other including male, age and income - as candidates for minimal models for our analysis. However, in}\]

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40 In addition, we collected data on: size of subject’s household, number of cars in the household, and whether the subject himself has his own car and what is its approximate value, all of which serve as proxies for income. We also asked the subjects whether they considered themselves as technical types compared to their peers. We recorded the occurrence of any inconsistencies in the after-instructions questionnaire, which served as a simple test of understanding of the basic structure of the game, and in the risk-aversion questionnaire. At the end of the session we asked our subjects whether they did understand the experiment. Finally, we recorded some general information about each session – the time of day when it started and any session irregularities if they occurred. After running some preliminary regressions we, however, conclude that none of these variables is significant for explaining subjects’ decisions. The demographic and the risk-aversion questionnaires are based on Rydval (2007).

41 Recall that in periods 1, 3, and 5 the endowment was low and in periods 2, 4, and 6 the endowment was high.

42 The second approach we used in both cases was $P(\text{translog } = 1|x) = \beta_0 + \beta_1 \cdot \text{ra_score}$, where ra_score is a risk aversion score computed based on data from the risk-aversion questionnaire. Preliminary analysis suggests that age, male and econ predict ra score well (all three are jointly significant at the 5% level, age and male with a negative sign on the coefficient, age with a positive; our proxy for income appeared insignificant, which is reasonable given our population sample). It was natural to consider these two sets of independent variables - one including ra_score only, and the other including male, age and income - as candidates for minimal models for our analysis. However, in
\[ P(\text{translog} = 1|x) = \beta_0 + \beta_1 \cdot \text{age} + \beta_2 \cdot \text{male} + \beta_3 \cdot \text{econ} + \beta_4 \cdot \text{treat}, \]

where age corresponds to subject’s reported age, male is a dummy variable defined based on subject’s reported gender, and econ is a dummy variable identifying a subject having (value of 1) or not having (value of 0) an economic background, which is defined based on the subject’s reported field of study. As we are mainly interested in the treatment effect, we also include a treatment dummy (where treat = 0 for B treatment; and treat = 1 for C treatment) in the model.

**Impact of instructions’ framing**

The results from the estimation are summarized in Table 5, denoted as Model 1. In this case, we denote the treatment dummy as Ctreat. This model is, however, not significant. In the next step, we extend the basic minimal model by interaction terms with male to allow for gender-specific effects. This leads to Model 2:

\[ P(\text{translog} = 1|x) = \beta_0 + \beta_1 \cdot \text{age} + \beta_2 \cdot \text{male} + \beta_3 \cdot \text{econ} + \beta_4 \cdot \text{Ctreat} + \beta_5 \cdot \text{male} \cdot \text{age} + \beta_6 \cdot \text{male} \cdot \text{econ} + \beta_7 \cdot \text{male} \cdot \text{Ctreat}. \]

The results from the estimation of Model 2 are also summarized in Table 5.

<table>
<thead>
<tr>
<th>Model</th>
<th>periods 1,3,5</th>
<th>periods 2,4,6</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>age</td>
<td>-.0287</td>
<td>.1280</td>
</tr>
<tr>
<td></td>
<td>(.302)</td>
<td>(.007)</td>
</tr>
<tr>
<td>male</td>
<td>.0686</td>
<td>3.3442</td>
</tr>
<tr>
<td></td>
<td>(.646)</td>
<td>(.010)</td>
</tr>
<tr>
<td>econ</td>
<td>-.1601</td>
<td>-.6307</td>
</tr>
<tr>
<td></td>
<td>(.212)</td>
<td>(.000)</td>
</tr>
<tr>
<td>Ctreat</td>
<td>.0559</td>
<td>-.7156</td>
</tr>
<tr>
<td></td>
<td>(.657)</td>
<td>(.004)</td>
</tr>
<tr>
<td>age* male</td>
<td>-</td>
<td>-.1852</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(.002)</td>
</tr>
<tr>
<td>econ* male</td>
<td>-</td>
<td>.5354</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(.002)</td>
</tr>
<tr>
<td>Ctreat* male</td>
<td>-</td>
<td>.7983</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(.006)</td>
</tr>
</tbody>
</table>

P (translog = 1|x) = \beta_0 + \beta_1 \cdot \text{ra_score}, ra_score never appeared significant and only rarely we observed the joint significance of estimated models. Therefore, we omit the discussion of these results.
Model 2 is strongly significant, giving evidence for a strong gender effect. In the discussion that follows, we will concentrate on the results from Model 2.

For both, low- and high-endowment-period data, the joint p-value of the model is .000. All demographic characteristics – age, male, and econ – and their interaction terms are significant at the 5% level. Interestingly, the treatment dummy together with its interaction term is only significant for the low-endowment periods. This suggests that only for the low-endowment periods the presentation of the game matters.

The mean predicted probability of transfer in the low-endowment periods is .56, in the high-endowment periods it is only .24, which is considerably lower. This result contradicts the theoretical prediction.\(^{43}\)

For the low-endowment periods, age has a positive sign on the coefficient for female, but negative for male. Econ has a negative sign on the coefficient for both male and female. The intercept is negative for women and positive for men. This suggests that with the same characteristics, women are less likely to make the transfer than men.

Treatment dummy \(C_{\text{treat}}\) has a negative sign for female but positive for male subjects. This suggests a negative impact of a corruption context on transferring decision for women but a positive impact for men, which is an intriguing result.

For the high-endowment periods, both age and econ have a positive sign on the coefficient for female, but negative for male. Similarly to low-endowment periods, the intercept is negative for women and positive for men. Thus, also when the endowment is high, having the same characteristics, women seem less likely to make the transfer than men.

The treatment dummy \(C_{\text{treat}}\) has a negative sign for both female and male subjects, which is yet another difference from low-endowment periods. This suggests a negative impact of a

\(^{43}\) Recall that in the theoretical equilibrium Participant X always transfers high endowment and never transfers low.
corruption context on the transferring decision – in high-endowment periods subjects are less likely to transfer when they are fully aware of the context. Note, however, that even though the sign reflects the expected impact of context, the coefficient is not significant.

5 Discussion

The experimental results confirm expected treatment effects. Once controlling for gender effects, we find that providing our subjects with a bribery context indeed affected their decision-making in the lab. There are, however, several interesting patterns in our data that deserve attention.

We expected that subjects in our experiment might not behave in complete accordance with the theoretical predictions made under the assumption of rationality and risk-neutrality. Apart from risk attitudes, phenomena such as altruism, reciprocity (positive or negative) and/or trust might play important roles. In fact, in our data we observe considerable deviations from equilibrium at some stages of the game. Also, men and women tend to react differently to instructions loaded with a bribery context, which, in some nodes of the game, is not explainable by standard theory of rationality. In this section, we discuss the results, and provide some explanations for these deviations and for the observed treatment effects. We also derive implications for experimental design and the implementation of the experimental testing of leniency programs.

Some of the results confirmed our expectations whereas some did not. In the aggregate data, we find only a small and statistically insignificant treatment effect, which is in line with Abbink & Hennig-Schmidt (2006) but not with our expectations. Once we look at the male and female subsamples separately, we discover (significant) gender effects that cancel each other out and are responsible for the reduced overall effect of non-neutral framing. For the aggregate second-stage data, the treatment effect shows in an increased denouncing rate, which is in line with our expectations. For male and female sub-samples, as much as we can tell given the low number of observations, denouncing rates are lower or the same in the B treatment. Also for the aggregate third-stage data the treatment effect goes in the predicted direction.

Different attitudes of men and of women towards corruption have previously been reported by, for example, Alatas et al. (2006). These authors find significant differences in the behavior of men and women in a corruption experiment. Their results, however, appear to be culture-specific.\textsuperscript{44} The observed negative impact of non-neutral framing on the transferring decisions of women, together with the positive impact on the denouncing decisions of women, are in line with earlier findings of women being less likely to engage in, as well as less tolerant of (thus

\textsuperscript{44} The authors run the experiment in Melbourne (Australia), Delhi (India), Jakarta (Indonesia), and Singapore. Only the Australian data confirm a significant gender effect.
more likely to act against), corruption than men (e.g., Swamy, Knack, Lee and Azfar, 2001, or Dollar, Fisman and Gatti, 2001).

For low-endowment periods, we find a positive impact of a bribery context on the transferring rates of men. This suggests the opposite treatment effect to what we expected, but only for the male subsample. Women react to the context by reduced transferring. The (significant) result for the male subsample is very surprising and difficult to understand. For high-endowment periods, the treatment effect appears insignificant. We find a (slightly) reduced transferring rate for male and a (slightly) increased transferring rate for the female subsample. The result for the female subsample is counterintuitive, however, the results of the t-test suggest that it might be due to random realization.

Another interesting result is that in both treatments for both low- and high-endowment periods more than 50% of subjects do not play the equilibrium. Recall that theoretically, the optimal strategies are to transfer when the endowment is high and not to transfer when the endowment is low. For both treatments we observe just the opposite – relatively high transfer rates for low-endowment and relatively low transferring rates for high-endowment periods. We offer several possible explanations for this phenomenon.

First, we note that the theoretical prediction is computed under the assumption of risk neutrality, which, as also suggested by the data from the risk-aversion questionnaire, is not likely to hold in our sample. Our subjects appear to be modestly risk-averse, in accordance with the typical finding in the experimental literature (e.g. Holt & Laury 2002, Harrison, Johnson, McInnes & Rutstrom 2005). When we computed the theoretical prediction for a (modestly) risk-averse subject, we found that under some (reasonable) assumptions, our chosen parameterization can lead to a no-corruption equilibrium also for the high-endowment periods. That is, for risk-averse subjects, it might in fact be optimal not to transfer a high endowment.

In addition, our subjects might exhibit the “preference for inclusion” reported by Cooper & Van Huyck (2003). The authors find that subjects presented with an extensive form game are significantly more likely to make choices that allow their co-player to make a choice – and thereby to affect final payoffs – rather than choosing a terminal node. In an extensive form game

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45 We assume a standard CRRA utility function \( u(x) = x(1−r) \). The average risk-aversion coefficient in our sample is about 0.03; the maximal is about 0.1. As the bribery game involves nodes with negative payoffs, some assumptions need to be made about the utility function in the negative domain. Prospect theory suggests that in the negative domain, the steepness of the utility function might be about twice as much as in the positive domain. For illustration, we computed the theoretical prediction for a risk-neutral subject in the B treatment assuming two different levels of (dis)utility from paying a 300 CZK penalty after detection: \( u(−300) = −u(450) \); and \( u(−300) = −u(600) \). For low endowment, the theoretical prediction is the same as for a risk-neutral subject. For high endowment it changes. For an extremely risk-averse participant (\( r = 0.1 \)), the disutility of 450 still predicts a corruption equilibrium, however, the disutility of 600 predicts a no-corruption equilibrium. For an average risk-aversion coefficient (\( r = 0.03 \)), the disutility of 450 is sufficient to change the theoretical prediction.
this “(non)inclusion” is more salient. In our game, “inclusion” introduces a risk of significant loss. Together with risk- or loss-avoidance, it might have resulted in subjects with a “preference for inclusion” being willing to transfer and continue playing the game, but only being ready to risk the low endowment and preferring to keep the high endowment for sure.

Furthermore, note that the difference in expected payoffs to Participant Y from choosing Denounce or Action a is relatively small\(^{46}\) in both treatments (assuming that Participant X will react rationally), whereas the difference in payoffs to Participant X is substantial. Therefore, an altruistic Participant Y might prefer choosing Action a even in low-endowment periods, when this action is not maximizing the expected payoff. Or, alternatively, choosing Action a might be an act of positive reciprocity. In low-endowment periods, a rational Participant X might expect a rational Participant Y to choose Denounce and therefore he would not transfer. A Participant X who is trusting might expect Participant Y to choose Action a in the second stage and therefore he might want to transfer.

Altogether, our data to some extent confirm the main result of Buccirossi & Spagnolo (2006) – an occasional illegal transaction is implementable when a leniency policy is in place. We also find that context indeed plays an important role for subject’s behavior in a bribery game. Importantly, the effect on male participants might be different than the effect on female participants, which points to important methodological, as well as policy-design implications. Some of our results are not significant, but this might be caused by a relatively small sample and gender-unbalanced subject pool. With more subjects, possibly observed over more periods, and with better gender-balanced sample, our results might become more conclusive.\(^{47}\) We also conclude that subjects seem to engage in all sorts of social considerations in a bribery game, including moral scruples, which should not be dismissed by experimenters looking for relevant policy implications. Further experimental testing of leniency policies might have to take these findings into account.

References


Abbink, K., Irlenbusch, B., Renner, E., (2002). An Experimental Bribery Game,

\(^{46}\) Note that this results from the nature of the game (see Figure 1).

\(^{47}\) Ortmann and Tichy (1999) also report some evidence of differences in the (cooperative) behavior of men and women. Also the gender composition of the subject pool in the experimental session matters. When controlling for past experience, gender differences, however, disappear.


Lambsdorf, J. Graf, (2015), Preventing Corruption by Promoting Trust – Insights from


APPENDIX 1

Gender differences in the impact of instructions’ framing

Hereby we provide an overview of gender-specific data. Figures 5 and 6 provide the summary data separately for men and women.

![Diagram](image)

Figure 5: Experimental results for male and for female subjects in low-endowment periods. For each branch of the extensive form of the game, the upper row always displays the frequency of the action in the B treatment, while the lower row displays the frequency of the action in the C treatment (with the corresponding percentage in parentheses). For the nodes E1 and E2, above the branches, we present the conditional choices subjects were asked to report before they made their actual choice. Frequencies of real choices, which depend on the preceding decision of
Participant Y, are presented at the bottom part of each figure.

For low-endowment periods, in the first stage of the B treatment the difference in the behavior of men and of women does not appear substantial – slightly more than half of each makes the transfer. However, in the C treatment, the transferring decisions of males and of females shift in opposite directions – two thirds of men, whereas less than a half of women decide to make the transfer. This suggests that the corruption framing affects men and women differently.

Similarly in the second stage we can clearly see from the descriptive data that facing a full context, women become much more likely to report. Men’s decisions seem to remain unaffected.

The results from the last stage are not so clearly distributed. In the E1 node we observe the opposite effect of context on men than on women. In the E2 node, the direction of the effect does not vary with gender. In general, both men and women prefer doing Nothing to Denouncing.

In the first stage of the high-endowment periods, the results are somewhat different. We still observe considerably more women refraining from making transfers but the framing effect seems to increase the transferring rate. Recall, however, that the results from the regression analysis suggest that these four observations might be just random realization. We observe almost no framing effect in the male subsample. In general, both men and women prefer not making the transfer.

Figure 6: Experimental results for male and for female subjects in high-endowment periods. For each branch of the extensive form of the game, the upper row always displays the frequency of the action in the B treatment, while the lower row displays the frequency of the action in the C
treatment (with the corresponding percentage in parentheses). For the nodes E1 and E2, above the branches, we present the conditional choices subjects were asked to report before they made their actual choice. Frequencies of real choices, which depend on the preceding decision of Participant Y, are presented at the bottom part of each figure.

In the second stage, the female subsample in the role of Participant Y is very small. In both treatments, all the women choose Denounce. For the male subsample, we observe some (possible) treatment effect, which shifts the choices more in favor of playing Denounce in the C treatment.

In the third stage the percentage of men choosing Denounce slightly decreases with framing, while for females it goes slightly up. In both subsamples, the prevailing choice is doing Nothing, though.

APPENDIX 2

Comparing data from periods before and after the switching of roles.

In Figure 7, we present the data from the before- and after-the-switch-of-roles periods (before-switch data in the upper rows and after-switch data below) from low- and high-endowment periods of the B treatment.

In both cases, we observe a somewhat higher transferring rate in the second six periods. Similarly as in the first part of the experiment, the transferring rate is higher in periods when the endowment is low than when it is high. In the B0 node, more subjects were choosing the safe option (with no possibility of loss) after the switch of roles. This means for low-endowment periods a shift towards, but for high-endowment periods a shift further away from, the theoretical prediction. In the E2 node, results from before- and after-switch data are very similar and for both low and high endowment, and they are in line with the theoretical prediction. In the E1 node, we observe a shift towards the equilibrium after the switch of roles.
Figure 7: Before- vs. after-the-switch-of-roles data in the B treatment. Before-switch data are in the upper rows and after-switch data are below.

Figure 8: Before- vs. after-the-switch-of-roles data in the C treatment. Before-switch data are in the upper rows and after-switch data are below.

In Figure 8, we present the data from before- and after-the-switch-of-roles periods from the low- and high-endowment periods of the C treatment.

In the C treatment, the transferring rate drops after the switch of roles, more so in periods when the endowment is high. This is just the opposite effect as in the B treatment. The transferring rate is higher when the endowment is low in both cases, before and after the switch of roles, which contradicts the theoretical prediction. In the B₀ node, a higher fraction of subjects chose the safe option (with no possibility of loss) after the switch of roles. This is a similar result as in the B treatment – for low-endowment periods it means a shift towards, but for high-endowment periods shift further away from the theoretical prediction. In the E₁ and E₂ nodes, the results from before- and after-switch data are similar for low-endowment periods (more so in the E₁ than in the E₂ node). In high endowment periods we observe no difference at all.

APPENDIX 3

Robustness checks

We performed two types of robustness check of our estimation results. The first regards the way we treated individual observations over rounds when running regressions – this is discussed in the subsection Handling of the data. The second regards the experimental design – we also run
several sessions of alternative treatments in which we introduce only minor changes that do not appear to significantly affect behavior of subjects – this is discussed in the subsection Pooling the sessions.

A. Handling of the data

Throughout the analysis we have defined three alternative dependent variables, each of which captures slightly different information about the first-stage data.

\( \text{translog} \) – is a 0/1 dummy variable identifying transfer being made (value of 1) or not (value of 0) in a particular period.

\( \text{atranslog} \) – is the average value of translog for one individual over periods 1, 3, and 5 (low-endowment periods) or 2, 4, and 6 (high-endowment periods).

\( \text{ltranslog} \) – defines a dominant choice of a subject in periods 1, 3, and 5 or 2, 4, and 6.

For a subject who has chosen \text{Pay} two or three times out of a total three periods of interest, the dominant choice is 1; for a subject who has chosen \text{Not Pay} two or three times out of total three periods of interest, the dominant choice is 0.

Then, using one of the three types of dependent variable, we conducted four different types of regression analysis.

\textit{Clustered regressions} – as discussed in the main text, we run a clustered (robust)\(^{48}\) linear probability model estimation with the binary variable \text{translog} as a dependent variable.

\textit{Regressions on Averaged data} – in this case, we run an ordinary least squares estimation of \text{atranslog}. We analyze only averaged data, where higher values of \text{atranslog} correspond to more transfers being made and thus to a stronger preference for this choice.\(^{49}\)

\textit{Regressions on the 1st or 2nd period data} – we estimate LPM only on the 1\textsuperscript{st} and 2\textsuperscript{nd} period \text{translog} (for low- and high-endowment periods, respectively). In this approach we are omitting part of the information, however we only use the part of the data that is not affected by the experience from previous rounds.\(^{50}\)

\textit{Regressions on Dominant Choice} – we estimate LPM using \text{ltranslog} as a dependent variable. Thus in this case, we are only looking at the dominant choice of each subject.

\(^{48}\) Standard errors are corrected for heteroskedasticity and for within-subject correlation.

\(^{49}\) We also run Poisson regressions on a count variable (counting the number of transfers made by an individual in the relevant three periods). The qualitative results are the same as with OLS and \text{atranslog}.

\(^{50}\) We realize that for 2nd period data this may not be completely true if subjects fail to realize that it is a different game they are playing in the high-endowment periods.
First we look at effect size measures, whether they give robust results for all four approaches to the data. The results for B vs. C are summarized in Table 6.

<table>
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<tr>
<th>Data</th>
<th>B</th>
<th>C</th>
<th>effect size</th>
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</thead>
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<td></td>
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<td>std.dev.</td>
<td>mean</td>
</tr>
<tr>
<td>1,3,5</td>
<td>1&lt;sup&gt;st&lt;/sup&gt; period</td>
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<td>.5036</td>
</tr>
<tr>
<td></td>
<td>average</td>
<td>.528</td>
<td>.4495</td>
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<tr>
<td></td>
<td>dominant</td>
<td>.5</td>
<td>.5108</td>
</tr>
<tr>
<td></td>
<td>all periods</td>
<td>.528</td>
<td>.5027</td>
</tr>
<tr>
<td>2,4,6</td>
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<td>.292</td>
<td>.4643</td>
</tr>
<tr>
<td></td>
<td>average</td>
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<td>.3764</td>
</tr>
<tr>
<td></td>
<td>dominant</td>
<td>.25</td>
<td>.4423</td>
</tr>
<tr>
<td></td>
<td>all periods</td>
<td>.222</td>
<td>.4187</td>
</tr>
</tbody>
</table>

Table 6: Effect-size indices for B vs. C.

In all cases, the effects are small (recall that Cohen 1998 defines effect sizes of $d = 0.2$ as small), for high-endowment dominant choice data the effect is zero (but we need to keep in mind that only part of the available information is used). Except for 2<sup>nd</sup> period data, also the direction of effect is the same in all cases. This suggests that initially, the transferring rate was lower for high-endowment periods in the context treatment but in later periods it increased. When we look at the male and female subsamples, the results are also robust for all four approaches – suggesting a counteracting gender effect (we omit reporting all numbers here as they are very similar to the results for averaged data reported in Table 4 in the main text).

Tables 7 and 8 summarize the main results from the estimation for low-and high-endowment periods for B vs. C. For all four approaches, the models that do not allow for gender-specific effects are not significant. Therefore in the discussion that follows we will concentrate only on models containing interaction terms.

For the low-endowment periods, the results from the averaged, 1<sup>st</sup>-period and dominant-choice data analysis confirm the results from the clustered regressions. We find the directions of all the effects the same, the explanatory variables are significant in most cases and there are no dramatic differences in coefficients sizes. Only econ and econ*male are not significant in the 1<sup>st</sup>-period data case. They both become significant once we include the information from later rounds – for clustered, averaged and dominant-choice data.
<table>
<thead>
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<th>dominant</th>
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</thead>
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<td>.1280</td>
<td>-.0287</td>
<td>.1280</td>
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<tr>
<td></td>
<td>(.302)</td>
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<td>(.011)</td>
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<td>.0686</td>
<td>3.3442</td>
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<tr>
<td></td>
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<td>(.010)</td>
<td>(.656)</td>
<td>(.015)</td>
</tr>
<tr>
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<td>-.6307</td>
<td>-.1601</td>
<td>-.6307</td>
</tr>
<tr>
<td></td>
<td>(.212)</td>
<td>(.000)</td>
<td>(.226)</td>
<td>(.000)</td>
</tr>
<tr>
<td>C treat</td>
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<td>-.7156</td>
<td>.0559</td>
<td>-.7156</td>
</tr>
<tr>
<td></td>
<td>(.657)</td>
<td>(.004)</td>
<td>(.666)</td>
<td>(.006)</td>
</tr>
<tr>
<td>age*male</td>
<td>-</td>
<td>-.1852</td>
<td>-</td>
<td>-.1852</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(.002)</td>
<td></td>
<td>(.003)</td>
</tr>
<tr>
<td>econ*male</td>
<td>-</td>
<td>.5354</td>
<td>-</td>
<td>.5354</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(.002)</td>
<td></td>
<td>(.004)</td>
</tr>
<tr>
<td>C treat*male</td>
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<td>-</td>
<td>.7983</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(.006)</td>
<td></td>
<td>(.010)</td>
</tr>
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<td>-</td>
<td>1.2342</td>
<td>-</td>
</tr>
<tr>
<td></td>
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<td></td>
<td>(.139)</td>
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</tr>
<tr>
<td>mean p(y=1)</td>
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<td>.5625</td>
<td>.5625</td>
<td>.5625</td>
</tr>
<tr>
<td></td>
<td>(.068)</td>
<td>(.139)</td>
<td>(.077)</td>
<td>(.162)</td>
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<td>144</td>
<td>48</td>
<td>48</td>
</tr>
<tr>
<td>joint p-value</td>
<td>.488</td>
<td>.000</td>
<td>.519</td>
<td>.000</td>
</tr>
</tbody>
</table>

Table 7: Results from clustered regressions vs. regressions on averaged, 1st period, and dominant-choice data from low-endowment periods.

For the high-endowment periods, only the results from averaged and dominant-choice data analysis confirm the results from clustered regressions – the treatment dummy is not significant, neither is its interaction term, the directions of all the effects are the same, and the sizes of the coefficients are comparable. For the 2nd-period data the estimated model is not significant. This suggests that the behavior in the second period is different, more difficult explain by demographic characteristics. To be able to say whether in later rounds the behavior really stabilizes, we would need to observe more high-endowment periods.
As regards sizes and signs of coefficients, the results are very robust, especially for clustered, averaged and dominant choice data.

<table>
<thead>
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<th>2\textsuperscript{nd} period</th>
<th>dominant</th>
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<td>0.0913</td>
<td>(0.381)</td>
<td>(0.000)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>male</td>
<td>0.1706</td>
<td>2.5462</td>
<td>(0.055)</td>
<td>(0.014)</td>
</tr>
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<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
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<td>0.0731</td>
<td>0.2210</td>
<td>(0.503)</td>
<td>(0.001)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C treat</td>
<td>0.0230</td>
<td>-0.0375</td>
<td>(0.809)</td>
<td>(0.644)</td>
</tr>
<tr>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>age*male</td>
<td>-</td>
<td>-0.0941</td>
<td>(0.032)</td>
<td>(0.019)</td>
</tr>
<tr>
<td></td>
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<td></td>
</tr>
<tr>
<td>econ*male</td>
<td>-</td>
<td>-0.3395</td>
<td>(0.043)</td>
<td>(0.026)</td>
</tr>
<tr>
<td></td>
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<tr>
<td>C treat*male</td>
<td>-</td>
<td>0.0036</td>
<td>(0.983)</td>
<td>(0.984)</td>
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<tr>
<td>mean p(y=1)</td>
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<td>.2361</td>
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<td>144</td>
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<td>48</td>
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<tr>
<td>joint p-value</td>
<td>.078</td>
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<td>.000</td>
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Table 8: Results from clustered regressions vs. regressions on averaged, 1st period, and dominant-choice data from high-endowment periods.

### B. Pooling the sessions

In addition to the benchmark treatment B and the context treatment C, we conducted two plus two sessions of “automatic” treatments A and AI. Under both treatments, A and AI, we used the same game and same parameterization as in the B treatment. The only difference was that in automatic treatments, each subject played against a computer program, with six subjects in the role of Participant X and six subjects in the role of Participant Y. The computer program was always playing a (subgame perfect) optimal strategy. Subjects were acquainted with these facts.
in the instructions. The only difference between the A and AI treatments was that in the AI treatment subjects received, as a separate part of instructions, a so-called Backwards Induction Tutorial, intended to explain the basic principles of using backwards induction.

Moreover, we conducted two sessions with partial context – the C- treatment. In the C-treatment, the subjects receive only limited information about the context – Participant X is called “Entrepreneur” and Participant Y is called “Bureaucrat”. Actions are, however, denoted by neutral letters – the same as in the B treatment.

Before pooling the data from different treatments we performed basic statistical tests in order to discover significant differences in the distributions of choices – Fisher’s Exact test and Wilcoxon rank-sum test. We find no evidence of significant differences in the distributions of the 1st-period choices between the A, AI and B treatments, nor between C- and C treatments. Afterwards, we performed two types of pooled analysis: 1) pooling the data from the A and B treatments vs. pooling the data from C- and C treatment; and 2) pooling the data from the A, AI and B treatments vs. pooling the data from C- and C treatment.

See Tables 9 and 10 for the regression results for low- and high-endowment periods, respectively, for B vs. C case. Clearly, pooling slightly different treatments leads to noisier results, which is not very surprising. For both low- and high-endowment periods, the significance of econ (and its interaction term) disappears. As regards the treatment dummy, on the one hand, the significance for low-endowment periods disappears, but on the other hand, the treatment dummy becomes significant for high-endowment-period data.

<table>
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<td>B vs. C</td>
<td>B,A vs. C,C-</td>
<td>B,A,Al vs. C,C-</td>
</tr>
<tr>
<td>age</td>
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<td>.1280 (.007)</td>
<td>-.0191 (.380)</td>
</tr>
<tr>
<td>male</td>
<td>.0686 (.646)</td>
<td>3.3442 (.010)</td>
<td>.0162 (.890)</td>
</tr>
<tr>
<td>econ</td>
<td>-.1601 (.212)</td>
<td>-.6307 (.000)</td>
<td>-.1754 (.089)</td>
</tr>
<tr>
<td>CCtreat</td>
<td>.0559 (.657)</td>
<td>-.7156 (.004)</td>
<td>.0609 (.550)</td>
</tr>
<tr>
<td>age*male</td>
<td>-</td>
<td>-.1852 (.002)</td>
<td>-</td>
</tr>
<tr>
<td>econ*male</td>
<td>-</td>
<td>.5354 (.002)</td>
<td>-</td>
</tr>
<tr>
<td>CCtreat*male</td>
<td>-</td>
<td>.7983 (.006)</td>
<td>-</td>
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Table 9: Results from estimation on basic vs. extended data sets for low-endowment periods. CCtreat is a dummy identifying context-type treatment(s).

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<td>B,A,AI vs. C,C-</td>
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<tr>
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<td>-.0941 (.032)</td>
<td>- (.1019)</td>
<td>-.1019 (.060)</td>
<td>- (.0601)</td>
<td>(.099)</td>
</tr>
<tr>
<td>econ*male</td>
<td>- (.3395)</td>
<td>-.3395 (.019)</td>
<td>- (.0768)</td>
<td>-.0768 (.740)</td>
<td>- (.2101)</td>
<td>(.248)</td>
</tr>
<tr>
<td>CCtreat*male</td>
<td>- (.0036)</td>
<td>.0036 (.983)</td>
<td>- (.1282)</td>
<td>.1282 (.436)</td>
<td>- (.1958)</td>
<td>(.243)</td>
</tr>
<tr>
<td>const</td>
<td>-.3900 (.553)</td>
<td>-2.1070 (.000)</td>
<td>-.3103 (.469)</td>
<td>-2.1335 (.000)</td>
<td>-.1354 (.737)</td>
<td>-1.2879 (.029)</td>
</tr>
<tr>
<td>mean p(y=1)</td>
<td>.2361 (.2361)</td>
<td>.2593 (.2593)</td>
<td>.2593 (.2593)</td>
<td>.2817 (.2817)</td>
<td>.2817 (.2817)</td>
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<tr>
<td># of obs.</td>
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<td>252</td>
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<tr>
<td>joint p-value</td>
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<td>.000</td>
<td>.045</td>
<td>.000</td>
<td>.075</td>
<td>.040</td>
</tr>
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</table>

Table 10: Results from estimation on basic vs. extended data sets for high-endowment periods. CCtreat is a dummy identifying context-type treatment(s).
ANALYSIS OF DYNAMIC RELATIONSHIP BETWEEN CORRUPTION AND FOREIGN DIRECT INVESTMENT

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Abstract

This text builds on our seminary work about the contra-intuitively weak relation between FDI and corruption. The mainstream economic thinking suggests improving transparency leads to increased FDI inflow. While economic environment without corruption is certainly value per-se, we find that given the nature of multinational corporations and FDI, it does not necessarily translate to higher FDI. Multinational corporations depend on arbitrary political decisions of home as well as host governments to offset their extra costs from doing business in multiple socio-economic environments of various countries, thus somehow increased level of corruption might be an outcome of this relationship. Following our previous theoretical research as well as of others, mainly Dunning’s eclectic model and Vernon’s obsolescing bargain model this paper finds no significant dynamic relationship between corruption and foreign direct investment. We base our conclusions on the results of a parametric test consisting of two panel Granger causality tests within a dynamic panel model framework estimated with the help of Blundell-Bond (modified Arellano-Bond) estimator, applied to data from Transparency International, the World Bank, and the International Monetary Fund for 154 countries and the years 1980–2015.

Keywords: corruption, Dunning eclectic model, Vernon obsolescing bargain model, foreign direct investment, dynamic panel, Choi meta-tests, ordinary least squares, generalized least squares, generalized method of moments

JEL Classification: C12, C13, C23, F21, F23

Introduction

In our previous study (Evan, Bolotov, 2014) about the relationship between foreign direct investment (FDI) and corruption we discovered that despite large body of existing literature to the contrary there is not statistically significant relationship between the two. We have set up three hypotheses: that corruption perception indicator is a stationary variable, that the co-integration relationship between corruption and FDI stock is statistically weak, and that changes in this stock do not Granger cause changes in corruption. We have proven these hypotheses on the sample of 94 countries for the years 1998–2007. Therefore increases in FDI stock do not seem to improve transparency of countries in the world and vice versa. While it might be seen as counter-intuitive our econometric study is well based on the combination of several long
standing theories of multinational corporations (MNCs) and international investment in general. The size and perhaps the very existence of MNCs is not caused, despite its prevalence, by its competitiveness stemming from economic effectiveness but rather by government created market failure (Evan, Bolotov, 2014, pp. 475-477). Indeed, economic literature of last almost sixty years proved the per-se incompatibility of MNCs with liberal market: Hymer (1960), Kindleberger (1969), Vernon and Wells (1972), Caves (1982), Dunning (1998). The latter author specified the reason why MNCs can survive and prosper in the current international economic environment by developing OLI paradigm under his eclectic model of international investment. While eclectic model is a standard mainstream tool of economic analysis today, its implications are not yet grasped by authors connecting them to specified topics as there is a need to drop a very important precondition and that is the existence of a liberal environment in the international investment. All three advantages of OLI paradigm, i.e. ownership (O), location (L) and internationalization (I) are only to be enjoyed by MNCs after negotiating these with governments of not only the host but also the home country. Similarly if we are to explore the relationship between a tool of MNCs, that is, FDI and corruption we first need to realize that this relationship is happening in a non-liberal environment. Hence, we cannot employ the above-mentioned “a priori” postulates on FDI and corruption in the tradition of Mill (1874), Cairnes (1875) or Robbins (1932), the basis of modern orthodox liberal economic thought, since there may be significant disturbing causes offsetting them, such as the above mentioned specifics of MNCs. On the contrary, there seems to be a general turn towards loosening these postulates in recent economic literature, which may be a sign of acceptance of their partial falsification (repeated non-validity in the light of evidence) in the sense of Popper (1968), Lakatos (1995) and Blaug (1992). Let us clarify several issues we take for granted to avoid any misunderstanding.. We are convinced corruption is bad for business. Even more so, it is bad for international business and international investment in particular as extra costs from different environment (language, legal system, transportation, cultural patterns, customs, and many others) are in many cases prohibitive and there is no need to add an extra layer of costs. We also take for granted that it is beneficial to a country to have clear rules and transparency not only for the purposes of business. It might be also true, as claimed by Habib and Zurawicki (2002), that foreign investors are corruption-averse considering corruption as inefficient and immoral or that they want to avoid it at almost any cost and not only because it creates risk of losing reputation (Zhao et.al, 2003). What is more, some positives of corruption mentioned in the literature under the broad description of greasing hand or helping hand (Houston 2007, Swaleheen and Stansel 2007) might be disproportionate. However, as we will see our, hypothesis in this paper is that MNCs per-se are not agents of change towards lower corruption as declared for example by Kwok and Tadesse (2006). MNCs per-se need a certain minimal level of political negotiation with governments of host countries (such as different forms of lobbying). This specific kind of negotiation, which from the point of the government (or its specialized agency) serve to convince MNCs to redirect its investment away from its optimal location under free market to a country, which give the investor highest
subsidies in order to maximize their OLI advantages. It is very nature of this rent-seeking behaviour, which instigate or at least which can be perceived as instigating corruption.

Two way street: relationship between FDI and corruption

The relationship between corruption of the host country and the FDI inflows is a complex matter. The older literature generally tends to be dominated by a theory assuming liberal environment in international investment and reports great reduction of FDI inflows for corrupt host countries while presumably consider lack of such relationship as “failure to find significant correlation” (Wei, 2000:1). Samrzynska (2000) and Wei (2000) found out that corruption reduces inward FDI and shifts ownership structure towards joint ventures and thus reduces investment of more technologically advanced firms. Wei (2000) goes one step further to measure how much more FDI host country would receive provided it would decrease corruption by certain percentage. Cuervo-Cazurra (2006) examined the impact of corruption on FDI and argues that corruption reduces FDI as well as changes composition of country of origin of FDI. We did not arrive to such results. Indeed, in the above mentioned study (Evan, Bolotov, 2014) we suggest both theoretically and empirically that there is a weak or no statistically significant relationship between the two phenomena.

Recent literature introduces more balanced approach, more differentiation and less straightforward relationship and thus more varied influence of both FDI and corruption. Kolnes (2016) summarizes both negative effects, or grabbing hand of corruption (“increase costs in terms of risk and outright uncertainty”, Kolnes 2016:26), and the positive, or greasing hand (“grease in the machinery, increasing FDI because it allows for short-cuts, lower taxes, beneficial regulations and rules, and in fact, less uncertainty and risk”, Kolnes 2016:26). This classification albeit in slightly different terms is shared by quite a few authors (Egger and Winner, 2006, Ohlsson, 2007, Quazi, 2014, i.a.). From the MNCs point of view corruption is therefore another out of many phenomena of host countries and should be dealt with by cost-benefit analysis (Cuervo-Cazurra, 2006).

In another categorisation corruption can be identified as administrative (bureaucratic, small) and political (big). This categorization of corruption serves to claim that administrative corruption might be large-scale but is predictable and can be budgeted. Indeed, Tanzi and Davoodi (1997) report that until the 1990s some investor countries considered MNCs being involved in such a corruption as legal in their home counties. On the other hand, political corruption is volatile and several authors (Cuervo-Cazurra, 2006, Ravi 2015, Kolnes 2016, i.a.) conclude that it not only decreases the profitability but also increases the risk of investment. It can be argued, however, that deal concluded with long-serving top politicians can give the company “untouchable status” from encroachments on the part of local politicians and country bureaucracy. Thus, the opposite may hold true, i.e. political corruption being very costly but giving a sense of stability while administrative corruption being only a drain of resources.
Yet another classification of corruption types is offered by Hakkala, Norbäck and Svaleryd (2008). It makes a difference between the horizontal (market-seeking) and vertical (resource-seeking) FDI. The horizontal FDI are used by MNCs to establish themselves on a new market, possibly getting their production cost lowered by economies of scale. As such they usually do not enter into such a close relationship with the host government as the vertical FDI pursuing MNCs. This together with the fact that they are possibly more exposed to administrative corruption led some authors (Ravi, 2015) to conclude that they have the need for more transparent environment. However, other authors insist that to the vertical MNCs looking solely for security of their operations and to decrease costs of production the agreement with the government is essential and they are more exposed to corruption. The agreement usually involves granting monopoly over natural resource, purchasing shares of large and/or privatized domestic companies or regulatory incentives including environmental or competition law. Thus, the increased corruption can be more damaging and MNCs might find it necessary to decrease their investment (Brouthers, Gao and McNicol, 2008).

Several authors go as far as to measure market attractiveness as a positive factor for FDI inflows while corruption as a virtually sole negative factor. This compensatory model can be found in Wei (2000), Voyer and Beamish (2004), Grosse and Trevino (2005). This is a clear misunderstanding or disregarding of what MNCs are and how much they are embedded in the mercantilist and non-liberal environment. Given the extensive need of MNCs for political favours of governments of both home and host countries there might be a situation where the trade-off has actually opposite signs as attractive markets opened to anyone are rather a liability than an asset to MNCs. Or at least, as was proven by Brouthers, Gao and McNicol (2008): “compensatory trade-offs do not appear to exist between corruption and market attractiveness for all types of FDI” (Brouthers, Gao and McNicol, 2008:678).

Robertson and Watson in their very interesting paper (2004) suggest that there is a by-directional relationship between FDI flows and corruption and they explore the ways how a change in FDI inflows influences the perceived level of corruption. They found out that both the rate of change of FDI inflows and the absolute value of the change have a positive impact of the level of corruption in host countries. Using culture as an explanatory variable they also found out that both uncertainty avoidance and masculinity cultural dimensions (Hofstede 1977) cause a higher perceived level of corruption. Robertson and Watson suggest practical applications of their findings that seem to be real-life scenarios. For example “if a manager of a multinational firm that is considering a potential market is aware that market has a pattern of high corruption followed by a massive influx of FDI, certain procedures and protocols for dealing with local contacts may need to be adjusted” (Robertson and Watson 2004:394). Top echelons of MNCs must be aware of the fact that their need to negotiate the best conditions for their company with politicians and officials of the host country is problematic per-se in the long-run. “Eagerness to get in on the action, and fear of being left out while their counterparts in other firms are seizing what appears to be a golden opportunity, are understandable. But this eagerness should be
tempered with awareness that the large increase in FDI may change the target country in ways that make it more difficult for MNCs to conduct business there” (Robertson and Watson 2004:394). These findings together with our own go directly in an opposite direction to the claim of Kwok and Tadesse (2006) stating that MNCs are agents of change for transparency as seen below.

A rather novel approach and a complex model of determinants of corruption is established by Larraín and Tavarres (2004). They try to separate the influence of openness (represented by FDI) on corruption by controlling six factors inducing corruption known to literature. Contrary to Robertson and Watson they conclude that FDI is significantly associated with lower corruption levels.

Interesting relationship between FDI and host government policies can be also found in Cole, Elliott and Frederiksson (2006). The authors explore how the FDI inflow affects environmental policy of the host country. They found out that it is conditional on the government degree of corruptibility. If the degree is sufficiently high the investment leads to more relaxed environmental policy and vice versa. Their findings are relevant for understanding of the creation of “pollution havens”.

Given the nature of MNCs it is hardly surprising that a statistically significant relation cannot be found between Index of Economic Freedoms and FDI inflows (Kapuria-Foreman, 2007). However, when disaggregated results are taken into considerations then those parts of Index of Economic Freedoms beneficial to maximization of OLI advantages (protection of property rights, lowering barriers to capital flows) are correlated to FDI inflows.

Still, several authors proved their affinity to the free market, liberal environment by putting it automatically into prerequisites for their analyses. Kwok and Tadesse (2006) seem to omit the essence of MNCs and consider them “agents of change” which through regulatory pressure effect, demonstration effect, and professionalization effect stemming from MNCs decrease corruption levels in host countries. However, the latter seems to be defined in such a way it needs only proper education system and not MNCs influence. The regulatory pressure effect is

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51 In addition to corruption and income per capita they consider Etho-linguistic fractionalization, Oil exporter status, Government expenditure, Ever a Colony, Population and Political Rights as determinants of corruption.

52 It might, indeed, be that “family-owned businesses consider sending their ‘heirs’ to business schools (Ramirez and Kwok, 2006).” This fact does little to prove that those heirs really embrace a more transparent business model. It is more likely that they select useful information while embracing their own culture as the anecdotal evidence of three maxims of a good father suggests: “get the boy to a good school, get him out of it, and get the school out of the boy”.

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arguably the bravest assumption of the authors as many developing countries apply regulatory (or non-financial) incentive schemes and indeed the MNCs have been on more than one well-publicized occasion caught pushing for lower environmental, labour and other regulatory standards. Serious arguments could be brought to bear also against the demonstration effect where the authors mix technological change (spill-over effects of FDI) with changes in management styles which include dealing with governments. Given, for example, the fact that large share of MNCs is getting investment incentives from the host government in various forms (which might include but is not limited to tax holidays, tariff exemptions and grants of free land) which are de facto paid for by domestic companies with their taxes, the higher moral ground the MNCs need to act as agent of change to employ for corruption reduction might be lost before MNCs even enter the market. For the demonstration of business being conducted in an environment built on trust and ethical conduct MNCs are arguably not well suited. Nevertheless, Kwok and Tadesse conclude that their empirical results are generally consistent with their hypothesis employing all three of these effects. 

Hardly any study, however, has applied Dunning’s OLI theory to the relationship between FDI and corruption. Accepting that MNCs cannot live or would have their activities dramatically reduced in an environment of free trade, free of monopolies stemming from intellectual property rights, excessive government regulations and most of all free from government subsidies, leads to more realistic models of corruption in international investment. 

Already in 2006, Egger and Winner studied the two way effects of corruption on the size of inward FDI. They found out that on one hand, corruption is costly for firms; while on the other hand, it “greases” the wheels with which MNCs do business with host governments. Or, corruption is important for intra-OECD FDI, “whereas it seems much less relevant, if not irrelevant, for the FDI from the OECD economies in non-OECD member countries” (Egger and Winner 2006:479). This paper gives us much more realistic overall picture as the OLI paradigm is, albeit implicitly, at play here. It suggests that FDI inflows to otherwise attractive developing countries (China, Thailand) do not depend as much on their corruption levels but rather on their locational advantages amplified by government agreements and subsidies.

Hypotheses

The rather extensive body of literature is thus inconclusive on the matter whether corruption inhibits FDI flows. The dominant view applying liberal tradition in the field of international investment claims corruption has a strong statistically significant negative relationship with FDI flows while dissenting opinion including our own seems to be proving otherwise. The few

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53 One example of many could be the collapsed Nike factory in Bangladesh, which labelled the MNC with sweatshop image and brought attention to labour standards of MNCs contractors around the world. Other involves oil spills caused by rusted Shell oil pipelines in Niger delta causing harm to potentially tens of thousands people.
studies exploring the opposite or both directions are conclusive even less. We would like to give our contribution despite running the risk of increasing the existing cacophony.

We base our hypothesis on a model of interaction between MNC and a host country government developed by Vernon (1971), which initially reach a bargain that favours the MNC but where, over time as the MNC’s fixed assets in the country increase, the bargaining power shifts to the government. This allows us to test the dynamic pattern of such relationship via three hypotheses:

**H1:** MNCs want lower corruption in a host country and are agents of change, i.e. they have the power at the beginning of the negotiation with the government before the FDI is placed and the will to achieve it. During this initial phase (several years) corruption in therefore diminishing in the host country as MNCs change the regulatory environment in their respective fields, but it may increase later to previous levels.

**H2:** The corruption levels are not decreasing during the initial phase of negotiations (several years) with host governments and later. This might be due to the fact that MNCs are not agents of change and use their power in negotiation not to decrease corruption but to gain other financial or non-financial benefits in the form of increased investment incentives.

**H2\textsuperscript{A}:** The corruption levels are counter-intuitively increasing during the initial phase of negotiations (several years) with host governments and later. The MNCs may for example be abusing their power or agreeing to the government’s corruption schemes, which become more significant in time.

**Construction of a parametric test**

To test the above stated hypotheses on available data, we define a non-parametric test of a dynamic non-linear relationship between corruption perception indicator in a country \((CI_i)\) and inflows of foreign direct investment of a representative (Gorman’s form-style)\textsuperscript{54} MNC into the country \((FDI_{j,i})\), based on Gorman (1961) and the ideas of our previous study (Evan, Bolotov, 2014). Assuming \(CI_{i,t} \propto FDI_{j,i,t}^2\) and \(CI_{i,t} \propto FDI_{j,i,t}\) where \(i \leq N\) is the country, \(j\) is the MNC and \(t\) is year, the relationship between \(CI_{i,t}\) in the country \(i\) and \(FDI_{j,i,t}\) of the MNC \(j\) will have the form of an autoregressive distributed lag \(ARDL(q,r)^*\), for \(FDI_{j,i,t}\) to Granger cause \(CI_{i,t}:\textsuperscript{55}

\[
CI_{i,t} = \eta + v_i + \sum_{k=1}^{q} \alpha_k CI_{i,t-k} + \sum_{k=1}^{r} \beta_k FDI_{j,i,t-k}^2 + \sum_{k=1}^{r} \gamma_k FDI_{j,i,t-k} + \epsilon_{j,i,t}, \quad q,r \geq 1
\]  

\textsuperscript{54} Non-representative or non-Gorman style MNCs can be considered if aggregation is performed.

\textsuperscript{55} The \(ARDL (q,r)\) model is adjusted for the Granger causality test, hence we denote it \(ARDL (q, r)^*\).
For all MNCs present in the country $i$, the transformation (i.e. aggregation across MNCs $j$) \[ FDI_{t-k}^2 = \sum FDI_{j,t-k}^2 \] and \[ FDI_{t-k} = \sum FDI_{j,t-k} \] is be applied to the model, so that:

\[ CI_{i,t} = \eta' + u_i' + \sum_{k=1}^{q} \alpha_k' CI_{i,t-k} + \sum_{k=1}^{r} \beta_k' FDI_{i,t-k}^2 + \sum_{k=1}^{r} \gamma_k' FDI_{i,t-k} + \varepsilon_{i,t}' \quad q, r \geq 1 \] \hspace{1cm} (2)

where $\eta$ and $\eta'$ are constants, $u_i$ and $u_i'$ are individual country effects, $\alpha_k$, $k \leq q$, $\beta_k$, $k \leq r$ and $\gamma_k$, $k \leq r$ and $\alpha_k'$, $k \leq q$, $\beta_k'$, $k \leq r$ and $\gamma_k'$, $k \leq r$ are coefficients of the model, $\varepsilon_{i,j,t}$ and $\varepsilon_{i,t}'$ are random components (errors), \{CI$_{i,t-k}$\}, $k \leq q$ is the dynamic (autoregressive) AR(q) term, and \{FDI$_{i,t-k}$\}, $k \leq r$ is the overall inflow of FDI into the country $i$. The maximum number of lags $q$ and $r$ will be considered equal to balance the ARDL ($q = r = K$), ARDL($K,K$)*.\(^{56}\)

The graphical comparatively static interpretation of the hypotheses $H1$, $H2$ and $H2^A$ for each $t$ in equation (2) under the ceteris paribus condition is presented in Figure 1: $H1$ is a degree 2 polynomial relationship between $CI_{i,t}$ and \{FDI$_{i,t-k}$\}, $k \leq K$, i.e. $\exists \beta_k' > 0 \land \exists \gamma_k' < 0$, $k \leq K$; \(^{57}\) $H2$ is a $CI_{i,t}$ equal to $\eta'$ and non-dependent on \{FDI$_{i,t-k}$\}, $k \leq K$, i.e. $\forall \beta_k' = 0 \land \forall \gamma_k' = 0$, $k \leq K$; and $H2^A$ is a degree 2 polynomial inverse to $H1$ or a positively sloped beam, $\exists \beta_k' < 0 \lor \gamma_k' < 0$, $k \leq K$. Thus, the parametric test combines two Granger causality F-tests, (Granger, 1969), for \{FDI$_{i,t-k}$\}, $k \leq K$ and \{FDI$_{i,t-k}$\}, $k \leq K$:

\begin{align*}
H1: & \quad \exists \beta_k' > 0 \land \exists \gamma_k' < 0, \quad k \leq K \\
H2: & \quad \forall \beta_k' = 0 \land \forall \gamma_k' = 0, \quad k \leq K \\
H2^A: & \quad \exists \beta_k' < 0 \lor \gamma_k' < 0, \quad k \leq K \hspace{1cm} (3)
\end{align*}

Figure 1: Schematic graphical comparatively static interpretation of equation (3) for each $t$ and at least one $k$ in the ARDL ($q, r$)*

\(^{56}\) This will simplify computations.

\(^{57}\) The signs of the coefficients are pre-defined by the shape of the degree 2 polynomial (parabola).
Methodology of the model

To test the hypotheses in equation (3) on multiple countries, i.e. with the help of one dynamic panel model instead of individual ARDL(\(k, K\))^+, we employ two panel Granger causality F-tests for relationships between \(CI_{i,t}\) and \(\{FDI^2_{i,t-k}\}\), \(k \leq K\) and \(CI_{i,t}\) and \(\{FDI_{i,t-k}\}\), \(k \leq K\) under the condition of stationarity\(^58\) of the variables in question or of their first differences (\(\Delta CI_{i,t}\), \(\{\Delta FDI^2_{i,t-k}\}\), \(k \leq K\) and \(\{\Delta FDI_{i,t-k}\}\), \(k \leq K\)) to perform the described parametric test.\(^59\) The panel version of the Granger causality F-test was developed by Hurlin and Venet (2001), Hurlin (2004a and 2004b) and Hurlin and Dumitrescu (2011), later by Hood, Kidd and Morris (2006) and others. The non-parametric test is conducted in three consecutive steps:

1) For unit root checks of variables, we recur to the augmented Dickey and Fuller (1979) (ADF) test (H0: presence of unit root in a time series) with a simultaneous verification by Kwiatkowski, Phillips, Schmidt and Shin (1992) (KPSS) test with an inverse H0 hypothesis (H0: no unit root in a time series) in the form of Levin, Lin and Chu (2002) and Harris and Tzavalis (1999) \(t\)-statistic poolization for the ADF tests and Choi (2001) p-value aggregation for the ADF and KPSS

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\(^{58}\) Stationarity is a prerequisite of Granger causality F-test.

\(^{59}\) If variables are non-stationary in levels, their first differences are employed to reduce the degree of integration to \(I(0)\).
The maximum number of lags for the ADF and KPSS tests is calculated using the Schwert (1988) second criterion \((l_{12})\):

\[
\max K = l_{12} = \text{Int} \left\{ 12 \left( \frac{T}{100} \right)^{\frac{1}{2}} \right\}
\]

where \(T\) is the length of time series (number of \(t\)). Panel unit root tests will help determine whether the variables are homogeneously stationary or homo-/heterogeneously non-stationary (require stationarization).

2) The estimation of the dynamic panel model (aggregate of \(ARDL(K,K)^{*}\)) is performed with the help of one- or two-step Arellano-Bond (1991) estimator modified by Blundell and Bond (2000), based on the generalized method of moments (GMM) (System GMM),\(^{62}\) Hansen, Heaton and Yaron (1996), Ahn, Lee and Schmidt (2001), Baum, Schaffer, Stillman et al. (2003), Lin and Lee (2010), which will remove the eventual homo-/heterogeneous non-stationarity, constant term and individual country (fixed) effects\(^{63}\) from the model by taking first differences of the variables:

\[
E \left( \Delta CI_{i,t} - \sum_{k=1}^{K} \alpha_k' \Delta CI_{i,t-k} - \sum_{k=1}^{K} \beta_k' \Delta FDI^2_{i,t-k} - \sum_{k=1}^{K} \gamma_k' \Delta FDI_{i,t-k} \left| Z \right. \right) = 0
\]

\[
Z = \{ \Delta CI_{i,t-k} \}, \{ \Delta FDI^2_{i,t-k} \}, \{ \Delta FDI_{i,t-k} \}, \ldots, k \leq K \leq l_{12}; \quad \Omega \ldots \text{arbitrary weights}
\]

where \(Z\) are instruments and \(\Omega\) are weights in the GMM one- or two-step estimation.

The number of lags \(K\) is derived from the information criteria, AIC, HQC and BIC,\(^{64}\) within the (pooled) ordinary least squares (OLS) estimation of the stationarized model in equation (2):\(^{65}\)

\[
\Delta CI_{i,t} = \sum_{k=1}^{K} \alpha_k' \Delta CI_{i,t-k} + \sum_{k=1}^{K} \beta_k' \Delta FDI^2_{i,t-k} + \sum_{k=1}^{K} \gamma_k' \Delta FDI_{i,t-k} + \epsilon_{i,t}, \quad K \leq l_{12}
\]

\(^{60}\) We employ four panel unit root tests with mutually exclusive hypotheses.

\(^{61}\) Since we are using big samples, \(N > 30\) and \(T > 30\), the version producing more lags is applied.

\(^{62}\) One-step estimation with GMM-style errors are preferred unless estimates of coefficients or errors are identified as biased.

\(^{63}\) Therefore, the constant term and fixed effects are not considered in the estimated model.

\(^{64}\) Akaike, Hannan-Quinn and Bayesian information criteria.

\(^{65}\) GMM estimations are not suited for calculation of AIC, HQC and BIC, therefore, pooled model has to be used.
3) The two panel Granger causality tests between $C_{i,t}$ and $\{FD_{i,t-2k}\}$, $k \leq K$ and $C_{i,t}$ and $\{FD_{i,t-2k}\}$, $k \leq K$ are performed with the help of linear restrictions tests, $\{\beta_k\} = 0, k \leq K$ and $\{\gamma_k\} = 0, k \leq K$, i.e. pooled Wald $\chi^2$-tests (Wald, 1943), in the dynamic panel model.

**Extension of the model**

For incorporating differences between developed, transitional and developing countries which may be affecting both $C_{i,t}$ and $\{FD_{i,t-2k}\}$, $k \leq K$, we add one additional variable reflecting the economic level $\{Y_{i,t-2k}\}$, $k \leq K$ into the equations (5) and (6):  

$$E \left( \Delta C_{i,t} - \sum_{k=1}^{K} \alpha''_{k} \Delta C_{i,t-k} - \sum_{k=1}^{K} \beta''_{k} \Delta FD_{i,t-k} - \sum_{k=1}^{K} \gamma''_{k} \Delta FD_{i,t-k} - \sum_{k=1}^{K} \phi_k' \Delta Y_{i,t-k} \mid Z \right) = 0$$  

$$Z = \{\Delta C_{i,t-k}\}, \{\Delta FD_{i,t-k}\}, \{\Delta FD_{i,t-k}\}, \{\Delta Y_{i,t-k}\}, \ldots, k \leq K$$  

$$\leq l_1; \; \Omega \ldots \text{arbitrary weights}$$ (8)

$$\Delta C_{i,t} = \sum_{k=1}^{K} \alpha''_{k} \Delta C_{i,t-k} + \sum_{k=1}^{K} \beta''_{k} \Delta FD_{i,t-k} + \sum_{k=1}^{K} \gamma''_{k} \Delta FD_{i,t-k} + \sum_{k=1}^{K} \phi_k' \Delta Y_{i,t-k}$$  

$$+ \epsilon_{i,t}'$$ (9)

where $\alpha''_{k}, k \leq K$, $\beta''_{k}, k \leq K$ and $\gamma''_{k}, k \leq K$ and $\phi_k', k \leq K$ is a new matrix of coefficients, $Z$ are instruments and $\Omega$ are weights in the GMM two-step estimation, presented in equation (5).

**Data file**

The available data were retrieved from official sources, specifically, from a) the Transparency International’s (TI) historical Corruption perception index (CPI) reports and from the Internet Centre for Corruption Research’s pre-TI tables (ICGG, 2017), b) the World Bank’s (WB) World Development Indicators database (February 2017), and c) the International Monetary Fund’s (IMF) World Economic Outlook database (October 2016). All variables are expressed as indices or shares in GDP / world average to preserve the degree 2 polynomial (parabolic)

---

66 Because of the Arellano-Bond (GMM) estimation and changes in methodologies of the IMF and WB for distinguishing between developed, transitional and developing countries in the last decades (our $T > 30$), this approach appears to be less biased than introducing new dummy variables into equation (2).

67 The pre-TI tables were constructed by the ICGG from data provided by Business International; Political Risk Service, East Syracuse, NY; International Institute for Management Development (IMD), Lausanne, Switzerland; and Political & Economic Risk Consultancy, Hong Kong.
relationship in the model\textsuperscript{68}, to incorporate trends (economic development) in each country and in the world (to adjust FDI inflows to the changes in output), as well as to achieve comparability of coefficients in the model. To achieve the longest possible time series, missing values in the panel were interpolated with the help of arithmetic means (for \( CI \) and \( Y \)) and zeros (for \( FDI \)) and extrapolated using repeated beginning and end values.\textsuperscript{69} The outcome was a partly artificial \( CI \) dataset, \( \overline{CI} \), which is used as a proxy for \( CI \).\textsuperscript{70} A detailed overview of the panel data file, which comprises data for 154 countries for the years 1980–2015 (5544 rows, 22,176 observations) with comments is provided in Table 1 and in Annexes 1 and 2. This is probably the biggest, though artificially balanced, panel data file on the topic of corruption and FDI (see the review of literature in the beginning of the paper), which supersedes the one in our own previous research; consult (Evan, Bolotov, 2014).\textsuperscript{71}

Table 1: Data file

<table>
<thead>
<tr>
<th>Description</th>
<th>Unit / Formula</th>
<th>Source of data</th>
<th>Interpolated / Extrapolated observations</th>
</tr>
</thead>
<tbody>
<tr>
<td>( CI )</td>
<td>Corruption Perception Index</td>
<td>Quality of institutions, index, 0–100</td>
<td>TI, ICGG</td>
</tr>
<tr>
<td>( FDI )</td>
<td>Inflows of foreign direct investment</td>
<td>Percentage of GDP</td>
<td>IMF, WB</td>
</tr>
</tbody>
</table>

Exogenous variables:

\textsuperscript{68} Logarithmization would entail a translog relationship with different formalization of \( H1 \) and \( H1^A \), as well as less intuitive interpretation of results for Vernon’s theory.

\textsuperscript{69} Extrapolation is based on a strong assumption that former socialist countries or dependent territories had similar economic and social level before the transition or independence as in the early stages of their transition / independence. From the point of view of economic theory, this method appears to be the only correct way of extrapolation, since any OLS or AR\((p)\) estimation from these countries’ “new” historical period would mean attributing the properties of their modern economic / political / social systems to preceding ones, e.g. free market to the centrally planned economy. Either way, extrapolation creates important artefacts in the data, and we will bear this bias in mind when interpreting the results.

\textsuperscript{70} We address the issue of credibility of our computations below.

\textsuperscript{71} The balanced panel dataset is required for unit root tests and subsequent computations.
<table>
<thead>
<tr>
<th>Country</th>
<th>GNI per capita in purchasing power parity</th>
<th>Percentage of world in the corresponding year</th>
<th>IMF, WB</th>
<th>814 (14.68%)</th>
</tr>
</thead>
</table>

Source: authors, self-prepared.

Filling missing values in the panel dataset requires an assessment of credibility of computations. The probability of bias (error) created by artefacts in either CI or FDI is $P(\text{artefacts}_{CI} \cup \text{artefacts}_{FDI}) = P(\text{artefacts}_{CI}) + P(\text{artefacts}_{FDI}) - P(\text{artefacts}_{CI} \cap \text{artefacts}_{FDI}) = 61.53\%$ with joint probability $P(\text{artefacts}_{CI} \cap \text{artefacts}_{FDI}) = 6.84\%$. Since there is no empirical way of assessing the quality of $\hat{CI}$ against CI, we are forced to strongly assume $\hat{CI}_{it} \propto CI_{it}$, which reduces the $P(\text{artefacts}_{CI} \cup \text{artefacts}_{FDI})$ to $12.18\%$ and overall probability of artefacts ($\text{artefacts}_{CI} \cup \text{artefacts}_{FDI} \cup \text{artefacts}_{Y}$) to $12.18\%$–$25.07\%$ depending on the number of variables proven to be statistically significant ($FDI$, $Y$ or both $FDI$ and $Y$). Ergo, the credibility of our computations, under all assumptions, must be at least $75\%$.  

**Results**

The maximum number of lags for panel unit root tests and for the dynamic panel model was $\max K = l_{12} = 9$ for $T = 36$. The same number proved to be optimal for the dynamic panel model, according to the AIC, HQC and BIC in a preliminary OLS estimation on first differences of $\hat{CI}$, $FDI^2$, $FDI$ and $Y$, see Table 2.  

**Table 2: Lags and information criteria in the OLS estimation of the dynamic panel model**

<table>
<thead>
<tr>
<th>Lags</th>
<th>AIC</th>
<th>HQC</th>
<th>BIC</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>21460.05</td>
<td>21540.38</td>
<td>21686.67</td>
</tr>
<tr>
<td>8</td>
<td>22126.18</td>
<td>22197.88</td>
<td>22328.83</td>
</tr>
<tr>
<td>7</td>
<td>22814.68</td>
<td>22877.65</td>
<td>22993.01</td>
</tr>
<tr>
<td>6</td>
<td>23505.27</td>
<td>23559.45</td>
<td>23658.97</td>
</tr>
<tr>
<td>5</td>
<td>24274.37</td>
<td>24319.68</td>
<td>24403.13</td>
</tr>
<tr>
<td>4</td>
<td>24920.74</td>
<td>24957.11</td>
<td>25024.27</td>
</tr>
<tr>
<td>3</td>
<td>25561.91</td>
<td>25589.28</td>
<td>25639.94</td>
</tr>
<tr>
<td>2</td>
<td>26212.27</td>
<td>26230.57</td>
<td>26264.54</td>
</tr>
<tr>
<td>1</td>
<td>26855.03</td>
<td>26864.21</td>
<td>26881.29</td>
</tr>
</tbody>
</table>

Source: authors, self-prepared based on calculations in STATA and gretl.

**Step 1.** Table 3 presents results of four different panel unit root tests for CI, FDI and Y, which acknowledged presence of heterogeneous non-stationarity, i.e. statistically significant number of

---

72 Significant reconstruction of CI because of important data fragmentation impedes any meaningful estimation of its quality.

73 The closest estimation to the system GMM, which was employed later in text.
non-stationary time series in a panel, for each variable with 99%, 95% and 90% probability (p-value ≤ 0.01, 0.05 and 0.1). For example, CI had 59 and 91 non-stationary time series according to individual ADF and KPSS tests, FDI – 95 and 75, and Y – 124 and 97 at the 10% significance level. This stresses the necessity of stationarization of variables (the use of Blundell-Bond estimator instead of the classical Arellano-Bond) and an Engle-Granger co-integration check after coefficients estimation: a panel unit root test of residuals in step 2, see (Engle and Granger, 1987).
Table 3: Four panel unit root tests for $CI, FDI$ and $Y$

<table>
<thead>
<tr>
<th></th>
<th>Levin-Lin-Chu (9 lags)</th>
<th>H0: Panels contain unit roots</th>
<th>Harris-Tzavalis (9 lags)</th>
<th>H0: Panels contain unit roots</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Statistic</td>
<td>p-value</td>
<td>Statistic</td>
<td>p-value</td>
</tr>
<tr>
<td>$CI, N = 154$</td>
<td>-10.9518</td>
<td>1.0000</td>
<td>0.9099</td>
<td>0.0948</td>
</tr>
<tr>
<td></td>
<td>26.8304</td>
<td></td>
<td>-1.3116</td>
<td></td>
</tr>
<tr>
<td>Unadjusted t</td>
<td>z</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adjusted t</td>
<td>z</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ADF (0–9 lags)*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H0: Homogenous non-stationarity</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inverse chi-square</td>
<td>927.4900</td>
<td>0.0000</td>
<td>669.3110</td>
<td>0.0000</td>
</tr>
<tr>
<td>Inverse normal test</td>
<td>-2.7038</td>
<td>0.0034</td>
<td>-15.8803</td>
<td>0.0000</td>
</tr>
<tr>
<td>Logit test</td>
<td>-6.3962</td>
<td>0.0000</td>
<td>-15.1838</td>
<td>0.0000</td>
</tr>
<tr>
<td>Distribution:</td>
<td>$\alpha &lt; 0.01 (43)$</td>
<td>$\alpha &lt; 0.05 (55)$</td>
<td>$\alpha &lt; 0.10 (59)$</td>
<td>$\alpha \geq 0.10 (91)$</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Levin-Lin-Chu (9 lags)</th>
<th>H0: Panels contain unit roots</th>
<th>Harris-Tzavalis (9 lags)</th>
<th>H0: Homogenous stationarity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Statistic</td>
<td>p-value</td>
<td>Statistic</td>
<td>p-value</td>
</tr>
<tr>
<td>$FDI, N = 154$</td>
<td>-13.9283</td>
<td>1.0000</td>
<td>0.5780</td>
<td>0.0000</td>
</tr>
<tr>
<td></td>
<td>15.1279</td>
<td></td>
<td>-49.7921</td>
<td></td>
</tr>
<tr>
<td>Unadjusted t</td>
<td>z</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adjusted t</td>
<td>z</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ADF (0–9 lags)*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H0: Homogenous non-stationarity</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inverse chi-square</td>
<td>722.0930</td>
<td>0.0000</td>
<td>760.0140</td>
<td>0.0000</td>
</tr>
<tr>
<td>Inverse normal test</td>
<td>-7.8561</td>
<td>0.0000</td>
<td>-16.9998</td>
<td>0.0000</td>
</tr>
<tr>
<td>Logit test</td>
<td>-6.7043</td>
<td>0.0000</td>
<td>-16.2797</td>
<td>0.0000</td>
</tr>
<tr>
<td>Distribution:</td>
<td>$\alpha &lt; 0.01 (31)$</td>
<td>$\alpha &lt; 0.05 (52)$</td>
<td>$\alpha &lt; 0.10 (59)$</td>
<td>$\alpha \geq 0.10 (79)$</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Levin-Lin-Chu (9 lags)</th>
<th>H0: Panels contain unit roots</th>
<th>Harris-Tzavalis (9 lags)</th>
<th>H0: Homogenous stationarity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Statistic</td>
<td>p-value</td>
<td>Statistic</td>
<td>p-value</td>
</tr>
<tr>
<td>$Y, N = 154$</td>
<td>-18.4897</td>
<td>0.8923</td>
<td>0.0000</td>
<td>0.0000</td>
</tr>
<tr>
<td></td>
<td>-1.5996</td>
<td>0.0548</td>
<td>-3.8910</td>
<td></td>
</tr>
<tr>
<td>Unadjusted t</td>
<td>z</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adjusted t</td>
<td>z</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ADF (0–9 lags)*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>KPSS (9 lags)*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H0: Homogenous stationarity</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Distribution:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>H0: Homogenous non-stationarity</td>
<td>H0: Homogenous stationarity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>------------------------</td>
<td>---------------------------------</td>
<td>----------------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Statistic</td>
<td>p-value</td>
<td>Statistic</td>
<td>p-value</td>
<td></td>
</tr>
<tr>
<td>Inverse chi-square</td>
<td>439.5020</td>
<td>0.0000</td>
<td>797.7900</td>
<td>0.0000</td>
</tr>
<tr>
<td>Inverse normal test</td>
<td>-2.4924</td>
<td>0.0063</td>
<td>-17.7942</td>
<td>0.0000</td>
</tr>
<tr>
<td>Logit test</td>
<td>-2.3031</td>
<td>0.0108</td>
<td>-17.1844</td>
<td>0.0000</td>
</tr>
</tbody>
</table>

**Distribution:**

\[
\alpha < 0.01 \ (10) \quad \alpha < 0.05 \ (20) \quad \alpha < 0.10 \ (30) \quad \alpha \geq 0.10 \ (57)
\]

Note: * 17 near-constant time series were left out in marked tests and assumed stationary.

Source: authors, self-prepared based on calculations in STATA and gretl

**Step 2.** Based on the one-step Blundell-Bond (system GMM) estimator with 913 instruments, matrices of coefficients \(\alpha_k''', k \leq K\), \(\beta_k''', k \leq K\) and \(\gamma_k''', k \leq K\) proved to be partly significant, lags 1–4 for CI, lags 4, 5, 7 and 8 for \(FDI^2\), lags 5, 6 and 9 for \(FDI\), and \(\phi_k''', k \leq K\) completely statistically insignificant, see Table 4. The overall Wald \(\chi^2(36)\) statistic was 34762.26 (p-value << 0.01), which acknowledged overall statistical significance of the model. This cannot be said about the residuals (see Annex 2), since they also showed presence of heterogeneous non-stationarity, according to the four unit root tests: the individual ADF and KPSS tests acknowledge 41 and 104 time series to be stationary at the 10% significance level, see Table 5. Despite the fact that the relationship proved to be spurious (there is no Engle-Granger panel cointegration vector between CI and \(FDI\)), we still perform Step 3 and interpret the examined relationship between CI, \(FDI^2\) and \(FDI\) in the next section.
| CI     | Coef.     | Std. Err. | z   | P>|z| | [95% Conf. Interval] |
|--------|-----------|-----------|-----|-----|----------------------|
| L1     | 0.8694019 | 0.0118604 | 73.30 | 0.0000 | 0.8461559 - 0.8926479 |
| L2     | 0.0788210 | 0.0179686 | 4.39 | 0.0000 | 0.0436033 - 0.1140388 |
| L3     | -0.0380424 | 0.0210211 | -1.81 | 0.0700 | -0.0792430 - 0.0031581 |
| L4     | 0.0380452 | 0.0214164 | 1.78 | 0.0760 | -0.0039301 - 0.0800205 |
| L5     | -0.0175980 | 0.0219703 | -0.80 | 0.4230 | -0.0606589 - 0.0254630 |
| L6     | 0.0196600 | 0.0223029 | 0.88 | 0.3780 | -0.0240528 - 0.0633728 |
| L7     | -0.00002495 | 0.0279030 | -0.01 | 0.9930 | -0.0549382 - 0.0544393 |
| L8     | 0.0389437 | 0.0373835 | 1.04 | 0.2980 | -0.0343265 - 0.1122140 |
| L9     | -0.0288920 | 0.0268913 | -1.07 | 0.2830 | -0.0815979 - 0.0238140 |
| FDI2   |           |           |     |       |                      |
| L1     | 0.0000127 | 0.0000410 | 0.31 | 0.7560 | -0.0000676 - 0.0000930 |
| L2     | -0.0000659 | 0.0000433 | -1.52 | 0.1280 | -0.0001508 - 0.0000190 |
| L3     | 0.0000618 | 0.0000409 | 1.51 | 0.1310 | -0.0000184 - 0.0001421 |
| L4     | -0.0000646 | 0.0000382 | -1.69 | 0.0910 | -0.0001394 - 0.0000103 |
| L5     | -0.0000804 | 0.0000366 | -2.20 | 0.0280 | -0.0001520 - 0.0000088 |
| L6     | 0.0000553 | 0.0000667 | 0.83 | 0.4080 | -0.0000755 - 0.0001861 |
| L7     | -0.0000727 | 0.0000385 | -1.89 | 0.0590 | -0.0001482 - 0.0000283 |
| L8     | -0.0001976 | 0.0000964 | -2.05 | 0.0400 | -0.0003866 - 0.0000086 |
| L9     | 0.00001980 | 0.0001493 | 1.33 | 0.1850 | -0.0000947 - 0.0004907 |
| FDI    |           |           |     |       |                      |
| L1     | -0.0023836 | 0.0116194 | -0.21 | 0.8370 | -0.0251573 - 0.0203901 |
| L2     | 0.0080029 | 0.0112086 | 0.71 | 0.4750 | -0.0139655 - 0.0299714 |
| L3     | -0.0130253 | 0.0108839 | -1.20 | 0.2310 | -0.0343574 - 0.0083067 |
| L4     | 0.0072212 | 0.0115100 | 0.63 | 0.5300 | -0.0153381 - 0.0297804 |
| L5     | 0.0279520 | 0.0125420 | 2.23 | 0.0260 | 0.0033702 - 0.0525339 |
| L6     | 0.0196221 | 0.0117730 | 1.67 | 0.0960 | -0.0034526 - 0.0426968 |
| L7     | 0.0023852 | 0.0125804 | 0.19 | 0.8500 | -0.0222720 - 0.0270423 |
| L8     | 0.0183651 | 0.0132325 | 1.39 | 0.1650 | -0.0075700 - 0.0443003 |
| L9     | 0.0205751 | 0.0118850 | 1.73 | 0.0830 | -0.0027190 - 0.0438692 |
| Y      |           |           |     |       |                      |
| L1     | 0.0050853 | 0.0041538 | 1.22 | 0.2210 | -0.0030560 - 0.0132267 |
| L2     | -0.0013002 | 0.0053792 | -0.24 | 0.8090 | -0.0118431 - 0.0092428 |
| L3     | 0.0017559 | 0.0051703 | 0.34 | 0.7340 | -0.0083777 - 0.0118895 |
| L4     | -0.0031249 | 0.0045604 | -0.69 | 0.4930 | -0.0120632 - 0.0058134 |
| L5     | 0.0032728 | 0.0043907 | 0.75 | 0.4560 | -0.0053329 - 0.0118784 |
| L6     | 0.0007611 | 0.0045078 | 0.17 | 0.8660 | -0.0080740 - 0.0095961 |
| L7     | -0.0017371 | 0.0046439 | -0.37 | 0.7080 | -0.0108391 - 0.0073649 |
Table 5: Four panel unit root tests for residuals of the dynamic panel model

<table>
<thead>
<tr>
<th>Residuals, N = 154</th>
<th>Levin-Lin-Chu (9 lags)</th>
<th>Harris-Tzavalis (9 lags)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>H0: Panels contain unit roots</td>
<td>H0: Panels contain unit roots</td>
</tr>
<tr>
<td></td>
<td>statistic</td>
<td>p-value</td>
</tr>
<tr>
<td>Unadjusted t</td>
<td>-11.8623</td>
<td>0.9102</td>
</tr>
<tr>
<td>Adjusted t</td>
<td>23.1319</td>
<td>1.0000</td>
</tr>
</tbody>
</table>

ADF (0–9 lags)

<table>
<thead>
<tr>
<th></th>
<th>statistic</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inverse chi-square</td>
<td>521.5570</td>
<td>0.0000</td>
</tr>
<tr>
<td>Inverse normal test</td>
<td>1.3622</td>
<td>0.9134</td>
</tr>
<tr>
<td>Logit test</td>
<td>2.4684</td>
<td>0.9931</td>
</tr>
</tbody>
</table>

KPSS (9 lags)

<table>
<thead>
<tr>
<th></th>
<th>statistic</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inverse chi-square</td>
<td>727.6480</td>
<td>0.0000</td>
</tr>
<tr>
<td>Inverse normal test</td>
<td>-16.3100</td>
<td>0.0000</td>
</tr>
<tr>
<td>Logit test</td>
<td>-15.5013</td>
<td>0.0000</td>
</tr>
</tbody>
</table>

Distribution: $\alpha < 0.01$ (20) $\alpha < 0.05$ (36) $\alpha < 0.10$ (41)

Source: authors, self-prepared based on calculations in STATA and gretl

Step 3. The results of the pooled Wald $\chi^2$-tests presented in Table 6 show statistical significance of model coefficients $\{\beta_k''\} = 0, k \leq K$ and $\{\gamma_k''\} = 0, k \leq K$ for $F_{DI}^2$ and $F_{DI}$, which acknowledges the presence of Granger causality at the 5% and 10% significance level (p-value ≤ 0.05 and 0.1), but not on 1% level for $F_{DI}^2$.

Table 6: Pooled Wald $\chi^2$-tests of coefficients in the dynamic panel model

<table>
<thead>
<tr>
<th>$F_{DI}^2$, N = 154</th>
<th>Wald test</th>
</tr>
</thead>
<tbody>
<tr>
<td>H0: $\beta_k = 0, k \leq 9$</td>
<td></td>
</tr>
<tr>
<td>statistic</td>
<td>p-value</td>
</tr>
<tr>
<td>$\chi^2 (9)$</td>
<td>19.6600</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>$F_{DI}$, N = 154</th>
<th>Wald test</th>
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</table>

74 This result is predictable and pro forma since a part of individual coefficients is statistically significant.
Source: authors, self-prepared based on calculations in STATA and gretl

To sum up the parametric tests confirmed the non-linear relationship between \( CI \) and \( FDI \).

**Interpretation and discussion**

Based on the obtained results, under the assumption of non-spurious relationship and with the 75% credibility of data, it is possible to observe a *ceteris-paribus* non-linear relationship between the level of corruption \( \bar{C}I \) and foreign direct investment inflows \( FDI \) for a 9-year period (i.e. almost a decade) for 154 countries since 1980s (and technically ca. 1990s because of 9 lags), as presented in Figure 2 (the graph does not depict disinvestment). It can be seen that \( FDI \) Granger cause no change in corruption for the first three years, after which the effects of MNCs begin to diverge, regardless whether the country is developing, developed or transitional, since the additional variable \( Y \) proved to be statistically insignificant. Overall, \( FDI \) seem to increase corruption to a small degree (less than 5 points) before \( FDI = 75.43\% \) of \( GDP \) (the local maximum), after which the process is reverted, but this reversion affects less than 10% of cases, see the 5% and 95% of percentiles in Annex 2 (95% percentile is 12.3% of GDP).

**Figure 2: Schematic graphical representation of the CI – FDI relationship based on results from the dynamic panel model under the ceteris paribus assumption**

Note: Corruption at \( FDI = 0\% \) GDP is calculated as the average for the years 2006–2015, the last ten years of observations, 43.51 out of 100

Source: authors, self-prepared

This seems to support \( H2 \) hypothesis for the first three years and \( H2^A \) hypothesis afterwards. Alternatively, if the relationship is correctly interpreted as spurious, based on the unit root tests for residuals, the \( H2 \) hypothesis can be claimed as the sole confirmed. Either way, \( H1 \) is rejected by our results, which means that MNCs cannot be seen as agents of change in nearly a decade for at least 90% of economies on data for 154 countries for the years 1980–2015 with 75% credibility under the assumption \( \bar{C}I_{lt} \propto CI_{lt} \). The exactness of our conclusions, however, depend on the quality of collected data, especially of the “subjective” nature of the \( CI \) (the Corruption Perception Index, CPI) as published by Transparency International. However, as shown in our
prior research, all major official corruption indicators tend to be strongly correlated, (Evan, Bolotov, 2014).

**Concluding remarks**

After about 20 years of research and near constant failure of international organisations to diminish the widespread subsidies to MNCs negotiated by host governments under the euphemistically called investment incentive schemes, the economic science reluctantly starts to understand the mercantilist economic environment in international investment is here to stay. It is recognized now by most researchers that corruption on one hand creates the need to pay politicians and officials thus incurring the costs of production but on the other hand it “greases the wheels” as negotiating with host governments can bring about not only “untouchable company” status but also advantages of monopolized markets, direct payments and generally maximizes profit from various MNCs assets.

In our paper, we have explored the dynamic pattern of relationship between MNCs and host governments on the panel data for 154 countries and 36 years (1980–2015, missing values intra- and extrapolated) by employing the Vernon obsolescing bargaining model. This model postulates initial advantage of MNCs in negotiation, yet, over time as the MNC's fixed assets in the country increase, the bargaining power shifts to the government. Vernon’s model invites to test the hypothesis about MNCs as agents of change for more transparent economic environment free of corruption. The model was estimated with the help of a custom-tailored non-parametric test based on dynamic panel model and two Granger causality tests.

We have found out the corruption levels are not decreasing during the initial phase of negotiations with the host government for at least three consecutive years despite MNCs having theoretically enough bargaining power to be an agent of change for a less corrupt environment. On the contrary, there is a statistically weak (less than 5 points change) positive non-linear relationship between corruption and foreign direct investment inflows for 90% of cases, i.e. depending on the amount of investment, for the years 3–9 (the maximum lag was statistically proved to be 9, i.e. almost a decade) if the relationship is considered non-spurious at all.

This forces us to refute the hypothesis about MNCs as agents of change and accept alternative hypotheses about MNCs exchanging their bargaining power for other financial or non-financial benefits in the form of increased investment incentives, instead, which either slightly increase corruption for the absolute majority of cases or do not influence it at all.
References:


Acknowledgement:

This paper was elaborated under the institutional support of the Faculty of International Relations, University of Economics, Prague, project No. IP200040

Annex 1: List of countries in the data file

<p>| ISO code | Country name          | 12  | BFA     | 13  | BGD     | 14  | BGR     | 15  | BHR     | 16  | BHS     | 17  | BIH     | 18  | BLR     | 19  | BLZ     | 20  | BOL     | 21  | BRA     | 22  | BRB     | 23  | BRN     |
|----------|-----------------------|-----|---------|-----|---------|-----|---------|-----|---------|-----|---------|-----|---------|-----|---------|-----|---------|-----|---------|-----|---------|-----|---------|-----|---------|-----|---------|
| 1        | AGO Angola            |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |         |
| 2        | ALB Albania           |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |         |
| 3        | ARE United Arab Emirates |   |         |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |         |
| 4        | ARG Argentina         |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |         |
| 5        | ARM Armenia           |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |         |
| 6        | AUS Australia         |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |         |
| 7        | AUT Austria           |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |         |
| 8        | AZE Azerbaijan        |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |         |
| 9        | BDI Burundi           |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |         |
| 10       | BEL Belgium           |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |         |
| 11       | BEN Benin             |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |         |     |         |</p>
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### Annex 2: Summary statistics for the data file and residuals of the dynamic panel model

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Source: authors, self-prepared based on calculations in STATA and gretl
USING RICO TO FIGHT CORRUPTION, FRAUD AND OTHER WHITE COLLAR CRIMES: A LOOK AT WHETHER RICO IS UP TO THE TASK AND COULD PROVIDE INSPIRATION IN OTHER JURISDICTIONS.

Carollann BRAUM
Anglo-American University
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Abstract

This paper will look at the use of the Racketeer Influenced and Corrupt Organizations (RICO) Act to combat corruption, including bribery, money laundering and other white collar crimes, in the United States, as well as corrupt acts that occur outside of the United States. While RICO was originally intended, and has been commonly used, to combat organized crime, its design has potential for use in white collar crimes and corruption, as well. This was most recently evident in the application of RICO to the FIFA corruption case brought in 2015. Consequently, this article will analyze current evidence-gathering practices and determine whether these practices have allowed for the suitable application of RICO in criminal prosecutions or civil actions. Finally, this article look at whether elements of RICO could be incorporated into laws in other jurisdictions in order to help strengthen existing laws used to combat corruption and white collar crimes.

Keywords: Corruption, FIFA, Prosecution, RICO

JEL Classification: D73, K42

1. INTRODUCTION

For almost half a century, the United States has been equipped with a legal tool that enables government prosecutors and civil plaintiffs to tackle criminal networks, large and small: the Racketeer Influenced and Corrupt Organizations Act (“RICO”). While this law has been largely aimed at tackling criminal networks within the United States, it is among several laws in the United States known for potential “long-arm” application, meaning they have extraterritorial jurisdiction which may allow them to be applied to criminals and their acts that occur outside of the U.S. While this is not a focal point in the FIFA corruption case, which will be at the center of this paper, because the indictments were based on activities that occurred in the U.S., it is still a substantial consideration in the case because of the strong cross-border aspects. In the past decades, the United States has been making steady legal progress in refining its tools to combat corruption. In fact, over the last decade in particular, Livschitz (2012) asserted that “the United States has far surpassed other developed countries in the effort to investigate and punish corrupt behavior committed abroad. In addition to

76 Cecily Rose, The FIFA Corruption Scandal from the Perspective of Public International Law, ASIL, Vol. 19, issue 23 (23 October 2015) available at https://www.asil.org/insights/volume/19/issue/23/fifa-corruption-scandal-perspective-public-international-law; citing Cristopher Staker, Jurisdiction, in INTERNATIONAL LAW 316 (Malcolm D. Evans ed., 2014). "A close look at the indictment, however, reveals that the United States is actually enforcing legislation that is based on the territoriality principle—the most well-accepted and heavily relied upon form of prescriptive or legislative jurisdiction under public international law.”
pursuing an increasing number of enforcement actions and seeking higher fines,” US law enforcement and legal departments “have relied on aggressive legal theories to expand the scope of” many laws used to combat corruption. One of these laws, RICO, was originally designed to combat organized crime. Established in 1970 and used extensively since then, both for its original purpose and applied to various other criminal enterprises, the RICO statute has been both limited and expanded in various ways through case law, which is a hallmark of common law legal development.

As of 2015, the United States Justice Department found that the RICO statute was ideally suited to tackle the ongoing multinational and multimillion dollar corruption scandal that was being perpetuated by Fédération Internationale de Football Association (“FIFA”) officials and many of their affiliates. However, RICO is not without challenges. There are multiple elements that must be satisfied, each of which have been litigated extensively. Therefore, the case law that defines how the elements apply in individual situations is vast and important. Furthermore, considering the nature of high level corruption cases, such as that involved in the FIFA scandal, investigations often require intensive, but very difficult evidence gathering. It is not an easy task for law enforcement to gather evidence in high profile corruption cases, particularly those that generate large amounts of money and cross many international borders. Despite these challenges, with both a criminal and civil component, RICO has potential to be a strong statute for prosecutors to use in corruption cases, for many reasons. As such, it may provide beneficial tools for other jurisdictions to consider implementing. It is important to note that the aim of this paper is not to analyze why other countries, such as Switzerland, did not bring the case against FIFA first, but rather to look at the law being used by the United States in this case and summarize how effective the law may be in corruption cases such as the FIFA situation and whether other jurisdictions may wish to incorporate certain elements of RICO, if their laws do not already provide them. In order to effectively achieve this aim, this paper will first outline the charges brought against officials in FIFA and its affiliates in Chapter 2. In Chapter 3, RICO will be analyzed and explained so that the specifics of the FIFA case can be discussed. Following the general explanation of RICO, the paper will then discuss criminal RICO prosecutions and civil RICO cases in Chapter 4. A comparative look at laws in other jurisdictions will occur throughout the paper.

2. CHARGES BROUGHT AGAINST FÉDÉRATION INTERNATIONALE DE FOOTBALL ASSOCIATION (“FIFA”)

In 2015, the United States Justice Department announced that it was launching a 92-count indictment against FIFA officials and many high ranking officials of other organizations that

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79 Rose, supra note 2.
fall under its umbrella (hereinafter the “FIFA case”).

This was surprising to many, considering that FIFA is a Swiss entity and most of the defendants and acts were outside of the U.S. The charges were based on crimes, such as conspiracy, bribery, wire fraud conspiracy, wire fraud conspiracy, wire fraud conspiracy, money laundering conspiracy, money laundering, obstruction of justice charges, and tax evasion, that fall under the RICO. In essence, the United States is approaching FIFA as if it were a much grander version of the mafia, the RICO statute’s original target, and rightly so, it seems. The allegations were made in connection with the defendants’ “participation in a 24-year scheme to enrich themselves through the corruption of international soccer” (football). In its superseding indictment, the Justice Department expanded the original indictment to include 16 more defendants, bringing the total to 41 defendants, including the current presidents of the Confederation of North, Central American and Caribbean Association Football (“CONCACAF”) and Confederación SudamERICana de Fútbol (“CONMEBOL”), current FIFA vice presidents and Executive Committee members. The 27 new defendants “are alleged to have engaged in a number of schemes all designed to solicit and receive well over $200 million in bribes and kickbacks to sell lucrative media and marketing rights to international soccer tournaments and matches, among other valuable rights and properties.” One of the many allegations implies that FIFA officials cast their votes for South Africa’s 2010 hosting of the World Cup in exchange for $10 million. Undoubtedly, a high level of corruption seems clear.

According to Fleishman (2016), although the United States is far from being at the epicenter of international football, the Justice Department made the decision to initiate the prosecution because it felt that it was equipped with the legal tools to bring the corrupt officials to justice. Furthermore, many of these acts touched the U.S., at least via its banking system, thereby giving the U.S. jurisdiction. United States Federal Bureau of Investigation Director James Comey explained the significance of the corruption in this scandal: “For decades, these defendants used their power as the leaders of soccer federations throughout the world to create a web of corruption and greed that compromises the integrity of the beautiful game.”

RICO is an excellent tool for prosecutors in this type of complex and widespread corruption because it “ties everything together” so that defendants of these types of accusations can be

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81 Rose, supra note 2.
82 Id.
84 Id.
85 Id.
86 Id.
88 Id.
89 Id.
90 Comey, Indictment, supra note 6.
tried together as an extensive network, rather than as individuals alone.\textsuperscript{91} Naturally, there were many questions as to why this case was instigated in the United States rather than a jurisdiction with closer connections to the defendants and their acts, such as Switzerland. While this paper does not seek to answer why exactly other countries did not yet begin prosecutions, one possible answer is simple: the development of the laws. While anti-corruption has been a significant focal point in the U.S. for decades, according to Elvin, \textit{et al} (2017), “[t]he topic has historically however received much less attention within Europe. That is now changing as Europe is catching up and many EU Member States have already implemented anti-bribery laws more strict than those in the U.S.”\textsuperscript{92} The problem therefore lies in enforcement. Furthermore, Michael and Nouaydi (2009) note that the dominant approach to combatting corruption in the EU seems to be through anti-corruption instruments implemented into domestic law.\textsuperscript{93} This has not been an easy task, however. While Europe has anti-corruption instruments, according to Elvin, “the lack of ratification, transposition, implementation and enforcement of international and EU norms poses one of the main barriers in the European fight against corruption. However, recent events have placed the topic back on the EU Commission agenda and we can expect further debate on the effectiveness and efficacy of enforcement in Europe.”\textsuperscript{94} Consequently, it was the U.S. that brought the case and therefore it is the law chosen by the Prosecutor to effectuate this that will be the focus of this paper.

Of course, the fact that the U.S. had an effective tool in its arsenal and jurisdiction over the acts, doesn’t mean there weren’t legal hurdles to clear in bringing a RICO case against these particular defendants, many of whom had little to do with the U.S. at all.\textsuperscript{95} The United States was able to claim that it had jurisdiction over the defendants in the FIFA case based on some seemingly tenuous connections to the U.S. While the defendants were not in the United States and did not even conduct the majority of their actions there., Fischetti (2015) explained they did have necessary contact with the U.S. in several ways, primarily through the finance and media systems.\textsuperscript{96} Furthermore, the U.S. government had the support and cooperation of other governments, Switzerland in particular.\textsuperscript{97}

\textsuperscript{94} Elvin, \textit{supra} note 18. Furthermore, “Several EU Member States have ratified all or most of the existing international anti-corruption instruments. However, three EU Member States (Austria, Germany, Italy) have not ratified the Council of Europe's Criminal Law Convention on Corruption, twelve have not ratified its additional Protocol (Austria, the Czech Republic, Estonia, Finland, Germany, Hungary, Italy, Lithuania, Malta, Poland, Portugal, Spain) and seven have not ratified the Civil Law Convention on Corruption (Denmark, Germany, Ireland, Italy, Luxembourg, Portugal and the UK). Three Member States have not yet ratified the UN Convention against Corruption (The Czech Republic, Germany, and Ireland ). Five EU Member States (Cypus, Latvia, Lithuania, Malta, and Romania) have not ratified the OECD Anti-Bribery Convention.” MEMO/11/376 Brussels, 6 June 2011, Commission steps up efforts to forge a comprehensive anti-corruption policy at EU level, available at http://europa.eu/rapid/press-release_MEMO-11-376_en.htm?locale=en (hereinafter MEMO).
\textsuperscript{95} Rose, \textit{supra} note 2.
Even with Switzerland’s cooperation, the fact that the United States claims jurisdiction over Swiss or other nationals, does not mean that those individuals will be extradited and tried by the United States.\textsuperscript{98} Six of the defendants are currently in custody in Switzerland awaiting extradition.\textsuperscript{99} As Garcia (2010) explains, in order for extradition to occur, there must be normally be a treaty between the countries in question and the crime must be one that is laid out in the treaty.\textsuperscript{100} For example, in the FIFA case, tax evasion was one RICO predicate act (crime) that the defendants are accused of. Therefore, the Swiss government still choose not to extradite these defendants based on Article 2 “Extraditable Offenses” of the Extradition Treaty between the United States and Switzerland: “An offense shall be an extraditable offense only if it is punishable under the laws of both Contracting Parties by deprivation of liberty for a period exceeding one year.”\textsuperscript{101} Since tax evasion is not criminal in Switzerland, if the government does not want its citizen to be tried for that crime, according to the treaty, it could refuse to extradite that individual to the U.S. based on those charges.\textsuperscript{102} Professor Ronald Fischetti of Fordham University explained that “It’s up to the country to decide. . . . And anybody who is representing these people better be an expert in RICO.”\textsuperscript{103} This is because of the myriad of crimes that a defendant can commit that would violate the RICO statute – if one falls outside of the extradition treaty, then it’s possible to petition the foreign government to refuse extradition. Being an expert in RICO is not an easy task for U.S. attorneys, but it would prove even more challenging for lawyers in other jurisdictions unfamiliar with U.S. legal development. In order to understand why and how the FIFA individuals are being tried in and by the United States, its first essential to understand the basics of a RICO claims, as well as the nuances that might impact the FIFA case and other cases of general corruption by organized groups.

3. RACKETEER INFLUENCED AND CORRUPT ORGANIZATIONS ACT (RICO)

In 1970, Congress passed the Organized Crime Control Act,\textsuperscript{104} including Title IX, the Racketeer Influenced and Corrupt Organizations (RICO).\textsuperscript{105} RICO criminalizes the act of engaging in an enterprise that acquires, operates or receives any income from a pattern of various activities that statutorily constitute racketeering (Albanese 2004).\textsuperscript{106} In general, the purpose of RICO is to increase the tools prosecutors have to eradicate organized crime

\textsuperscript{97} Rose, \textit{supra} note 2.


\textsuperscript{99} Rose, \textit{supra} note 2.

\textsuperscript{100} Porzucki, \textit{supra} note 22.


\textsuperscript{102} Id.

\textsuperscript{103} Id.


\textsuperscript{106} Jay Albanese, \textit{ORGANIZED CRIME IN OUR TIMES} 75 (2004).
through gathering evidence, establishing penal prohibitions that go to the nature of organized criminal networks, and enhancing sanctions and remedies applicable to the unlawful activities such networks engage in. These are some of the signficant elements that other jurisdictions could consider for their anti-corruption laws because “RICO is a powerful weapon for bringing together in a single prosecution disparate acts that play out over an extended period. It allows prosecutors to largely avoid issues related to the statute of limitations, and it permits charging a number of defendants who may have only tenuous connections to one another but are part of a larger scheme." These are among the hallmarks of RICO that are often absent in laws aimed at combatting corruption and bribery alone. At the time it was enacted, Congress had five primary reasons for passing RICO:

1) organized crime in the United States is a highly sophisticated, diversified, and widespread activity that annually drains billions of dollars from America's economy by unlawful conduct and the illegal use of force, fraud, and corruption;
2) organized crime derives a major portion of its power through money obtained from such illegal endeavors as syndicated gambling, loan sharking, the theft and fencing of property, the importation and distribution of narcotics and other dangerous drugs, and other forms of social exploitation;
3) this money and power are increasingly used to infiltrate and corrupt legitimate business;
4) organized crime activities in the United States weaken the stability of the Nation's economic system, harm innocent investors and competing organizations, interfere with free competition, seriously burden interstate and foreign commerce, threaten the domestic security, and undermine the general welfare of the Nation and its citizens; and
5) organized crime continues to grow because of defects in the evidence-gathering process of the law inhibiting the development of the legally admissible evidence necessary to bring criminal and other sanctions or remedies to bear on the unlawful activities of those engaged in organized crime and because the sanctions and remedies available to the Government are unnecessarily limited in scope and impact.

When the indictments were brought against the FIFA officials and related defendants, Chief Richard Weber of Internal Revenue Service-Criminal Investigation (IRS-CI) asserted similar concerns about the FIFA corruption system:

[t]he brazenness with which the individuals indicted today breached the integrity of the U.S. financial system to promote and conceal their criminal schemes is quite alarming. While it is one of the most complex worldwide financial investigations ever conducted, it is also an eye opener to everyone that such greed and corruption could be hiding in plain sight within the world’s most popular sport. By conspiring to enrich themselves through bribery and

108 Henning, supra note 17.
kickback schemes relating to media and marketing rights, the defendants undermined the process of fair and open competition, corrupting the beautiful game for their own personal gain.\textsuperscript{110}

This demonstrates that the corruption uncovered in the FIFA case falls squarely in line with the original intent of the drafters of the RICO statute. Now, prosecutors are able to not only tackle black market-esque organized crime, but can go after corruption “hiding in plain sight” as well.

G. Robert Blakey, the author of RICO, explained that before the statute was passed, the government’s efforts to thwart organized crime were “necessarily piecemeal.”\textsuperscript{111} Since there were no tools designed to combat the diversity and complexity of organized criminal networks and their activities, the government was only able to attack “isolated segments of the organization as they engaged in single criminal acts.”\textsuperscript{112} Consequently, if the leaders were actually caught, they “were only penalized for what seemed to be unimportant crimes.”\textsuperscript{113} Therefore, the “larger meaning of these crimes was lost because the big picture could not be presented in a single criminal prosecution.”\textsuperscript{114} Of course, this is not as much of a concern with corruption, because most anti-corruption laws are directed at high-level officials. However, many anti-corruption laws do seem to be aimed at narrower corruption-related offenses, such as bribery, while not including a wider-network or related crimes, such as wiretapping, conspiracy, or tax evasion. RICO allows the connection of multiple crimes and defendants into one prosecution.

Over the past 40 years since RICO’s inception, law enforcement and prosecutors have been able to attack “the entire picture of the organization’s criminal behavior,” including the involvement of its leaders in directing that behavior.\textsuperscript{115} Of course, the approach that RICO provides does not attempt to ban membership in a group, but rather simply has an extensive lists of crimes that organized groups were commonly found to be engaging in (which includes actions that corrupt groups, such as FIFA, engage in\textsuperscript{116}), and then criminalizes participation in a group that commits those crimes over a period of time.\textsuperscript{117} RICO goes a step further than the crime of conspiracy by allowing loosely connected people to be considered group members for the purpose of being part of a single enterprise.\textsuperscript{118} Therefore, those people can be prosecuted simultaneously in a single RICO trial and prosecutors are able to present the complete picture of the criminal network’s activities rather than individual crimes committed by individual people.\textsuperscript{119} This is what made RICO such an attractive tool in the FIFA case and this is an element that is missing in many criminal codes.

\textsuperscript{110} Chief Richard Weber of Internal Revenue Service-Criminal Investigation (IRS-CI), Indictment, supra note 6.
\textsuperscript{112} Id.
\textsuperscript{113} Id.
\textsuperscript{114} Id.
\textsuperscript{115} Id.
\textsuperscript{116} 18 U.S. Code § 1961 - Definitions
\textsuperscript{118} Id.
\textsuperscript{119} Id.
During the original drafting of RICO, a Report by the Senate concluded that new approaches were needed to combat endemic organized crime. It would require approaches that could contend not only with individuals, but with the “economic base through which those individuals constitute such a serious threat to the economic well-being of the Nation,” as well. In order to truly combat organized criminal networks, “an attack must be made on their source of economic power itself, and the attack must take place on all available fronts.” This is most often done through forfeitures, which will be discussed at length below, but is something that many countries in Europe seem to do with less frequency. While the FIFA case in ongoing, hundreds of millions of dollars have already been seized in the U.S. and abroad. There have already been convictions and guilty pleas that have resulted in the forfeiture of millions of dollars. This demonstrates that the use of RICO in corruption cases is capable of making a serious economic impact on individuals and organizations engaging in corruption. Since the basis of corruption is most often economic or commercial gain, it makes sense to target the money that is obtained through corrupt transactions.

Another statement in the Senate Report could as easily have been made in the 21st century regarding corruption and the FIFA scandal: “What is ultimately at stake is not only the security of individuals and their property, but also the viability of our free enterprise system itself.” The U.S. government appears to have seen the parallels here with the FIFA corruption and its serious impact on international sports. As U.S. Attorney General, Loretta Lynch, who brought the FIFA indictments, declared, The Department of Justice is committed to ending the rampant corruption we have alleged amidst the leadership of international soccer – not only because of the scale of the schemes, or the brazenness and breadth of the operation required to sustain such corruption, but also because of the affront to international principles that this behavior represents. The message from this announcement should be clear to every culpable individual who remains in the shadows, hoping to evade our investigation: You will not wait us out. You will not escape our focus. Clearly, the U.S. Justice Department considers RICO to be a force to be reckoned with, largely because of its strategy to tackle complex organizations and high punishments, but also its potential to help maintain a strong society with integrity and transparency.

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120 S. REP. NO. 91-617 at 79, 80-81.
121 Id.
122 Id.
123 Id.
124 MEMO, supra note 20
125 Indictment, supra note 6.
126 S. REP. NO. 91-617 at 79, 80-81.
128 “Violations are punishable by up to 20 years in prison. The sentence can be increased to life in prison if authorized by the underlying crime. Offenders also face a fine of either $250,000, or double the amount of the proceeds earned from the activity. As a tool for dismantling criminal enterprises, following a conviction the government is automatically given a forfeiture of all of the defendant’s interest in the organization. So not only do defendants lose all their money and property that can be traced back to the criminal conduct, but the organization itself can be severely crippled. And the government need not wait until after a guilty verdict, when the property expected to become subject to forfeiture may be difficult to
4. RICO: CRIMINAL PROSECUTIONS AND CIVIL CASES WITH A LOOK AT SIMILAR INSTRUMENTS IN OTHER JURISDICTIONS

A. CRIMINAL RICO

Essentially, RICO boils down to three elements: enterprise affecting interstate commerce, racketeering activity, and a pattern. These elements must be directly related and the defendant(s) must have been involved in the enterprise. Thus, in a RICO case the government must prove the following beyond a reasonable doubt:

1) That an enterprise existed which affected interstate commerce;
2) That the defendant was connected with the enterprise;
3) That the defendant conducted or engaged in racketeering activity through the commission of at least two acts of racketeering; and
4) That the defendant engaged in a pattern of racketeering activity.\(^{129}\)

An enterprise “includes any individual, partnership, corporation, association, or other legal entity, and any union or group of individuals associated in fact although not a legal entity.”\(^{130}\) Furthermore, an enterprise does not need be a larger operation, it simply needs enough people to work together to commit at least two felonies in an effort to further some sort of business. This is how 41 defendants have been charged in the FIFA case. Furthermore, in *United States v. Turkette*, the Supreme Court held that an enterprise can be proven simply through “evidence of an ongoing organization, formal or informal, and by evidence that the various associates function as a continuing unit.”\(^{131}\) This demonstrates that members of multiple entities can be tried together as single enterprise.

The statutory definition of “racketeering activity” is quite lengthy, enumerating approximately 35 qualifying felonies.\(^{132}\) A “racket” is simply an illegal business.\(^{133}\) In laymen’s terms, racketeering occurs when an ongoing organized crime enterprise misuses “legitimate business or government agencies to carry out crimes.”\(^{134}\) Case in point: using a legitimate sports
regulation organization to make millions of dollars through bribery and money laundering. Under § 1961, a “pattern or racketeering activity” requires only that a defendant commits two or more predicate felonies, or “acts of racketeering activity,” within a 10-year period. With regard to the pattern element of RICO, a defendant can be found guilty of a violation for any of the following activities:

1) using or investing any income derived from a ‘pattern of racketeering activity’ to acquire an interest in or to establish an ‘enterprise’;  
2) acquiring or maintaining an interest in or control of an ‘enterprise’ through ‘a pattern of racketeering activity’;  
3) conducting or participating, even indirectly, in an ‘enterprise’s’ ‘pattern of racketeering activity’ whether as an employee or an associate, or  
4) conspiring to violate any of the above.

Once each of these elements is proven and a conviction is obtained, the United States Attorney General also has the ability to seize all of the enterprise’s illicitly gained property and assets. This is an incredibly substantial provision. RICO further provides for extended penalties, up to 20 years of imprisonment (“or for life if the violation is based on a racketeering activity for which the maximum penalty includes life imprisonment”) and/or a fine of up to $250,000. Consequently, thanks to its purpose, lengthy penalties, treble damages in civil cases, and asset forfeiture provisions, RICO is considered “the most potent weapon in the prosecutor’s organized crime control repertoire.”

B. ADVANTAGES OF USING RICO IN CORRUPTION CASES

i. CONNECTING AN ENTIRE OPERATION, RATHER THAN ONLY INDIVIDUALS

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One of the most advantageous aspects of RICO with respect to corrupt groups, such as FIFA is alleged to have been, is that § 1962(c) makes it a RICO violation for any person who is “employed by or associated with any enterprise engaged in, or the activities of which affect, interstate or foreign commerce, to conduct or participate, directly or indirectly, in the conduct of such enterprise’s affairs through a pattern of racketeering activity.”\textsuperscript{144} This is important particularly in light of the Supreme Court’s decision in \textit{Reves v. Ernst & Young}.\textsuperscript{145} Although the Court held that this provision requires that a defendant had participated in the “operation or management of the enterprise itself,”\textsuperscript{146} it also confirmed that “liability under § 1962(c) is not limited to upper management.” Rather, an enterprise can also be ‘operated’ or ‘managed’ by “lower rung participants,” as well as by someone “‘associated with’ the enterprise” who exerts some form of control over it.\textsuperscript{147} As such, employees, affiliates, or independent contractors, could fall within the RICO enterprise, as well. Under the RICO indictment, this is how not only FIFA officials, but also officials from other football organizations have been charged together. This provision is somewhat more expansive than the Swiss criminal code, for example, which defines bribes as “offering, promising or granting an undue benefit to an employee, agent, partner or other auxiliary of a third party, in connection with such person's professional or commercial activity on behalf of the third party.”\textsuperscript{148} Considering that the definitions of “employee, agent, partner or other auxiliary of a third party” could potentially be construed narrowly, it’s possible that certain FIFA defendants could have escaped liability under this provision, which is of course focused on bribery alone.

\textbf{ii. ASSET FORFEITURES}

Since the chief motivating factor behind RICO was that organized crime and its various activities were adversely affecting the American economic system as a whole, from business to banking, through “untaxed profits and illicitly funded investments,\textsuperscript{149}”\textsuperscript{150} it is believed that the best way to attack a profit-driven criminal enterprise that is negatively affecting the legitimate economy is to attack its financial structure and profits. Consequently, § 1963 provides that anyone convicted of a RICO violation will forfeit to the United States:

(1) any interest the person has acquired or maintained in violation of § 1962;  
(2) any interest in, security of, claim against, or property or contractual right of any kind affording a source of influence over any enterprise which the person has established, operated, controlled, conducted, or participated in the conduct of, in violation of § 1962; and  
(3) any property constituting, or derived from, any proceeds which the person obtained, directly or indirectly, from racketeering activity or unlawful debt collection in violation of § 1962.\textsuperscript{150}

\textsuperscript{144} 18 U.S.C. § 1962(c).  
\textsuperscript{145} 507 U.S. 170 (1993)  
\textsuperscript{146} Id. at 185.  
\textsuperscript{147} Id. at 184.  
\textsuperscript{148} Article 322octies (bribery of private individuals or bribery) of the Swiss Criminal Code, Länzlinger, supra note 69.  
\textsuperscript{149} 507 U.S. 170, 115.  
\textsuperscript{150} 18 U.S.C. § 1963 (a)(1)-(3).
By allowing the seizure of illicitly obtained property, which helps sustain criminal organizations and further criminal activity, RICO’s asset forfeiture provision “is seen as a way to undermine the fiscal structure and even the survival of an organized crime group.”\footnote{151} These provisions simply maintain that if an enterprise engages in racketeering activity, then any person who commits a RICO violation in furtherance of that enterprise forfeits all of his interests in the enterprise.\footnote{152} One criticism of the anti-corruption laws in various European jurisdictions has been the need for stronger confiscation of assets in corruption cases. In its 2011 Memo regarding future efforts to forge a comprehensive anti-corruption policy at the EU level, the European Commission stated that among other efforts that must be made, confiscation of assets is a priority in the fight against organised crime, including in cases of corruption (see the "EU Internal Security Strategy in Action" adopted in November 2010 - IP/10/1535 and MEMO/10/598). In 2011, the Commission will propose to revise the existing EU legal framework on confiscation and asset recovery, notably by allowing more third party confiscation and extended confiscation. The proposal will also ensure that courts are able to effectively enforce confiscation orders in the European Union, confiscate criminal and criminally tainted assets and fully recover the corresponding values.\footnote{153}

The effect that asset forfeiture provisions can have on criminal networks, such as the alleged FIFA network, would be staggering. The United States Government Accountability Office (GAO) has concluded that “the traditional law enforcement remedy, incarceration of drug dealers, has not made much of an impact on drug trafficking.”\footnote{154} However, the ability to seize drug traffickers’ assets may make a much greater impact on their business. Therefore, effective uses of asset forfeiture provisions go great lengths in disrupting illicit enterprises and curtailing “the effect of large amounts of illicitly obtained cash on the economy.”\footnote{155} The same analysis would prove true with other corrupt organizations, since they share many characteristics and motives of organized drug trafficking syndicates. Furthermore, in addition to crippling the financial support of a criminal organization and possibly acting as a deterrent to criminal behavior, forfeitures can have the important function of “compensating the government for the cost of enforcing the law.”\footnote{156} This last aspect is particularly alluring in corruption cases, and may make RICO, or at least its substantial asset forfeiture provisions, an attractive tool to jurisdictions around the world. If a government has difficulties prosecuting corruption because of budget constraints, allowing an asset forfeiture component to combating corruption would make the task much easier and more attractive.\footnote{157}

\footnote{151} Albænæsæ, Transnational Crime and the 21st Century, supra note 43, at 115. Cash and cars are the most commonly seized assets. These, combined with boats, planes, jewelry and weapons make up 95 percent of all assets seized in RICO cases. However, when residential or commercial properties are able to be seized, they obviously can bring a much higher value. Id. at 119.

\footnote{152} Id.

\footnote{153} Memo, supra note 20.


\footnote{155} Id. at 116.

\footnote{156} Id. at 116-17; emphasis added.

\footnote{157} Micheal, infra note 19.
It’s easy to see that RICO allows prosecutors greater flexibility and more evidentiary leverage, thereby making it easier for them to disrupt large corrupt groups. Prosecutors are able to present evidence of both long-term criminal activity and crimes that have already been prosecuted, in order to show a pattern of racketeering activity. RICO also “permits the joinder of multiple defendants who are members of the enterprise, as well as the joinder of a wide variety of crimes.” Of course, this is also one of RICO’s greatest criticisms because sometimes people with tenuous connections can be linked for through minor offenses, thereby applying substantial penalties to small-level criminals. The increased penalties brought on by RICO also give prosecutors the opportunity to bring down entire criminal networks, thereby giving them an incentive to connect the dots to create the larger picture. Consequently, the old adage of ‘throwing in the kitchen sink’ is often a wise strategy for prosecutors under RICO because the “government is entitled to try to prove all the racketeering acts making up the pattern of racketeering activity, so that it may obtain a conviction even if the jury rejects some of its theories.” In this case, even if a jury does not find that an ongoing criminal enterprise existed, it still has the opportunity to convict the individuals under various charged crimes. However, that doesn’t mean that using the statute doesn’t come with a plethora of complexities and challenges that must be overcome.

C. CHALLENGES TO BRINGING A RICO CASE

i. ESTABLISHING THE ENTERPRISE

For obvious reasons, proving the “enterprise” can be a challenging hurdle for prosecutors bringing RICO cases. For unlike a normal legitimate business which survives by being conspicuous, criminal enterprises by nature must be secretive to avoid law enforcement. This doesn’t mean that an enterprise cannot be a legitimate organization that is misused for corrupt purposes. For example, in the FIFA case, the enterprise, which included a network of organizations, had a completely legal and legitimate purpose: to regulate and promote football worldwide. However, the US government’s RICO indictment alleged “that between 1991 and the present, the defendants and their co-conspirators corrupted the enterprise by engaging in various criminal activities, including fraud, bribery and money laundering.” Therefore, in the FIFA case, proving the enterprise was not the most daunting challenge.

159 Id.
162 Id.
163 Albanese, IN OUR TIMES, supra note 32, at 79.
164 Indictment, supra note 6.
165 Id.
166 An interesting theory related to Stephan’s analysis of the legal approach to cartels in both the U.S. and E.U. (2010) would be to approach corrupt enterprises as cartels in competition law. Corruption and competition cartels have some significant overlap: 1) enforcing laws against corrupt organizations and cartels is resource-intensive; 2) political interference can thwart investigations and prosecutions, “especially where there is a strong overlap between the political and commercial elite;” 3) competition and corruption “law enforcement can only be as strong as all law enforcement.” Andreas Stephan, Cartel Laws
While it can be a difficult task to attribute multiple crimes to one criminal, particularly if evidence-gathering tools are limited, it is even more arduous to link a multitude of criminals and crimes as part of pattern connected to an ongoing criminal enterprise. All of which, according to Albanese (2004), makes RICO a difficult, albeit valuable, tool to use.\(^{167}\) Recently, in 2009, for example, the Supreme Court further clarified RICO in response to a defendant’s arguments that the government must prove that a criminal enterprise has hierarchy and structure. In Boyle v. United States,\(^ {168}\) the Court resolved an appellate court circuit split and explained that for purposes of a RICO enterprise, only three structural features were necessary: “a purpose, relationships among those associated with the enterprise, and sufficient longevity to permit pursuit of the purpose. However, additional structural features, such as hierarchy or a chain of command, were not required to be convicted of racketeering.”\(^ {169}\) Though hierarchy is often clear in corruption cases, according to Bac (1996), containing at least a principal and agent, hierarchy must be looked at as “a multipurpose ordering. This ordering may reflect the transmission of information, ranking of authority delegated to the members, and the coordination mechanism within the organization.”\(^ {170}\) Many corrupt groups, while possibly organized at higher levels, may be comprised of loosely connected, smaller operations at the base echelons. Alternatively, corruption may be found in a network of loosely connected groups and individuals, rather than a single organization alone. Therefore, the Boyle declaration that there needn’t be a solid hierarchical structure for a RICO criminal enterprise to exist will aptly apply to various types of corruption. This is clearly demonstrated in the FIFA case. Of course, the structure of FIFA itself is organized and hierarchical. Therefore, there is little difficulty in considering it an enterprise. However, when looking multiple organizations together, such as FIFA and its associations and confederates, including CONCACAF and CONMEBOL, the structure will naturally be looser by virtue of the fact that they are not one single organization. However, by applying the Boyle analysis, the combined organizations have a purpose (to promote and regulate football), a relationship (through worldwide promotion of football events and advertisement), and sufficient longevity (decades of coordinated activity). However, the enterprise element is only one hurdle; the prosecution must have gathered enough evidence to prove the defendant committed at least two predicate acts and then establish that there was a pattern of racketeering activity.

### ii. UNCOVERING THE PREDICATE ACTS AND PROVING THE PATTERN

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\(^{167}\) Albanese, IN OUR TIMES, supra note 32, at 79.

\(^{168}\) 129 S.Ct. 2237 (2009). This case involved a “series of bank thefts that were allegedly conducted by a group that was loosely organized and did not appear to have had a leader or hierarchy. The defendant argued that the government must prove the RICO enterprise had an ascertainable structural hierarchy distinct from the charged predicate acts.” Albanese, IN OUR TIMES, supra note 32, at 80.

\(^{169}\) Albanese, IN OUR TIMES, supra note 32, at 80, emphasis added, citing 129 S.Ct. 2237, 224.

This is the point in a RICO prosecution that relies most heavily on evidence gathered during the investigation. Therefore, this can be the most challenging hurdle to overcome. Evidence gathering can be extremely difficult, especially in the white collar crimes that are often seen in corruption cases. According to Stephan (2010), when potential defendants are operating with millions of dollars and conducting sophisticated international business, thereby crossing many borders and dealing in complex transactions, it can be dauntingly difficult for law enforcement to collect evidence involving often confidential details of operations.\textsuperscript{171} In order to establish the predicate acts for RICO, which might include bribery, sports bribery, money laundering, and wire fraud, law enforcement must often engage in lengthy investigations that involve techniques such as wire-tapping and the use of informants or undercover agents. There are many domestic and international legal protections that can make getting evidence challenging. This is even more so when the potential defendants are located in and acting in a foreign jurisdiction, thereby requiring extensive cross-border cooperation. Milroy (2010) notes that Australia has a law similar to RICO, also aimed at tackling high level organized crime. The Australian Crime Commission Act’s interpretation of ‘serious and organized crime’ mirrors RICO in many ways. It describes “it as involving two or more offenders, involving substantial planning and organization; using sophisticated methods and techniques; committed in conjunction with other offences of a like kind; and a serious offence within the meaning of the Proceeds of Crime Act 2002 (Australian Crime Commission Act 2002).”\textsuperscript{172} According to Attewell and Milroy (2010), the Australian law enforcement struggles with evidence gathering in such situations because the heightened element of “sophisticated methods and techniques” necessarily requires law enforcement to utilize more sophisticated methods of surveillance. However, in order to do this, the authorities must prove that “‘ordinary methods of investigation into the matters are likely to be’ ineffective.”\textsuperscript{173} This is a difficult hurdle to overcome, thereby leaving certain criminal groups under-investigated and not prosecuted.

Under RICO, the threshold is less stringent, thereby allowing police to use normal investigating techniques for the lower level crimes – thereby allowing prosecutors to connect these crimes to the whole enterprise. Of course, there is often a good deal of sophisticated investigation necessary. In the FIFA case, this came in part in the form of reporting by financial institutions, which aided the government a good deal. While we have some idea of what evidence the government may have in the FIFA case based on the Indictments, an Indictment comes before the evidentiary hearings, so whether the government actually has enough admissible evidence to establish its claim will be considered during the discovery phase of the trial. After that, the jury would determine whether the admitted evidence proves the defendant’s guilt beyond a reasonable doubt. As such, what evidence and whether it will succeed in trial, is still to be determined.

\textsuperscript{171} Stephan, supra note 92.
In the FIFA indictment, which involved defendants outside the United States and many actions largely outside of the US, the Justice Department had to be very specific regarding which predicate acts it could base its RICO claim on. These predicate acts were largely based on financial crimes. According to Fleishman (2016), he government was careful to allege money laundering as one of the predicate acts because the money laundering statute includes an extraterritorial provision, thereby making money laundering that occurs outside of the United States a crime within the United States. This will give the prosecution a greater chance of proving the acts fall under RICO because they can occur outside of the United States. Furthermore, “the wire fraud conspiracies all involve communications into the United States, allowing for a broad description of foreign activity that includes the requisite domestic impact.” These connections into the United States are what most significantly spurred the government’s investigation and subsequent use of RICO. The specific instances established in the Indictment further demonstrates how essential cooperation from financial institutions is in investigating corruption scandals and gathering evidence for RICO prosecutions.

However, even if the government is able to gather evidence of the predicate acts through the use of “testimony of former ‘insiders,’ electronic surveillance, and undercover officers, the evidence of an ongoing enterprise” or a pattern of racketeering activity is often fragmentary at best. It can be challenging for the prosecutors to piece together various activities, particularly if it is difficult for law enforcement to gather the evidence in the first place. Yet, in addition to establishing the predicate acts, the prosecution must also establish that the acts were part of a pattern.

In order for activities to satisfy the pattern element, the Supreme Court held that there must be relatedness and continuity. When two or more predicate acts are committed for “the common purpose of furthering a continuing criminal enterprise, with which that person is associated,” then there is sufficient relatedness and continuity to establish a pattern. For ordinary organized crime, Albanese (2011) demonstrates that it can be challenging to prove that two or more criminal acts were related, and even more difficult to prove that they were part done in order to advance, or continue, the objectives of an “ongoing criminal scheme,” particularly if the acts were more personal in nature. However, it seems that this element may not be so challenging in the FIFA case. The FIFA case involved numerous actions that spanned decades. The actions were interrelated and appear to be aimed at common goals: profiting via football event promotion and advertising. Clearly, in order to establish this

Fleishman, supra note 13; According to the Indictment, the government claims that FIFA’s “alleged corruption scheme operated as a classic money laundering operation. One particular allegation contends that FIFA wired three installments totaling $10 million “from a FIFA account in Switzerland to a Bank of America correspondent account in New York City for credit to accounts held in the names of CFU and CONCACAF, but controlled by the defendant Jack Warner, at Republic Bank in Trinidad and Tobago.” Warner then allegedly diverted a percentage of these funds into his personal account by laundering the money through a Trinidadian supermarket chain and a real estate investment firm. This use of the U.S. financial system to channel bribe payments is the cornerstone of the prosecution’s allegations against international soccer officials.” See note 100 above. Albanese, TRANSNATIONAL CRIME AND THE 21ST CENTURY, supra note 43, at 103. H.J. Inc. v. Northwestern Bell Telephone Co., 492 U.S. 229 (1989). Albanese, TRANSNATIONAL CRIME AND THE 21ST CENTURY, supra note 43, at 101. Id.
pattern, evidence was not merely gathered by a single entity, but was tackled by a multitude of government agencies and impacted industries.

**D. CIVIL RICO AND EUROPE’S RELATIONSHIP WITH RICO**

RICO is a particularly interesting and complex law because it provides for both criminal prosecutions and civil actions, which can occur simultaneously. The U.S. Justice Department is currently bringing a criminal RICO case against the FIFA defendants, but it is not unforeseeable that a civil claimant could bring a case against corrupt organizations, as well. However, as will be explained, as of 2016, this is very unlikely to happen with regards to the FIFA corruption.

While the government is currently using the criminal RICO action, it’s possible that civil RICO claims in corruption cases may prove to be even more useful, or more successful in some circumstances, assuming the claimants have the time and resources to dedicate to a lengthy and complex civil action. While civil corruption cases are implemented in Europe, the United States is widely known for having a very litigious system with individuals often not being easily deterred from suing one and other. This seems to be much less pervasive in the civil law jurisdictions of Europe. Furthermore, even in a litigious society such as the U.S., civil RICO cases are difficult and uncommon. However, Micheal (2009) notes that using civil actions in corruption cases is tactic for combatting corruption that is gaining traction worldwide, and could prove highly effective for countries to consider. This has been particularly true in developing countries that need to shift the burden off government prosecutors and allow civil claimants to shoulder some of the costs.

In the United States, there are many advantages, to claimants and society in general, for bringing civil rather than criminal RICO cases, particularly when corruption is concerned. The main advantage is that civil RICO cases allow successful claimants to recover treble damages. This means that they will be awarded three times the damages they suffered. This is a substantial incentive for a claimant brave enough to go through the extensive civil RICO litigation and could provide an incentive for civil corruption cases if treble damages were allowed.

Perhaps the best example of the interaction between RICO and Europe came through the recently decided *RJR Nabisco v European Communities* case in the United States. In this case, the European Community (now, of course, the European Union) brought a civil RICO case in the United States based on cigarette and narcotics smuggling, money laundering, evasion of taxes and customs duties, etc. It can be speculated that a civil RICO case in the U.S. was attractive because of its treble damages. However, according to Francq (2016), it is also likely that there was not a straightforward option for the European Community to bring a

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181 Civil Law Convention on Corruption, Council of Europe, ETS No.174 (1 November 1999).
182 Micheal, supra note 19.
183 Id.
case safeguarding its financial interests in Europe.\textsuperscript{185} If the European Community had tried to bring a case against Nabisco in Europe, “it would have been dependent on the willingness of national criminal and/or administrative authorities to bring such charges before Member State courts and it would have faced a series of practical difficulties. Coordination of the criminal proceedings launched in the various Member States was not yet officially organized.”\textsuperscript{186} In the end, Europe was not successful in the U.S. Court, largely because the situation was not perceived as balanced: “in the European Union, there is no equivalent to RICO offering a private right of action to both public and private plaintiffs in case of a criminal offense. The case would thus unfold in a very different way depending on the identity of the plaintiff and be structured along the lines of the public-private divide.”\textsuperscript{187} Therefore, the Supreme Court seemed to be insinuating that Europe would need a legal instrument like RICO that allowed both civil and criminal components in cases of corruption and related crimes.\textsuperscript{188} Of course, the Council of Europe has a Civil Law Convention on Corruption in which signatories must implement the ability for civil claims against corruption, but its damages are limited (meaning RICO has more extensive treble damages), and also has a limitation period that more restrictive than RICO.\textsuperscript{189} Furthermore, it only includes corruption defined as “requesting, offering, giving or accepting, directly or indirectly, a bribe or any other undue advantage or prospect thereof, which distorts the proper performance of any duty or behaviour required of the recipient of the bribe, the undue advantage or the prospect thereof.”\textsuperscript{190} Therefore, there are certainly crimes that could fall outside of this scope.

Interestingly, since the FIFA indictments in mid-2015, several European countries have enacted changes in their legal systems. Much of these efforts are clearly aimed at creating more robust anti-corruption laws. Of course, there are a multitude of reasons for countries to adjust their laws or pass new laws, but one may surmise that the FIFA scandal acted as one incentive for countries to create stronger laws to apply to similar situations in the future. While many countries do have a legal tool similar to RICO, such as Australia and the U.K., according to Feldman (2015), many civil law jurisdictions appear to lack enforcement measures in similar laws that allow them to successfully tackle corruption.\textsuperscript{191} The expansive criminal enterprise and linked criminal acts elements could be particularly important. France recently passed a law aimed at improving its anti-corruption laws, which included ancillary offenses similar to some of RICO’s predicate acts.\textsuperscript{192} However, the French law, Sapin II, is

\footnotesize{\textsuperscript{185} Stephanie Francq, AGORA: Reflections on RJR Nabisco v. European Community, A European Story, ASIL (9 August 2016).
\textsuperscript{186} Id.
\textsuperscript{187} Id.
\textsuperscript{188} Id. “In 2016, the European Union still does not offer the equivalent of a RICO private right of action to foreign victims of illegal conduct by European Union-based companies. Based on a sharp public-private divide, the situation is precarious for foreign public authorities, while private plaintiffs have a more straightforward access to jurisdiction. The existence of predetermined jurisdictional grounds and the absence of forum non conveniens avoid dramatic debates on grand doctrines such as extraterritoriality. But, in the end, EU substantive law does not offer any powerful form of private enforcement equivalent to RICO’s treble damages.”
\textsuperscript{189} Civil Law Convention on Corruption, Council of Europe, ETS No.174 (1 November 1999).
\textsuperscript{190} Id.
\textsuperscript{191} Feldman, supra note 9.
aimed at corruption perpetrated by large companies. This might allow certain transactions to fall through the cracks if businesses are not connected as one enterprise.

Nor is there yes a uniform approach within the European Union, which could perhaps create a strong and robust anti-corruption framework. “While most EU Member States have clearly improved their anti-bribery regimes in recent years, what seems to be the biggest hurdle is insufficient enforcement and the considerable differences in the enforcement levels across Europe, in particular when it comes to bribery abroad.” Consequently, there is some effort to create a single European Anti-Corruption package. While this package is aimed at anti-corruption, it could be very interesting if the Commission were to include provisions similar to some of those found in RICO, such as robust asset seizures. This would create an anti-corruption tool that had even more potential for prosecutorial creativity, and possible civil actions as well. After the recent Nabisco case, perhaps we will see such development in the years to come.

Another consideration is that while the approaches in common law and civil law are quite different, the former being developed piecemeal over time and the latter established through legislation, the situation with RICO could satisfy both systems. The precise contours of the elements of RICO have been evolving for decades through the common law since its inception in 1970, particularly the use of evidence and requirements to prove the individual elements. Details are still being worked out in cases to this day. While RICO has been a slowly evolving tool in the U.S., it’s detailed, nuanced and extensive evolution in U.S. courts could be advantageous to other jurisdictions looking to implement elements of RICO. Due to the many court cases interpreting and applying RICO, there is now a well-developed body of law explaining how RICO can and should work. While there is certainly still more to develop and understand, other jurisdictions could implement these decisions and analyses into their own laws, thereby transplanting not just statutory elements, but the case law that has built upon it. In civil law jurisdictions, it would be possible to implement many of these interpretations, in which judges have established lists of criteria and specific definitions, into civil and criminal codes, creating clear and concise law for prosecutors and legal practitioners to rely on.

6. CONCLUSION

In conclusion, while the RICO statute can be very complex and challenging for prosecutors and defense attorneys alike, it seems as though the U.S. government will have a fighting chance in succeeding in their case against the FIFA and affiliate officials. Furthermore, while evidence-gathering in large-scale corruption cases based on white collar crimes is challenging and often requires collaboration and creativity, when done properly it can create a strong case that can effectively dismantle multimillion dollar corrupt enterprises. If this is possible, then the positive effects could be great around the world, particularly if other jurisdictions were

193 Id. The law applies to companies with over 500 employees.
able to adopt provisions similar in structure and breadth to elements in the RICO statute in the United States.

**RE-THINKING THE PERVASIVENESS OF CORRUPTION IN WESTERN COUNTRIES**

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**Abstract**

This paper studies the pervasiveness of Corruption in Western societies. Corruption has often been presented as higher in developing or (former) transitional economies than in the North-West part of the world (Western Europe, North America). Internationally used ranking of countries classified by the level of Corruption (i.e. Transparency International, World Bank) show that most of Western countries are on the safest side. Nonetheless, there are studies (Johnston, 2005; Shaxson, 2011) highlighting that Corruption is very diffused also in these area of the world, even if the available international ranking do not necessarily show Western countries as particularly tainted by Corruption. This apparent incongruent result may be due to the forms that Corruption takes in Western societies. Administrative Corruption or blatant extortion from public officials may be less diffused than in other areas of the planet. Nevertheless, State Capture and/or Grand Corruption (these two sub-phenomena are often equivalent) are present and may take extremely sophisticated (and less visible) forms. This paper investigates on the mechanisms of Corruption in the West, rather than measuring it numerically, through case-studies. Case studies are a method which is useful to research on particular mechanisms and to shed light on relatively under-researched phenomena (Bryman, 2016).

**Keywords:** Western countries, Corruption. State Capture, Grand Corruption, Administrative Corruption

**JEL Classification:** D73, K42

**Introduction**

This paper studies the pervasiveness of Corruption in Western societies, especially discussing the patterns of Corruption in countries which are generally perceived to be “semi-immune” from the constraint that Corruption creates or that are in any case considered to offer an environment where Corruption is kept under control. An investigation of such patterns appears of importance, considering two inter-related trends. The first trend is that most of the studies on Corruption are mainly focused on developing or (former ) transitional
economies (Jain and Lehrer, 2003; Jannicky and Wunnava, 2003; Grosse and Trevino, 2005; Rijkers et. al., 2014). The second is that there are still concerns related to the incidence of this phenomenon in countries which are nonetheless often portrayed as presenting a transparent environment. Hence, this paper sheds some light into this latter perspective.

This research aims at studying and highlighting patterns, putting them within a theoretical framework. Our approach is qualitative and follows the perspective taken by Johnston (2005). This means that this paper does not attempt at measuring Corruption, indeed it is after identifying and detecting its mechanisms and forms. This represents a complementary perspective in comparison with the one taken by studies who have quantified Corruption and their effects. Both methodologies present strengths as well as shortcomings (in particular see Grogan and Moers, 2001 for a detailed discussion of the limitations embedded in quantifying Corruption) and some authors have maintained that any attempt to quantify Corruption is biased in view of the secrecy characterizing specific transactions. Also, Corruption may take different types of patterns and follow different mechanisms, which are not captured by quantitative indicators. This is why this paper follows a qualitative approach, which, in general, expounds exactly those patterns and mechanisms.

Our paper is organized as follow. The next section will present the theoretical basis of this study, whereas the following one will discuss the methodology in more details, presenting two case studies. The third section will discuss the case-studies in relation with the theoretical background. The paper will end with a conclusive and with a reference section.

1.) Theoretical background

This section will be divided into two sub-sections. The first (1.1.) will discuss Corruption in general, whereas the second (1.2.) will expound the particular characteristics of Corruption in affluent Western societies.

1.1. Corruption in general Corruption is defined by Transparency International as Abuse of Entrusted Power for personal gain. There are various definition of Corruption, nonetheless the one of Transparency International is endorsed in this paper. Corruption presupposes an abuser who is exercising his power in a way not consistent with the very rationale underpinning the conferral of this power on him/her (Rose Ackermann, 2007). On the other hand, the other side of the transaction characterized as embedding Corruption may or may not be a victim of the abuser. It may be that the abuser imposes an obligation on the other party in order to avoid inflicting an unfair sanction or in order to provide a service due in any case (win-lose situation within a game-theory context). On the other side, it is even possible that both the abuser as well as the other player(s) are both on the benefiting side (win-win situation), when the abuser is bending rules in favour of the other party or eventually providing a service not
contemplated or even forbidden by official regulations. Corruption of a win-win type is hard to curb, as all parties directly involved have an incentive in continuing with their game and keeping the illicit side of their interaction hidden.

Corruption may involve only private agents, only public agents or both types. This paper will limit the discussion of those cases witnessing the presence of a private agent who benefits from illegal actions taken by a public official in exchange for illegal compensations or is threatened by a public official in case the private agent refuses to pay any sort of compensation. This compensation may take the form of money, gifts but may also consist in more sophisticated forms of reward (i.e. appointment to prestigious Boards).

The literature distinguishes various types of Corruption, nonetheless it is possible to identify two macro-categories: Administrative Corruption (Petty Corruption when it involves small transactions with small amounts of money) and State Capture (Hellman et.al, 2000; Kaufmann et.al, 2005; Kaufmann et.al., 2007). The former refers to cases when the agents are on the one side common citizens (or companies) interacting with public officials in their daily activities (i.e. policepersons, clerical employees of local authorities, teachers). Here the private agent bribes in order to obtain a favour or in order to avoid an unjustified sanction (only in this latter case the private agent is necessarily a victim). The latter category encompasses illegal transactions occurring between top decision-makers and private agents (affluent individuals and companies) able to purchase their votes or in any case able to exercise a strong influence on the behaviours of the top decision-makers. These latter cease acting according to the perceived public interest, indeed they operate according to the interest of the capturing side. In this case, politics becomes a privatized activity and people's top representatives betray their own mandate and transform themselves into the voice of the capturer. The whole building of democracy would falter in this latter case, as legislative acts would in reality reflect the preferences of the winners of the capturing side of the game. The game is (obviously) played secretly, behind corridors. Negotiations and agreements are far from being visible. Capturers may compete to obtain the services of the various decision-makers, or may cooperate creating an oligopolistic situation of demand of services, thus resembling the behavior of market players.

Administrative Corruption is, usually, illegal, agents participating in these activities are risking prosecution, even if many settings (countries) are characterized by a certain level of tolerance towards this phenomenon (eventually prosecutions may occur in order to sanction insubordination or undesirability of the corrupted/corrupting parties in other contexts, hence leading to an arbitrary enforcement of law). A win-lose situation occurs when the private agent is threatened with the imposition of arbitrary and unjustified fines (i.e. the police patrol extorting money to drivers who are actually respecting rules) or when the public agent refuses to render a service which is due (i.e. a clerical employee refusing to stamp a document unless a gift is offered). In “win-lose” transactions, as said, the losing side has an interest in refusing to play or reporting the winner, which is perceived as an inimical counter-party. Nonetheless,
there are also situations when both parties benefit from the transaction (win-win situations, Von Neumann and Morgestern, 1944). A typical example could be a police patrol who omits to fine a driver who was is actually violating valid rules in exchange for a bribe which represent a fraction of the potential fine. In such cases parties have an interest in transacting, as both sides benefit from the game. The reward for the public official is normally in the form of cash or a monetizable gift (i.e. a watch, a bottle of wine). Still there are other forms of compensation, eventually less visible, when the bribing agent offers personal favours helping the public one in solving problems arising in his personal life (using the contact network of the private agent).

Apart from the examples provided above, which clearly indicate an abuse of power for personal gain, there are also situations when the connotation is less clear. For example, a public official may eventually bend unfair rules or rules whose application to the specific case would result in an unfair outcome. The party which receives the aid is eventually manifesting his gratitude in various forms (proportionate gifts, favours). This form of Corruption is not necessarily unethical or is maybe not really representing a case of Abuse of Power. It can be defined as “Humanitarian Corruption”, even if such a term has not been used in the previous literature.

In general, State Capture takes more sophisticated forms in comparison with Administrative Corruption. Negotiations occur at high levels, in prestigious circles and are eventually supported by well elaborated requests. The party attempting to capture the decision-maker(s) may actually come with refined studies and technical arguments in favour of his request. The compensation for the availability of the decision-makers to please the interest of the capturing party may manifest itself after the former leaves the office and consist in prestigious working opportunities. The main reasons explaining why curbing such phenomena is difficult are:

1.) Disentangling an illicit reward of a captured public agent from a legitimate accepting of a regular position (or accepting an appointment after, or well after, a political mandate has terminated) is extremely difficult. One may easily remind of the cases of the former German Chancellor Schroeder and of the former President of the EU Commission Barroso (https://www.theguardian.com/business/2006/mar/31/russia.germany; https://www.theguardian.com/business/2016/jul/08/jose-manuel-barroso-to-become-next-head-of-goldman-sachs-international). Both of these gentlemen have been taking top positions in the private sectors after the termination of their mandate (almost 2 years elapsed in the case of Barroso). This type of appointment may raise and has actually risen concerns regarding the honesty of the particular persons involved. Nonetheless, rumouring parties may also be reminded of the full right of a former public agent to have a professional life after the termination of his mandate.

2. A further characteristic of State Capture is the particular form of payment which occur when transactions are accompanied by an actual transfer of money. On the contrary of
Administrative/Petty Corruption, money is often sent through international bank transfers. Clearly, the payer and the beneficiary will not appear in the documents with their own name. A web of anonymous bank accounts, companies whose ownerwhip is not disclosed are all effective vehicles for transferring huge sums of money without fearing incrimination. Bank accounts and companies are usually held in tax havens or in countries where money laundering occurs on a regular basis. These countries (or independent territories) hardly cooperate with investigative authorities. This particular phenomenon has been described by Shaxson (2011) and is considered to be supported by those official public representatives which should in principle attempt at curbing it.

3. As said by Johnston (2005), part of the influencing process of private agents on top decision makers has been legalized. Lobbying is a legitimate and regulated activity in many countries. Certainly, no legislation allows open State Capture and all top decision makers are bound to allegiance to their constituent’interests and to the public interest in general. Nonetheless, private agents (Companies through their representatives) are allowed to present their points of view, (biased) studies, arguments to top decision-makers. Both sides often interact and meet at social events, venues of various types. Communication between public decision-makers and private company’representative cannot be eliminated and is , in principle, also beneficial to the society in general. The general public would probably be worse off if top representatives were deprived of the possibility of having a contact with and information from representatives of the various economic sectors. Nevertheless, one may easily imagine how these contacts and their frequency may facilitate illicit arrangements. Existing regulations imposing transparency (Lobbying Disclosure Act, 1995) are certainly appropriate but their enforcement depends also on those very parties involved in State Capture.

4. State Capture is a win-win game. The two sides benefits from it. Hence, only an eventually damaged third party (i.e. representatives from a sector not benefiting from the process) would have an interest in interrupting the game. These other parties, indeed, may tend to cooperate in the process of State Captures and allocate “market quotas”, with mechanisms that recall Cartels in the business sector.

The last point discussed in this sub-section (which discusses Corruption in general) is that Corruption is actually measured by various organisations like Transparency International, World Bank and Heritage Foundation. Countries are ranked on the basis of the strength of Corruption, defined in various ways. The methodology for measuring Corruption has been criticized by many authors (Thompson and Shah, 2005; Feige,1998, 2012,2015) on the basis of poor validity and reliability of the data and various econometric acrobacies. Nonetheless, the various ranking positions of the countries tend to be strongly correlated , which reinforces the usefulness of the ranks themselves (Podda, 2010).
1.2. Corruption in affluent Western Societies

Western Countries are defined here as North-American countries and those European Countries which have not been associated with the Socialist block during the Cold War. These latter category is basically composed by the pre-2004 enlargement 15 members of the European Union plus Norway and Switzerland. These countries have been considered as a block of developed market economies in the literature, traditionally considered to belong to a different category if compared with (former) transitional and developing economies. Moreover, these countries have normally (in general and traditionally) be placed among those less affected by Corruption in comparison with the others present in those various ranking mentioned above.

The validity of the categorization of Western countries offered here may be questioned. For example, Italy results to lie below various former transitional economies in the most recent ranking of Corruption. The Czech Republic is nowadays a full market economy, classified as a developed economy by the World Bank and one may legitimately maintain that it also belongs to the group of Western countries. While accepting these potential criticism, the category presented seems still worthy of a special consideration. Western societies, as defined here, have been considered as a category in the last generation of economic studies especially in view of the fact that they are organized as long term democracies and have been led by market economies for the last 70 years (leaving aside cultural similarities which are not necessarily stronger than those between Austria and other former parts of the Austrian-Hungarian Empire which are part of the former Communist bloc). According to those international agencies which measure Corruption, the standards of Transparency in these countries have traditionally been higher than in former transitional economies. Moreover, Corruption is path-dependent (North, 1990,1997, 2003, 2005) and is embedded in the cultural and historical roots of any society. These latter are resistant to change, especially if one considers the patterns that Corruption takes rather than focusing on a quantitative measure of it. This is actually the scope of the present paper, on the basis of a model developed by Johnston (2005) which will be presented in this very sub-section and which will, incidentally, reinforce the validity of the present classification of countries.

As said, Western societies present, in general and on historical average, higher level of Transparency or, equivalently, lower standards of Corruption than developing and former transitional economies do. For this reason, they are often portrayed as settings where Corruption is kept under control and does not have a strong incidence and does not distort economic and social dynamics and equilibria. Nonetheless, this favourable picture would clash with the conclusion emerging in various studies. Petrillo (2010) has highlighted the incidence of lobbying as a precursor of State Capture, whereas Shaxson (2011) describes at lenght the mechanisms of State Capture in some of those countries (i.e. Switzerland, Luxenbourg, USA, UK) which top the ranks of Transparency or are in any case at the highest level. The Governments of those countries under the scrutiny of Shaxson have built a web of
connections and have legalized tax evasion and money laundering. The picture appearing from these studies is quite bleak and does not fully correspond to the favourable portrait offered by Transparency International and other organisations measuring Corruption across the world. This discrepancy may appear puzzling.

An explanation can be found in the work of Johnston who had already addressed the problem (2005) earlier than Shaxson did. This author expounds the limitations of those methodologies used to measure Corruption. Corruption is normally invisible and can hardly be measured directly (as said already by other authors like Grogan and Moers, 2001). For example, the amount of money paid in bribes is not recorded and estimations cannot, by definition, be precise. In addition, the compensation for the bribed agent is, as said in the previous subsection, not necessarily expressed by a sum of money. A direct measure of Corruption may be given by the number of convictions in the various countries, however this would be a poor indicator because Corruption, when pervasive, permeates also judicial operators’ behaviours. This way, a higher number of convictions may, paradoxically, indicate a low incidence of Corruption. Some surveys (i.e. BEEPS) have attempted at capturing direct measures of Corruption (amount of money paid or incidence of the phenomenon using a Likert scale). Nevertheless, respondents are tempted to offer the „Socially acceptable answer” (Bernard, 2000) even when the interviewer pretends he is asking about the general trend in the sector and not about the direct experience of the respondent. The case is rested here but there would be other reasons for insisting on the limitations in the validity and reliability of direct measures of Corruption.

As a consequence, Corruption is often measured indirectly, for example on the basis of the perceptions held by people living in a given country, as done by Transparency International. Nonetheless, perceptions may not be a valid representation of reality (as admitted, fairly said, also by the very agency Transparency International). In particular:

1. Different communities may manifest a more or less optimistic/pessimistic attitude towards estimating the pervasiveness of Corruption because of cultural factors.
2. State Capture is less visible than Administrative Corruption and Petty Corruption. The former happens in corridors and actors are few people in position of powers, the latter involves the majority of citizens as direct actors. Hence the measure may be biased in favour of those countries where State Capture is more pervasive and Petty Corruption rare. Those places described as tax havens are often corresponding to the category.
3. Connected with point 2), common citizens tend to perceive Corruption as direct payment of a bribe to a public official. The general public may not perceive those complexities of State Capture as a representation of Corruption, especially when certain activities (lobbying), which in practical terms are at the border of State Capture, have been legalized.
4. State Capture is a win-win game, whereas Administrative Corruption may also be a win-lose game. Hence, in the latter case, there are more incentives to bring cases to the fore.

Moving from the ideas discussed above, Johnston proposes to study Corruption more in terms of patterns and mechanisms (qualitatively) than in quantitative terms. This perspective represents a complementary approach to understand and appraise the phenomenon. Quantitative and qualitative approaches are considered to be complementary by the literature on research methods (quote here). Johnston identifies four types of Corruption

a. Influence - political decision makers strongly responsive to the requests presented by private groups. This is what has been termed State Capture. Influence represents the prevalent form of Corruption in those Western countries (USA, UK, Germany, France but also Japan) which are considered very developed in terms of Institutions and occupies favourable positions in the various ranks of Corruption. This type of Corruption is actually often legalized. Those societies characterized by an Influence type of Corruption experience low levels of Administrative Corruption.

b. Elite Cartel - "corruption occurs among, and helps sustain, networks of political, economic, military, bureaucratic, or ethnic and communal elites, depending upon the society in question" (Johnston, 2005 page 3). Examples are Italy, South Korea and the Czech Republic.

c. Oligarch and Clan - "corruption takes place in a risky, and sometimes violent, setting of rapidly expanding economic and political opportunities and weak institutions. It is dominated by figures who may be government officials or business entrepreneurs, but whose power is personal and attracts extensive followings" (ibid.). Examples are Russia, Mexico and Philippines.

d. Official Moguls - "are government officials, or their protégés, who plunder an economy with impunity. Institutions and political competition are weakest of all in this category, and economic opportunities are often scarce and bitterly contested. A statistical analysis in chapter 3 uses measures of participation and institutions to assign about one hundred countries to these four categories" (ibid.). Examples are China, Kenya, and Indonesia.

Following the approach of the author, this paper considers that each type of Corruption has its own patterns, characteristics and models and the existence of various typologies does not imply that Corruption is quantitatively higher or lower in any of the classified groups. This may actually be the case, however the spirit of the classification is (more) to discuss the different forms that Corruption may take, not (than) to propose a measure of the phenomenon in quantitative terms.

Consistently with the scope of the paper, the next section will concentrate on the mechanisms of Corruption in some of those countries affected by the Influence form.
The bulk of these countries is represented by those Western economies which tend to score quite favourably in the ranks mentioned in the previous parts of this paper.

2. Case-studies

This section is divided into two parts. The first (2.1.) reminds some general characteristics of case studies as a method of research and explains the suitability of this method in the current study. The second section (2.2.) presents the cases.

2.1. Case studies as a method of research and explains the suitability of this method in the current study

Case studies are a method used to shed light into specific phenomena happening in a circumscribed context (Denzin and Lincoln, 2000; De Vaus, 2002; Remenyi et.al., 2015; Bryman, 2016). Case studies are used to reconstruct stories, identify mechanisms and patterns of interaction, decisions, application of standards. A case study should not be expected to generalize (as case studies are qualitative and not a quantitative method of research), indeed expecting generalization would reveal fundamental misunderstandings regarding the scope and aims of research based on a case-study. Actually, case study are used as a basis for clarifying relationships emerged following a quantitative –based study or , alternatively, can be used within a strategy of exploratory research perspectives, the emerged patterns can be operationalised into statistical variable and used in further quantitative studies to generalize results. Our paper makes use of case studied in view of highlighting the mechanisms of the decisional process specific to the concrete story. A process of generalization is largely beyond the scope of our paper. Information about the case studies presented below is obtained reading media reports. The source is not an academic one, however the information reported is considered fairly accurate especially because it containts facts to a certain extent admitted by the very persons involved.

2.2. Two case studies: the “Affaire Fillon” and the “Flint case”.

The first case is happening in France and involves the Prime Minister and presidential candidate Francois Fillon (www.lefigaro.fr; www.lepoint.fr). The magazine Canard Enchaine’, earlier in 2017, has revealed that the wife and the children of the candidate has been employed directly by him as assistants of a Member of the Parliament and by another magazine close to Fillon, receiving exorbitant salaries (partly paid through the use of state resources) and, alledgedly, not even performing a genuine working activity in reality. The magazine insists that the director of the magazine employing Mrs. Fillon has received a Honour directly from the French President following an endorsement from Mr Fillon. This latter maintains that all the members of his family have contributed to the organization of his political activities and have been selected because of a trust-based relationship. He maintains he has not violated any existing
law and he claims that the case has been organized on purpose by his political opponents who are competing with him for the appointment of the next French President. Hence, he questions the very professionality of the media involved in investigating the reporting on the case. Canard Enchaine, from his side, has admitted having exaggerated (bona fide) the amount of the compensation received by the family members of the presidential candidate and has also declared that finally the employment of these persons by Fillon and by the magazine in question were not necessarily illegal acts, still there were serious grounds to doubt regarding the very morality of all the persons involved, including also Francois Fillon. Moreover, Mrs. Fillon had, in the past, denied for a long time having ever worked for her husband and the director of the magazine employing her had declared that her actual contribution to the magazine (and the working load) was symbolic (hence the salary paid would hardly be justifiable). The comments of other politicians are in general favourable or unfavourable, this depending on their siding/not siding within the same political area with Fillon. Another presidential candidate (Mrs. Le Pen) has invited Fillon to withdraw from the presidential competition, nonetheless there are strong allegations of intense corruption and nepotism occurring also inside her own party. Fillon himself had blocked a legislative proposal aiming at increasing transparency regarding the behavior of members of Parliament. A formal investigation has been opened, the hypothesis is embezzlement of public funds and abuse of power. Still, we can draw some not disputed facts from the case:

1. A high profile political representative has employed his family members paying them through state resources
2. A private employer of Mrs. Fillon, who has paid her significant monetary sums for an admittedly symbolic workload, has received a honour after the endorsement of Mr. Fillon
3. Mrs. Fillon has for a long time denied having ever worked with/for her husband
4. Such practices seem to be diffused in France
5. Years ago, Mr. Fillon had blocked a legislative proposal aiming at increasing transparency

A further case has happened in Flint, a town located in Michigan, US. Here the Governor Rick Snyder has implemented policies which appear controversial to various observers. First of all he appointed an Emergency Manager accountable to himself alone, de facto bypassing elected assemblies in the name of the urgent need to stabilize the precarious financial and social environment he had inherited. Secondly, he has offered significant tax breaks to wealthy individuals and companies, and he has also cut benefits for the poorest segment of the population. Thirdly, he decided that the city of Flint would stop sourcing water from the lake Huron and would indeed source the water from the local river. The choice was motivated on the basis of cost-savings. Indeed, the savings seem to be minimal, whereas the quality of the water from the local river is, apparently, absolutely questionable. Water is polluted from the discharge of local companies which, indeed, are allowed to continue sourcing from the lake.
Hurton whose cleaner waters are now prdeicted to residents of Flint. Diseaeses are spreading among residents “researchers at the nearby Hurley Children's Hospital identified a "rise in blood lead levels of children less than 5 years old living within two Flint Zip codes since the city began sourcing drinking water from the Flint River” (CommonDreams). It is not only lead poisoning that has come out of this crisis: “The number of cases in Flint of Legionnaires Disease has increased tenfold since the switch to the river water” , and at least ten people have already died as a result. The change in water supply had a catastrophic impact on the city of Flint, leaving its residents looking for answers” ((Huffington Post). Snyders does not deny the evidence, however he maintains not having been informed of the poor quality and unhealthiness of the water from the local river. His statement appears hardly believable, considering that the situation was a major topic in media reports as well as among the general public. It has also been ascertained that top collaborators of Snyder were well aware of the problem since the very beginning. Snyder himself had allowed General Motors, who operates a plant in the area, to source its water from the lake Huron, following a complaint from the company according to which the water from the local river was corrosive. Incidentally, Snyder makes use of two funds to accept corporate donations to his campaign. General Motors is among the donors and this elicits legitimate and serious suspicion regarding the existence of a strong influence likely to border State Capture.

3.  A discussion of the case-studies

The cases presented above contain some similarities and, even adopting a favourable attitude towards the decision makers involved, there are conflicts of interest at the very least. Fillon has been entrusted with the power to select his own collaborators in order to choose those that would better serve him directly and, indirectly, the general interest he is supposed to defend. Furthermore, public honours should be conferred (or proposed) when a person has served the State, the community , excelled in a particular area or given a positive example to follow, eventually performing an extraordinary action of serie of actions. Fillon, as Member of Parliament and Head of Government, has been entrusted with the power to select those assistants who are particularly suitable to help him in serving the public interest (because of their competence). Moreover, he has been entrusted with the authority to propose a person to be awarded a honour when he genuinely feels this person meets the corresponding requirements. Appointments of close family members and honour’ proposal of close acquaintances who have also employed and generously remunerated the spouse of the very proposing agent are questionable from the point of view of transparency and leaves legitimate and strong suspicions (close to the “beyond any reasonable doubt” criterion) that the political agent has not respected those criteria he was expected to follow when acting. Indeed, there is a strong suspicion, logically bordering presupposition, that Fillon has exercised his power in order to reach goals different from those for which achievement he had been entrusted with the corresponding power (i.e. satisfaction of his family members , “compensating” the “employer” of his wife). It is also legitimate to infer that the financial benefits accrued to his family members have been co-used also by Fillon himself. Hence, appointments and honour’ proposals become a mean to increment the personal income of the very agent selected to serve
the State at the highest levels. The financial resources accruing to the Fillon family are obtained from public funds (which were not budgeted in order to provide an extra-income to already remunerated high levels servants) and also from private funds (presumably obtained in exchange of favours like the conferral of a honour). As for the case of Flint, the governor was manifestly in a position of conflict of interest when he has allowed a multi-national company, who has/is presumably financed/ing his activity, to obtain its water (filtered and distributed through state resources) from a source unavailable to the general public. The abuse of power is highly likely, without even mentioning issues related to Corporate Social Responsibility from the side of the company. It could also be added that the official rationale for changing the source of water was the need to save costs in view of the precarious balance of the local financial resources. Indeed, this balance has worsened also because of those tax-cuts (benefiting the wealthiest tax payers and companies) which has been introduced by Snyder.

As for the specific features emerged from the case studied, there are some remarks to formulate.

1. First of all, there is plenty of anectodal evidence suggesting that these types of manipulations or (alleged) abuse of power are not uncommon in the countries where they have occurred (https://www.theguardian.com/world/2001/may/10/jonhenley; http://www.thejournal.ie/le-pen-aide-3253815-Feb2017/; Grossman, 2003). As said many times, case studies do not allow generalization (nor they have been devised for this purpose), but provide information regarding the patterns and mechanisms of a given phenomenon (thus complementing statistical measurement, which is not thought to investigate patterns and mechanisms). Nonetheless, the revelations concerning continuous cases of abuse of power at the top political levels in the Western societies (revelations which have accompanied the case Fillon) reinforce the idea that those episodes described in the previous chapter are far from representing deviations from an otherwise clean system.

2. Moreover, the behavior of the persons involved in the affaire Fillon is indicative of blatant nepotism and cronyism. On the basis of this, the pervasiveness of familism and cronyism, which the traditional literature associate with the environment of developing countries (Jain, 2001; Jain and Lehrer, 2003) emerges also in its most worrisome features also in a country like France, which is ranked quite favourably by the competent international organisations measuring Corruption. On the other side, the behavior of Mr Snyder, as reconstructed, indicates how State Capture can lead to choices which can threaten the very health of costituents. The political decision-maker goes further than introducing laws favourable to the capturing agent, as suggested by Johnston (2005). Indeed, the behavior of Snyder seems to guarantee privileges to the capturing agents at the cost of jeopardizing basic rights of costituents (that he, supposedly, he represents), like for example the right to be supplied water of an acceptable quality when this is available.
3. It appears that both Fillon and Snyder may have been acting within the borders of law. Investigations are going on, nonetheless the illegitimacy of their behaviours is far from being taken for granted. Fillon is, in fact, entitled to appoint his assistant among persons of his choice, including family members and he is also entitled to propose the conferral of Honours to any person deemed worthy of it. Equivalently, also Snyder may not have violated any law, while deciding to save costs finding an alternative source of water and guaranteeing an exception to a company. It seems that top political agents are abusing those rules conferring a wide margin of discretion to them to please their personal interests and those of their close acquaintances or sponsors. Namely, those wide margins of discretion has been conferred for a different purpose, namely the best representation of the interest of residents. Top political agents seem to act following mechanisms that are normally associated with medieval habits and practices in developing countries.

4. The whole picture creates concerns because of the difficulty to reconstruct cases like those described and prosecute the actors. State Capture and nepotism may be diffused among the whole spectrum of political parties, hence creating an oligopolistic market with a tacit agreement not to report. Information may spread occasionally and eventually due to a plan devised by the very opponent of the person whose immoral behaviours are made public. This may lead to an arbitrary enforcement of law, similar to the one observed in the Soviet and post-Soviet countries (as studied by Fiege, 1998).

The whole discussion raises points which shed a less benevolent light on some countries normally considered to be almost immune from Corruption. It may be that petty corruption is little diffused in the West, hence public officials would render a service (i.e. stamping a form) irrespectively from the offer of a bribe and would refrain from abusively sanction citizens. However, the top hierarchical levels of the public administration are permeated with practices more similar to those existing in developing countries that was originally thought.

Conclusion

Our paper has studied certain mechanisms of Corruption in affluent Western countries. It has resulted that political decision-makers behave in ways which are deeply incompatible with the mission they are supposed to represent, abusing their power. The picture emerging is even bleaker that represented in the typology developed by Johnston (2005), where Corruption in Western societies is depicted as a sophisticated form of State Capture. Indeed, practices are quite worrisome, definitely challenging the representation of Western societies as able to control Corruption. Further studies may pursue the investigation further. The use qualitative as well as quantitative research methods (not necessarily in the same study) would be recommended, in order to obtain a complementary and comprehensive overview of the phenomenon.

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HERITAGE OF THE CZECH CAPITAL MARKET FAILURES

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Abstract

The goal of this paper is to analyse typical failures connected with creation of the Czech Capital Market during the transition period in 1990s. The paper also analyses the forms and impact of the past irregularities of behaviour on the present public and market participants. Setting up of the Prague Stock Exchange was one of the most promising results of the long path to the standard capital market in the CR. During the „roaring 1990s“, the Czech Capital Market suffered heavily from many scandals, caused by combination of different negative factors. The authors are trying to identify the roots of this special Czech situation, resulting primarily from the „home-made legislation“ of capital markets. This in many respects reflected the distorted way of understanding the concept of “freedom”. In Part two we are first highlighting two big scandals and subsequently we provide a brief description and analysis of the causes of long-lasting „disorder „at the Czech Capital market during the transition period. Firstly, the Viktor Koženy funds (“the old case”) and subsequently the Key Investments (“the new” case). The analysis deals with the damages caused by corruption, financial ill-literacy of the Czech public, remnants of a non-standard situation of capital market legislation, and the failure of courts to find a way how the real tress-passers should and could be punished for their illegal activities. The preferable ways of overcoming the negative “heritage” are presented in the conclusion together with suggestions for further research, inter alia to study not only the difference between financial or economic criminality and corruption, but also the difference between lobbyism and corruption and how these factors affect institutions. In the Paper it is explained, firstly, that one of feasible ways how to limit the corruption is to upgrade financial sanctions to be paid for when the corruption was detected, i.e. corruption should be made more costly than honest behavior. Secondly, it was explained that, corruptive practices on the capital market applied in developing markets are mostly used during the pre-trade phase (falsified documents about ownership, incorrect or falsified accounting, reports and fake auditing, etc.). Thirdly, it is proposed to draw on experience of advanced world Stock Exchanges where more powerful methods of potential corruption detection are applied (i.e. very strict regulatory measures, double-checking, high sanction as a deterrent, etc.).
Keywords: Capital market, corruption, ill-literacy, regulation, transition period.

JEL Classification: D53, D74, P2

1. Introduction

The main goal of the paper is to analyse how the phenomenon of corruption in its complexity, as a dynamic process, has been changing during the Czech capital market development (1990-2016).

The present conditions of the Czech capital market have been predestined by the remnants of the previous legislation, which tolerated practices that to some extent still influences the present manners of thinking of market participants. Their remnants affect their behaviour and ethics. This is that defines the used term “heritage” which should not be forgotten, as its negative impact still exists and has to be gradually minimised. Corruption in some of its forms (Mussie, 2016) was one of the “diseases” which has badly damaged the creation of the Czech capital market and scared its credibility.

Only some 10-15 years have elapsed since the first corrective measures aimed at certain standardisation of the Czech capital market. Yet, deeper and fair valuation of its development based on a comprehensive professional historical analysis cannot be prepared due to some technical and different other reasons.

Actually, there exist two approaches how to evaluate the initial period. Firstly, some politicians defend the necessity of short-term political solutions involving so called coupon privatisation which allegedly have had positive and long-term effects; whilst on the other side, a growing number of not only foreign (Cohen, & Schwartz, 1993), but also local Czech economists claim that the long-term effects of setting up a non-standard capital market were in fact disastrous for its further development (Holub et al., 2004, and others).

Corruption – inter alia – has been one of the factors closely connected with the birth of the Czech capital market and not only with its further development. Therefore, it is useful to analyse both the corruption on the Czech capital market in its historical development and the ways how it could be reduced in present conditions.

A note on research methodology

Three points concerning the methodology have to be explained in the paper. Firstly, a brief survey of “fundamentals” of corruption was prepared to explain our approach to the analysis. (See: part 2)

Secondly, our analysis focuses mainly on the financial sector. Only this approach enables us to analyse the specific role of corruption in the Czech capital market. Unfortunately, this task was not fully viable because of a lack of specific statistical data about the Czech financial sector. However, there is a high number of important evidences – first of all, the main legal
documents - legal regulation, numerous articles in the press, tracking the course of corruption scandals,(see part 4 of this paper) and personal experience of different market participants. For better understanding of the role played by the corruption in modern society it was necessary to briefly remind the theory of corruption. Various authors show different approaches to the analysis of “corruption” in its complexity within diverse branches of social sciences.

Thirdly, the authors of this paper are trying to elaborate specific stages of development of the Czech capital market in order to explain the main features of prevailing types and forms of corruption.

Based on critical events of the Czech capital market development convenient time periods have been defined. (Note: The legislative rules were not the main objects of this analysis.)

2. Fundamentals of Corruption

During the historical development of our civilisation, corruption has been an *omni – praesens* negative element (a real plague!), and its dangers should never be neglected. Corruption resembles a self-modifying virus (cancer) which - if it finds appropriate conditions for its existence - it is able to intoxicate its environment and can spread further. The modern human society (represented by various states) has to fight this virus by suitable means in order to protect all citizens living on their territory. “The virus” has to be identified and disciplined. However, the history of economic thought describes and explains why the “eradication” of this virus has been (and still is?) hardly possible (For summary see e.g. Volejníková, 2009).

The phenomenon of “corruption” is defined in various countries in a different way; because real corruptions have diverse types and forms. These types and forms depend on many factors, such as the degree of economic development, degree of civilisation, cultural habits, level of education etc. The same form of “corruption”, say the bribery, is perceived in a different way in minds of people in diverse countries (or in the same country in different cultural “milieu”). This is the reason why there does not exist any recognised common definition of corruption. Anti-corruption laws have to exist for practical reasons – to be able to fight real corruption in its changing mode. This implies the existence of different legal definitions of corruption in different countries. The logical chain of events goes as follows (in brief): (1) anti-social behaviour of individuals and/or organised groups, (2) corruption detection, (3) Penal Code = anti-corruption police actions (investigation), (4) courts, and finally, (5) punishment. In modern developed societies (organised in the form of states) the phenomenon of corruption is analysed by different branches of social science, i.e. criminology, sociology, legal science, economy, finance and psychology etc. are analysed involved on the horizontal axis.

In a country, where “bribery” (as a form of “corruption”) is defined as a criminal act by Law, bribery is a form of financial criminality, whilst in some other countries, where bribery is
perceived as a “cultural habit”, it cannot be considered to be a criminal offense (unless defined by Law).

However, even more important is the analysis on vertical axis, which depicts the history of crime. This dimension performs the analysis of real criminal cases provided by documentation from available police investigations. At present, a more and more significant role is played by media (TV, the press – investigative journalists) and lobbyists, who are able to change the perception of corruption on a large scale. This suggests that horizontal analysis has become more important than before, as it reflects the dynamic changes of corruption due to changing social environment.

As far as economy and finance are concerned (both at the micro- and macroeconomic level), the estimation of the damage caused by corruption to individuals, enterprises and states, is logically the prevailing interest. However, when incorrect valuation methods are used, the results do not correspond with reality which is – unfortunately frequently – the case. Economic and financial experts who do not take the complex background of corruption environment fully into account may multiply the total damage caused by the “corruption virus”. “Real corruption” on capital market exists as a part of its background surrounding behaviour of capital market participants. Therefore it needs to be researched by interdisciplinary methods.

Specific approaches of different social sciences to corruption as a part of financial criminal offenses (C/FC) are categorized in table No. 1.

Table 1. **Analysis of fundamental questions**

<table>
<thead>
<tr>
<th>Discipline</th>
<th>Main analysed questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. History</td>
<td>Development of C/FC</td>
</tr>
<tr>
<td>2. Criminology</td>
<td>Forms, methods and instruments of C/FC</td>
</tr>
<tr>
<td></td>
<td>Effective methods of C/FC detection</td>
</tr>
<tr>
<td></td>
<td>Prevention of C/FC</td>
</tr>
<tr>
<td>3. Sociology</td>
<td>Forms and methods of C/FC and their impact on society</td>
</tr>
<tr>
<td>4. Psychology</td>
<td>C/FC motivation its impact on the individual’s psyche and behaviour</td>
</tr>
<tr>
<td>5. Economics and Applied Economy</td>
<td>Estimating damages from C/FC on microeconomic and macroeconomic levels (impact of the C/FC errors on state budget, aggregate indicators and on economic growth and development)</td>
</tr>
<tr>
<td>6. Statistics</td>
<td>C/FC statistical evidence</td>
</tr>
<tr>
<td></td>
<td>C/Methods of FC monitoring</td>
</tr>
<tr>
<td>7. Demography</td>
<td>C/FC influence on the quality of population</td>
</tr>
</tbody>
</table>

Sources: authors´ elaboration

Note: In its research, every scientific discipline tries to answer similar questions, for example, the origin and history of corruption, its causes, motives and impacts. However, the investigation is „filtered” by their specific methods and perspectives. Each stage of FC studied by the group of scientific historians can be drawn as the flow of events on the
horizontal axis. The analytical approaches of different social sciences to FC are depicted on the vertical axis.

In theory, optimal research results would arise, if the research of all above disciplines could be performed systematically and simultaneously; unfortunately, this approach is not viable in real conditions.

Furthermore, the research of FC (based on the current Czech legislation which includes “corruption” into the family of criminal offenses) in the Czech Republic is segmented; each of the above branches went through its own way. In our opinion, sociological and criminal studies are still the most significant ones. One of the most valuable analysis covers the period from 2001 to 2003 (Cejp, & Baloun, 2004). Recently, a detailed survey of previous FC literature was published by IKSP Prague (Chabova, 2016). It is based (inter alia) on a paper by Vargas-Hernández (2014). Among the well-known, recognised and often cited general definitions of corruption belongs the definition elaborated by the World Bank (2001) that defined the corruption as ‘the single greatest obstacle to economic and social development’. As for corruption measurements, the corruption perception index (CPI) was constructed in 1995 and it is used by Transparency International, and it is globally recognized and respected as resources. The theoretical background for this model was mainly elaborated and later modified by Lambsdorff (2007), and Byrne (2009). A new corruption typology was proposed and explained by Mussie (2016).

The question how the corruption can be measured is one of the most important parts of its detection.

First of all, every object of measurement has to be observed, described and analysed. Different dimensions – economic, legal, social, and psychological, etc. have to be also defined. Then it is possible to proceed to scientific classification of the researched objects. The qualitative analysis has to be followed by quantitative analysis (which can have different forms according to the researched objects). Therefore, it is useful to develop a universal benchmark – a corruption index. For many reasons, corruption cannot be measured directly. Instead, only the perception of corruption is measured by means of the Corruption Perception Index (CPI) elaborated by Transparency International in 1995 (Transparency International, 1995). CPI is, in fact, a substitute for a direct measurement of corruption, i. e. a common denominator for its different types, forms, methods and tools observed all over the world. On the other hand the CPI enables international comparison of corruption perception in different countries at the same time. In spite of the fact that the CPI index – after more than 20 years of its existence – is generally recognised minor objections against its construction still appear in connection with modifications of the CPI structure, i.e. sources used for the CPI index calculation (Wawrosz, 2016, p.80-81).

As for CPI methodology models, we refer to the authors of structural models and their CPI opinion: "...perception-based indices of corruption have recently been criticized as potentially biased and inaccurate measures of corruption across countries, but they are, nevertheless,

widely utilized in the empirical literature on corruption due to their availability, their extensive country coverage and lack of alternative measures. As discussed in the introduction, those indices may not be reliable indicators of the degree of corruption. Instead, they may just reflect a general perception of a country’s institutional quality.” (Dreher, et al, 2007, p.27)

Model-based corruption measurements are undoubtedly crucial; however, their validity and reliability depend on their construction and on reliability and trustworthiness of entry data. The question is how the data is selected and used, and if their quality verification is fair, before they are applied in economic decision-making. Authors of any CPI index should explain not only its calculation methodology, but also its components. These and similar questions were thoroughly analysed by Lambsdorff in his papers published in 2006-7 (Lambsdorff, 2007).

For a better understanding of the present Czech anti-corruption legislation, the explanation of the basics published by the Czech Police on the website is essential (Policie ČR, 2017) (Co je korupce [What is Corruption]? The Report of the Czech Ministry of Interior describes the main corruption characteristics in 2015 in comparison with the previous years (MVCR, 2015).

3. Three stages of the Czech Capital Market Development

This part presents a specific time schedule of the Czech capital market development (1990 – 2016) with the goal to identify the specific forms of corruption typical for each stage.

Three main stages were defined: (1) Stage One from 1990 to 1992 (split of Czechoslovakia as a milestone, setting up of separate Czech and Slovak capital markets); (2) Stage Two from 1993 to 2004, this can be divided in two parts – 1993 to 1997, when the Czech Securities Commission was finally set up, and from 1998 to 2004, when the CR became the EU member; (3) Stage three covers the years (2004-2016).

3.1. Stage One from 1990 to 1992

During the first stage, the fundamental laws on the capital market were prepared and approved by the Czech Parliament, i.e. The Securities Act (No. 591/1992), and the Law on the Stock Exchange (No 214/1992).

The approach to the preparatory legislative work was not completely professional. It was decided to prepare both laws without having a clear idea of systematic and logical links of these laws into one coherent system. Without any rational reason, there was a propensity to apply the obsolete pre-war versions of the Austrian and German legislation which was not apt to inclusion of modern concepts of capital market regulation existing abroad. In the end, a compromise was generated (under political pressure) resulting in a home-made non-standard mix of different controversial views which elements of German, French and British systems (Pavlat, 2016).

One of the characteristic features of this situation was a disregard of any regulatory measures which would protect the market and its participants. A complete “freedom” i.e. (chaos) was preferred to standard rules of market protection. Proposals to set up Securities Commission as
an institution protecting the securities trading from abuse were systematically refused for a long time and (until 1997) postponed. During the period of 1994-1996 the Czech Ministry of Finance analysed the negative aspects of the Czech capital market and pointed out that under existing unfavourable conditions (weak regulation, the absence of powerful sanctions, the underdeveloped financial market infrastructure, the necessity of reforming the SCP, underdeveloped settlement, technological and technically information network, unskilled personnel etc.) creation of securities commission would be premature. In 1996 the Ministry was under strong pressure of political party ODA (See for example the proposal for further reforms of the Czech Capital market - ODA Economic Section documents [only print version can be provided]). However, in the preceding documents from 1995, the question of setting up such a Commission was not yet officially on the agenda (presentation by Dr.Kalvoda - in print). The activities of the Czech Ministry of Finance were described in detail by A. Kubicek in (Pavlat, and Kubicek, 2010, pp.139-145). The initiation of the Prague Stock Exchange (PSE) and the parallel trading system (RM-S) was prepared on the background of boisterous coupon privatisation significant by its repertoire of corruption, bribery, cheating, etc. Under these conditions, it is quite clear that corruptive practices penetrated to the opening Czech capital market.

According to Lízal and Kočenda (2000), some anti-corruption plans existed even during the nineties. Nonetheless, those were hardly applied in practice, in spite of formal declarations of anticorruption plans. In the banking sector, the situation was alarming: some of the new banks were accredited, even though they did not fulfil capital requirements. Had this it been possible, if no „incentive“(or a deliberate „omission“) had been in play? Such things simply “happened,” because the regulator was inexperienced, and the tress-passers would never be punished, because the proper time elapsed.

Anyway, a specialised pre-trade (i.e. a wide range of administrative and double checking activities necessary to be performed before a trade) and post-trade (i.e. a wide range of administrative and double checking activities necessary to be performed after a trade) capital market infrastructure was practically missing and this opened the door for different forms of corruption as soon the securities trading on both trading systems began.

To conclude: During the preparatory stage (1990 – 1992) the corruption concentrated primarily on the area of coupon privatisation. The enumeration of all possible “tricks” is out of scope of this article.

3.2 Stage Two from 1993 to 2004

The second stage of development which began by the start of securities trading at the stick exchange and RM-S (March 6, 1993) can be subdivided in two distinct phases: (1) namely the period since the start of trading in 1993 till the establishment of the Czech Securities Commission in 1998, and (2) the period from 1998 to the entry of the Czech Republic into the European Union in 2004.

3.2.1 The period from 1993 to 1998
Very interesting essay by two American authors was published after the PSE and RM-S started trading. In this study the authors express a strong criticism of transition process in the Central and Eastern European countries (Cohen, & Schwartz, 1993). We point out only on the relevant instances related to the coupon privatisation in the Czech Republic which confirms some of our conclusions related to stage one par. 3.1.

At the beginning of the transition period from “socialism” to “capitalism”, “such essential preconditions for modern capitalist economies as established legal system or tax code, financial institutions, and effective capital markets did not exist. These shortcomings increase the odds that a "big bang" privatization turned into a "big bust" (Cohen, & Schwartz, 1993). And this is what has exactly happened. American authors continue: “… private ownership, even in the Western context, makes sense only in the context of embedded socioeconomic institutions. Big companies do not exist in an institutional vacuum. Nor do markets. Both require external structures of law, finance, and regulation.” However, the privatisation programmes were reduced to the “fundamentalist” capitalism – to a simple programme that could be understood by everyone: “… free prices, free trade, and, above all, rushed privatization.” But: distributing ownership of shares would not create a market system or a capitalist culture. In this concept of a primitive capitalism, no securities regulation was needed. Therefore, at the end of the Light there was a Tunnel.

Practically all possible corruption methods and instruments were used in practice during the period from 1993 to 1998 and almost no trespasses were disciplined (although some exceptions existed there as well).

During the preparatory stage (1990 – 1992) the majority of corruption cases were primarily concentrated on the processes of so called „coupon privatisation”. At the next stage from 1993 to 1998, the bulk of corruption (as a part of a chain of other illegal activities - (Vantuch, 2008, p.35) switched to capital market. According to Wawrosz, corruption has to be analysed “in all its complexity” (Wawrosz, 2016, p.31).

The first period and the first sub-period of the second period had several characteristic features: (1) Ideological prejudice consisting in refusing market regulation as such; a myth of an unregulated and completely free capital market, (2) Technical, technological and organisational unpreparedness of pre-trade and post-trade services. (3) The non-existence of skilled workforce that could serve the capital market, PSE stock exchange , and practically all banks and related state services, (4) Financial illiteracy at all levels, (5) Practice of the Ministry of Finance and (later on) at the Governmental level (non-existence of a Securities Commission); “gaps” in majority of financial rulings enabling widespread “tunnelling” and attempts of a pre-mature start of derivatives trading. This vague set-up of capital market institutions has opened broad room for irregularities and shady practices of market participants.

3.2.2 Sub-period from 1998 to 2007

At the beginning of this period, corruption records of the Czech Republic and Slovakia „improved” a little bit as the country acceded the EU in 2004. But it still continued to be a problem in the post-accession era.” (De Ridder, 2009).

195 http://prospect.org/article/privatization-eastern-europe-tunnel-end-light
The most important event in 1998 has been undoubtedly the establishment of the Czech Securities Commission. This signalled the long-expected “cultivation process” of the Czech capital market. However, the first steps of this new institution were not very successful, as the position of the Commission was not very strong. One issue was highlighted for example in the OECD suggestion 2000, which recommended providing more protection to minority shareholders. “This would require still better enforcement of information disclosure…” (Jindrichovska, & Kuo, 2004).

The prepared Basel2 Agreement forced the Czech authorities to apply more strict approach to capital market participants. However, as it can be found in literature, modified forms of corruption were still widespread in all ten new EU member states. (Open society foundations, 2002)\textsuperscript{196}

In the report of the European Commission on the Czech Republic's Progress towards Accession published on November 8, 2000, the judgement was passed, that „...the fight against corruption and economic crime has so far been insufficient. Tangible results in this field will respond to public concern and help ensure a transparent business environment“ (EC Report, 2000) and tunnelling (defined as “a deliberate siphoning off of assets without further specification”) was explicitly quoted.

The extent of corruption in ten accession or candidate states was set out in detail in a 2002 in the Open Society Institute report. This Report revealed that corruption in the form of the bribing of politicians and officials was a commonplace e.g. through financing of election campaign or creation of the account by Swiss Bank (Baboiet al, 2002).

3.3. Stage Three from 2008 to 2016

During this stage, a drastic tightening of financial market regulation - as an effect of the burst of the world economic and financial crisis - has been started and, is still going on all over the world according to the Basel 3 Agreement timetable. It is necessary to underline that - the first time in the history of financial markets regulation - it embraces financial markets and its most important infrastructures as well. One of the important impacts of this development is a shift to a more strict anti-corruption legislation, a more strict punishment of tress-passers, a shift to important modifications of securities trading rules, accounting, auditing, reporting etc. At the same time, more stress will be laid on corruption prevention.

As far as the Czech capital market is concerned, the situation is slowly improving, however, corruption in changing forms and extent is still going on. These forms (old and new ones) were recently analysed by Wawrosz (2016). There is a positive feature that not only small and unimportant tress-passers are prosecuted and punished, but bigger criminal cases started to be investigated as well. However, there is a space for corruption in Corporate Governance, as it is indirectly reported in e.g. “Report on Corporate Governance in the Czech Republic in 2015”. The report states “...there is a positive development in terms of criminal liability and corruptions where companies adopt sufficient measures eliminating the associated risks.”

\textsuperscript{196} https://www.opensocietyfoundations.org/reports/monitoring-eu-accession-process-minority-protection
Deloitte, 2015. In general, criminal deeds connected with the Czech securities market are now more sophisticated than ever before.

In the next paragraphs of our paper, two cases of corruption are highlighted and analysed.

4. The Heritage

The goal of this subchapter is to analyse the relics of corruption causes generated in the period before the country has entered the EU.

4.1 Viktor Koženy Harvard funds

Harvard funds have become a symbol of tunnelling of the international scale. We label it as “the old case” with difficult solution. Kozeny case had impacts on innocent and naive investors as well as on the companies in the portfolio themselves. Therefore these cases affected many stakeholders including employees of affected companies and their local communities. Harvard Funds concentrated in investing vouchers in companies with international links and overreach. By and large these were prosperous companies bringing money to Czechoslovak economy. Inevitable liquidation of these companies had a significant impact on the country international trade and balance of payments. Kozeny case was widely publicized and the brief summary timeline of Kozeny case in Czech is available on the web page.

Kozeny case was also a focus of academic authors, e.g. Wysong et al, 2012; Grochova, &Otahal, 2013; Wawrosz, &Otáhal, 2014, and Wawrosz, 2016.

After analysing the Kozeny case the authors conclude, that in Czech privatization cases of „Corrupt practices like theft, “tunnelling” and asset striping provided evidence that bureaucracy participated on rents provided by earlier communist politicians .... Communist politicians respected bureaucratic’ claims on rents and ....as a result, later, when communist politicians were replaced, privatization of the state ownership officially targeted to general public led to the legalization of communist bureaucratic claims for rents in most cases. Bureaucrats were a strong interest group in the privatization process, therefore “tunnelling” and asset stripping together with other corrupt practices prevailed over the establishment of efficient legislation and regulation, i. e. efficient rule of law.“ Grochova, &Otahal (2013, p. 13.)
In this special case of Czech corruption the corruption was defined as the „bribery, which is a voluntary exchange between economic agents, where a bribe is the price paid by an agent buying a particular service provided by another particular agent “Grochova, &Otahal (2013, p. 4.).

The offenders have not been punished up to date. The investigation is to a large extent disabled thanks to a broad amnesty granted by the former president Vaclav Klaus - one of the authors of the controversial coupon privatization method.

4.2 New cases of FC (Key Investments) 2012

The case of Key Investments 2011 was a classic deception and manipulation of - funds of badly informed shareholders. 199

An important role is played by interconnection of Key Investments with companies whose securities the company purchased. According to investigations the firm operated "more or less as in-house bank" financing group of interconnected companies.

The convicted trio of managers was undergoing disproportionate risk in purchasing and management of non-marketable securities. The investors were not informed. Customers who have entrusted Key Investments with their money were not investing professionals. This was the reason why they used services of Key Investments.

Problematic financial deals of Key Investments started to be publically discussed mainly after 2011. Clients - several cities and city districts, after having entrusted their hundreds of millions to Key Investments to invest - could not get their money back.

Trinity of defendants purchased high-risk securities of companies for example Sincom, the Association for Chemical and Metallurgical Production, E Side Property and Via Chem Group. Defendants intentionally concealed risks arising from the proposed investment strategy from their customers.

One of the main actors was also prosecuted for insolvency proceedings for example, the company Via Chem Group, which he wielded.

Financial fraud that was allowed under the inadequate regulation and evident lack of investment ethics by involved managers in managing other peoples’ money still, even today, damages the capital market and harms the overall investment climate in the financial markets. Further details of the case are available on the internet in Czech language. 200

199 http://byznys.ihned.cz/c1-58105000-key-investments-je-v-konkurzu-a-nema-takrka-zadny-majetek-praha-6-a-10-asiprijdou-o-stamiliony

200 https://zpravy.actualne.cz/domaci/manazeri-key-investment-ktera-pomohla-zazranc-zbohatnout-ex/r-38449488bdf711e6a8d3002590604f2e/
5. Conclusion

Despite the nature of the discussion of some of our findings concerning our proposed time schedule of the Czech capital market development, we believe that we are now able to finally formulate several propositions.

Firstly, for the very possibility of corruption/FC measurement it is crucial that some quantitative data on FC are regularly released at the national level. So that the investigators are able to assess the extent to which the actual level of corruption differs from that of perception of corruption assessed by the CPI.

This data could be used for differentiating forms of corruption in the logical chain of the pre-trade (i.e. a wide range of activities necessary to be performed before a trade), actual trading, and post-trade (i.e. a wide range of activities necessary to be performed after a trade). Our assumption is that it is important to identify the opportunity for corruption that is present in the pre-trade infrastructure rather than only during the actual trading. Due to the absence of necessary data, such assumption can be neither confirmed nor denied.

Secondly, the results of measuring corruption through the CPI indices or other relevant models may not be usable in particular business decisions. From examination of selected literature one can conclude, that corruption can be reduced by different instruments especially in such situation where it does not pay in long period of time. When the environment is set up transparently with efficient anticorruption measures the dishonesty does not pay simply because fraud is more costly than honest behaviour.

Thirdly, we consider it as a proven fact that both the perceived corruption and real corruption are primarily affected by the general financial literacy of relevant corporate and political representatives. Governmental prevention plans should be based on the findings of corruption research and they should also include support for such research. This is still is not current in general perhaps because of lack of political will and general failures of democratic two-party system, where politicians are competing and striving for repeated re-elections (e.g. Sabatier 1999; Howlett, and Ramesh, 2009, etc).

Indeed, the cartel party theory argues that party elites enter into a tacit collusion as they realize they have more in common than the grassroots, i.e. their survival in public office. Thus, even though they remain as vocal critics of one another in the electoral arena, in many aspects they tacitly collaborate, for example to deter new parties or anything that aims at using the material benefits of the system (i.e. state funding) to their advantage (Katz and Mair, 2009).

Fourth, while studying such of complex issues as corruption (including its negative impact on the Czech society or the results of its domestic research) one cannot get rid of impression, that the corruption is perceived as harmful for economy in different periods and in different way and intensity. Information about corruption from different and often unverified sources is purposefully used for its negative influence on public especially by the media. It serves as a tool to spread sensational news to attract the interest of readers and increase sales. It also
serves as a tool to divert public interest from some "undesirable" information and it leads on the contrary to over saturation with banal and boundary issues. Allegation of corruption is also often used as a tool to defame political rivals. In the business sector the corruption is demonstrably abused as an instrument of unfair competition among entrepreneurs. In contrast, there is the lack of knowledge of the social danger of corruption in the Czech society that could be used as a tool for ethical education and as a tool for prevention. Research on better corruption measurement is understood as one of the conditions for more comprehensive investigation of corruption and a tool for more comprehensive approach to its prevention.

Fifth, in recent years some correction of abnormalities on the Czech capital market was provided. Corruption has newly shifted primarily to pre-trade and post-trade activities, where is the detection still lagging due to insufficient infrastructure. Even though our article does not directly deal with legal issues, it can be noted that some "proposals for improvement" proposed by MPs are also - directly or indirectly affected - by ongoing events on the Czech capital market. This also leads to relapses of corrupt spawn in places where it was most likely unexpected.

6. Points of interest for further investigation

For the next investigation of corruption as of a part of financial criminal activities on capital markets we propose to focus on the following issues:

1. To uncover the structure and forms of corruption, we propose to analyse the prevailing types of corruption in all areas of financial markets - not only capital markets;
2. Further we suggest to search which products were the most often involved in criminal activities - cheques, common shares, shared issued in physical form;
3. From the institutional perspective we propose to identify the most „infected” subjects on the market, i.e. which particular institutions are most affected, what is the position of depositary centre of securities in this connection;
4. Market infrastructure: pre-trade and post-trade perspectives need to be screened and evaluated in details as it has been discovered that the most activity is now taking place in pre-trade and post-trade activities - initiation and settlement.
5. The aim should be to study not only the differences between financial or economic criminality and corruption but also the differences between lobbyism and corruption and how do these phenomena affect institutions in economy at large.

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