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THE ANTECEDENTS AND EFFECTS OF CORRUPTION - A REASSESSMENT OF CURRENT (EMPIRICAL) FINDINGS

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Abstract:

Corruption has fierce impacts on economic and societal development and is subject to a vast range of institutional, jurisdictional, societal and economic conditions. Research indicates that corruption's predominantly negative effects have arisen to a massive trans-border threat while creating high obstacles to sustainable and prospective development. It is this paper's aim to provide a reassessment and a comprehensive state-of-the-art survey of existing literature on corruption and its antecedents and effects. A particularly strong focus is put on presenting and discussing insights resulting from empirical research.

Keywords: Bribery, Corruption, Measuring Corruption, Determinants, Consequences, Survey

JEL: D73, F63, H1, O17, K42

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1. Introduction

Corruption, as the predominant part of organized crime, has fierce impacts on economic and societal development. Gloomy estimates state that global bribery contributes to over \$1 trillion in costs. However, this number neither entails embezzlement nor the misapplication of public funds, which add some \$1.5 trillion (Transparency International, 2011a). “Corruption is one of the most dangerous social ills of any society. This is because corruption, like a deadly virus, attacks the vital structures that make for society’s progressive functioning, thus putting its very existence into serious peril.” (Gire, 1999, p. 1).

Corruption has arisen to a massive trans-border threat while creating high obstacles to a sustainable and prospective development. Daniel Kaufman of the Harvard Institute of International Development named public sector corruption as the single greatest restraint to development (Kaufmann, 1999). This is reflected by the highly increasing efforts of economists who analyze the effects of and reasons for corruption and its economic and societal impacts. To date, the World Bank has carried out over 600 anti-corruption programs fighting corruption since 1996 (Banerjee, et al., 2012, p. 1). Anecdotally, Paul Wolfowitz, former president of the World Bank, devoted utmost attention to the combat of corruption, before having been forced to step back after personal involvement in corruption were unveiled (Stiglitz, 2011).

Surprisingly, corruption was rarely the focus of attention and has rather been analyzed in a broader context of crime. Until the 1980s, corruption was mainly a topic of political, sociological, historical, and criminal law research and just recently came to the fore in the fields of economics (Abed & Gupta, 2004, p. 3). With accelerating globalization and political, social, and financial integration, corruption has become a widespread phenomenon, inducing a sort of race to the bottom. “Globalization is increasing the

dangers, diminishing the authority of governments (especially the weaker and poorer ones), and inadvertently giving new openings for the criminal world to globalize as well.” (Evans, 1999, p. 5). Interestingly, until lately, certain forms of bribery, like bribing a foreign official, were not viewed as illegal by law and could even be considered as deductible business cost in many countries, e.g. Germany (Tanzi, 1998, p. 561). Fortunately, economic approaches to analyzing corrupt activities and providing sophisticated (and more importantly: implementable) countermeasures gained weight over the course of time. Anecdotal evidence suggests that the use of game theoretical insights can facilitate the creation and introduction of new incentive structures into elections, with the ultimate goal to allow for cleaner and better campaigns (McKinnon, 2014).

Following a number of influential and frequently cited surveys on the economic analysis of corruption published by, among others, Rose-Ackerman (1999), Jain (2001), Tanzi (1998), Aidt (2003), and Lambsdorff (2006), it is this paper's aim to provide a comprehensive state-of-the-art overview of existing literature on and an ample discussion of the antecedents and effects of corruption. What sets this paper apart is the strong focus on presenting and discussing recent empirical work on the antecedents and effects of corruption of current research. The comprehensive breakdown of both lines of research into a wide number of distinct categories is overdue and largely facilitated by the increasing amount of (more reliable) data on corruption. Hence, light is shed not only on recent developments on the role of corruption in areas that had already been discussed by previous literature (e.g. bureaucracy, economic development and income), but also on areas that lacked attention in previously studied due to rudimentary data available, such as for example the interrelation between migration and corruption. Focus will be put on an utmost comprehensive collection of determinants and consequences of corruption in **Table 2** and **Table 3**, respectively.

In what follows, in **Chapter 2** we discuss the fundamentals of corruption and in **Chapter 3** shed light on existing approaches to measure corruption using both micro and macro data. We then turn to discussing and providing an extensive list of determinants of corruption in **Chapter 4** as well a comprehensive set of the corruption's consequences for society and economy in **Chapter 5**. We close with a discussion of findings including indications of further research in **Chapter 6**.

2. The Omnipresence of Corruption - On a General Note

Although being exceedingly rampant in poor countries, corruption has become a vicious threat to western countries as well. Previously, corruption was widely assumed impossible to measure. Nowadays, thanks to efforts of institutions, such as Transparency International and others that will be discussed in the next chapter, estimates that are more precise have been identified, setting the foundation to carry out long overdue analyses of corruption's impact on economy and society. Corruption has become a visible and prevalent element of everyday life. As pointed out by Judge et al. (2011, p. 94): "Corruption is not only an economic phenomenon, but also a moral one. Since morality is influenced by, as well as influences, the socio-cultural norms of society, the socio-cultural institutions are also very important. Furthermore, political/legal and economic institutions serve to constrain as well as legitimate certain behaviors."

Based on the Transparency International Bribe Payers Index (2011b), Russian and Chinese companies are considered the most corrupt and the most likely to pay bribes abroad and corrupt governments are perceived to have a higher probability of bankruptcy (Thießen & Weigl, 2011). Evidence also suggests that corruption is the central issue to the economic development of Russia (Economist, 2004), Turkey (Economist, 2005), as well as China,

Indonesia, Poland and the African continent (Doh, et al., 2003). Although not as endemically rampant as in developing countries, the United States is still getting its share. In a report provided by the United States Department of Justice (2012) to the congress, the data speaks for itself: more than 20,000 public officials and individuals were convicted for corruption and related crimes in the past two decades. Most cases originated in or around the local and state governments, indicating that breeding political corruption is a fierce problem in the states.

Along these lines, corruption is considered as being decisively responsible for political instability, economical underdevelopment, low administrative efficiency and poor governance structures around the world (Ko & Samajdar, 2010, pp. 508-509). What is more, adverse effects on business, where corruption increases risks and uncertainty, are observed as well. Representing a form of tax, repeated interactions with public officials increase transaction costs and analyses show a positive relationship between the country's Transparency International CPI rank and regulatory discretion, leading to an impairment of investments (Stapenhurst, et al., 2006, p. 14).

Changes in the political sphere have also induced changes in corruption reporting behavior. Increased media attention has widely been observed by scholars, stating that articles published on this topic have quadrupled between 1984 and 1995. Approximately 180,000 papers¹ within fourteen broad categories of economic analyses on corruption have been published. To this extent, several universities such as the University of Paderborn (Germany), University of Passau (Germany), University of Regina (Canada) and the New Economic School (Russia) have commenced offering courses on the economics of corruption.

¹ JSTOR search on 10 March 2014, for papers including the word "corruption" in their title.

3. Measuring Corruption

Properly measuring corruption imposes various challenges². Not only does measuring corruption face a naturally given obstacle, namely that corruption takes place under the surface, but also the methodological approach to measuring corruption as well as the corruption period are difficult issues to overcome. In the past, empirical work on corruption has been carried out using cross-country indices. However, recently a growing number of scholars turned to using micro data to shed light on corruption and now represent a growing body of empirical research.

Let us first turn to the prolonged use of **macro data**. Presently, five distinct measures of corruption have gained public and scholarly attention in the past years³ and are widely used in cross-country comparisons: the Business Environment and Enterprise Performance Surveys (BEEPS) conducted by the World Bank & European Bank for Reconstruction and Development, the well-known Corruption Perceptions Index (CPI) by Transparency International and the International Country Risk Guide (ICRG) created by the Political Risk Services (PRS) Group are all based on entrepreneurial and country expert surveys. Only the Control of Corruption Index (CCI), again created by the World Bank, and the Index of Economic Freedom (EFI) by the Heritage Foundation are based on a broader range of sources. Both combine different national and supranational indices and country rankings.

² See also Galtung & Pope (1999) and Lambsdorff (2007)

³ See also Lancaster & Montilola (1997), Knack (2007), Svensson (2005) and Judge et al. (2011)

Following these institutions' public claims, all indices try to apply mostly consistent measuring methods in order to allow for time consistent comparison.⁴ These approaches have in common that their measure of corruption is provided via the usage of multiple perception based sources, such as interviews of experts. Because of their accessibility, these indices are frequently cited in media and academic papers and are used as fundamental data for econometrical analysis (Ko & Samajdar, 2010). However, all indices suffer from a similar set of deficiencies: since corruption is hard to be measured directly, the construction of an index that relies on beliefs and perceptions is subject to profound bias and measurement errors (cf. e.g. Apaza (2009), Chatterjee & Ray (2012), Donchev & Ujhelyi (2014)). What is more, there is some suspicion that such indices are overly unfavorable of the non-Western countries. These indices were created in developed Western countries and "particular interest groups try to measure corruption in their own justifiable way" (Ahmed & Ullah, 2014, p. 112)⁵. Consequently, the overly poor performance of developing countries in comparison to the developed countries' ranking is at least debatable. Such a bias may become detrimental especially for developing countries, since financial aid is often affected by these indices. Hence, important support in establishing good governance principles in these countries is taken away and without further help, combating corruption might become even more (Andersson & Heywood, 2009). At the same time, the standardization of identification methods is difficult and itself might bias results as well. Donchev & Ujhelyi (2014) come to the conclusion that corruption indices based on perceptions are biased both on the individual and the firm level and should therefore be reconsidered.

⁴ One prominent exception is the Transparency International Corruption Perceptions Index (CPI). Here, Transparency International explicitly asks not to use their index for comparisons over time due to frequent changes in their measurement structure in 2012 (Transparency International, 2012). Still, it seems that such a piece of advice is not sufficiently deterrent, as one can find a considerable number of published empirical papers using the CPI as the corruption measure. Stephenson (2014) discusses comprehensively the flaws associated with the inter-temporary comparison of CPI scores.

⁵ See also De Maria (2008), Philp (2006) and Galtung (2006).

Along these lines, such cross-country are prone to neglecting important local variations of corruption's pervasiveness. The perception bias between local people and international experts is mediated by the influence of country specific media coverage, the overall level of corruption as well as trust in government in each country (Roca, 2010). Shedding light on this issue, Lin & Yu (2014) provide an empirical investigation for 13 different East and Southeast Asian areas. Using a data analysis based on the Asian Barometer the authors find that global and local perceptions differ significantly and are only moderately aligned in the analyzed countries. Although they remain useful instruments, the derived results should be assessed critically and with caution as perception and actual experience might differ quite substantially (Seligson, 2006). The distinction between perception and experience opens up a new view on the indices, since they "might be usefully rethought as informing us about the determinants and implications of corruption perceptions, and political trust more generally" (Donchev & Ujhely, 2014).

Rather than solely relying on subjective perception-based data, corruption could also be measured using other more objective **micro data**. One approach that has attract scholarly attention has been provided by Ferraz & Finan (2011) for the case of Brazil. In their study, they use audit reports to construct more reliable measures of political corruption in local governments. In trying to answer whether electoral accountability affects the (corrupt) behavior of incumbent politicians, they find that there is less corruption whenever mayors can get reelected as compared to municipalities without the possibility of reelection. Chatterjee & Ray (2012) combined data provided by the United Nations Interregional Crime and Justice Research Institute (UNICRI) and the International Victimology Institute Tilburg (INTERVICT) to investigate corruption on an individual level with the World Bank Enterprise Surveys (WBES) which grant a closer look at the firm-level corruption. Their study shows that there is a significantly stronger incidence of bribe demands in the

business sector than on the individual level. In order to create a composite corruption risk indicator, Fazekas et al. (2013) use administrative data from Hungary to shed light on corruption by linking public procurement data to restricted market access. The robustness checks provided in the paper highlight the validity of this approach and indicate that such a method represents a feasible approach to estimate corruption for other countries as well, since the type of data needed for these estimations is typically publically accessible. In a similar vein, Alt & Lassen (2014) combine panel data on corruption convictions and relative public sector wages to estimate the impact of prosecutorial resources on criminal convictions of those who engage in corrupt deals. Their findings indicate that the more extensive the prosecutor's resources, the more corruption related convictions occur (*ceteris paribus*) in the United States. Gorodnichenko & Peter (2007) combined reported earnings, household spending and asset holdings of people employed in the public sector in order to examine unobserved compensation. Using this approach in the Ukraine, they find statistically significant and large amounts of unreported income indicating a high level of bribery.

In conclusion, using micro data to overcome the shortcomings of cross-country macro data is most likely the future of empirical work on corruption. However, such micro data is usually hard to obtain, thus reducing the area of application of such an approach (cf. Heywood & Rose (2014)). It will be the respective government's responsibility to be more transparent and provide the much needed data in order to facilitate future research.

	NAME / AUTHORS	COVERED COUNTRIES	COVERED YEARS
MACRO	Business Environment and Enterprise Performance Surveys (BEEPS)	29 (Focus on Eastern European and Asian countries) ⁶	1999, 2002, 2005, 2008
	Corruption Perceptions Index (CPI)	175 (cf. Transparency International (2014))	1995 – 2014 (annually)
	Control of Corruption Index (CCI)	215 (cf. Kaufmann et al. (2014))	1996-2013 (annually)
	International Country Risk Guide (ICRG)	140 (cf. PRS Group (2014))	1980-2014 (monthly)
	Index of Economic Freedom (EFI)	186 (cf. The Heritage Foundation (2014))	1984-2014 (annually)
MICRO⁷	Alt & Lassen (2014)	USA (covering 48 states)	1977-2003
	Lin & Yu (2014)	13 (East and Southeast Asian countries)	2005-2008
	Fazekas et al. (2013)	Hungary	2009-2012
	Chatterjee & Ray (2012)	18 (European countries)	1989-2005
	Ferraz & Finan (2011)	Brazil	Varying (audit reports from 2004 for 496 municipalities)
	Gorodnichenko & Peter (2007)	Ukraine	1991, 1997-2003

⁶ In 2008 the methodology of the report was changed and Albania and Croatia were added to the sample. Comparisons to earlier years may be problematic (World Bank, 2010).

⁷ This list is not exhaustive but rather highlights the more recent micro-based approaches to measuring corruption. Further studies can be found in Fazekas et al. (2013, p. 5).

4. Determinants of Corruption

Existing research indicates that a wide range of factors are predictive of the spread of corruption. In what follows, we broadly categorize these factors into economic and legal as well as sociological factors and discuss some of the determinants in more detail.

Economic and Legal Factors

In general, the degree of the administration's efficiency determines the extent to which corruption might find fertile grounds to sprout. Such efficiency is driven by the quality of regulations and authorizations. **Inefficient regulations** might introduce corruption in at least two different ways. On the one hand, artificial monopoly power given to public officials allows them to extract bribes based on their superior position, consequently inducing frictions to the systems. Public officials are usually assumed to have a relatively low reservation price, creating temptation to be more prone to accept bribes. That is because people in charge have the power to make decisions that might negatively affect the society at some point in the future while being given the chance to benefit immediately in the form of pecuniary gains. Having an intrinsic motivation to maximize one's own profit in the first place, these people might favor personal gain *now* over collective harm *at some point*. On the other hand, inefficient regulations might induce frictions through creating incentives for private persons to pay bribes ("speed money") in order to accelerate the bureaucratic process. Transnational comparisons show that an inordinate amount of time is taken away from doing business when dealing with authorities, causing welfare diminishing effects. These harmful effects, in turn, can be diminished by paying bribes (Tanzi, 1998, p. 567ff). Governments often recognize the need to dissolve profitable deals among public officials and the briber, but more often than not, the government lacks the necessary information to carry out the required actions to do so (Tirole, 1986, p. 184f).

What is more, well known issues of **opaque tax systems** require frequent contacts with public officials. Taking account of underlying transparency issues to control civil servants, the officials' discretionary power, and the occurrence of low wages, corruption is likely to spread. Anecdotal evidence suggests that an unusual strong demand for poorly paid jobs in administering taxes has been widely reported, pointing to the fact that people tend to know the opportunities for some 'extra money' resulting from these jobs. It has been proposed that the reduction of such 'monopolistic power' on the side of tax administrations through the buildup of several fully authorized offices would lead to a superior outcome where competition among public officials will reduce the room for corruption, because officials have simply less to 'sell' (Tanzi, 1998, p. 568). Unfortunately, while reasonable from the theoretical perspective, such setting would be costly and is likely to exceed the benefits.

Another strand of literature suggests that **low public sector wages** represent one of the main sources of corruption. Consequently, raising wages is expected to be an effective measure to crowd out the official's incentives to engage in corrupt behavior (cf. Tanzi (1998)). Rijckeghem & Weder (2001) find that corruption is a more prevalent problem in low-wage countries as opposed to high-wage countries. However, this effect might be subject to self-selection bias as there is a good case to believe that low-paid jobs more frequently attract low-educated morally, ethically and mentally more unstable individuals, indicating a higher risk for corrupt behavior (Klitgaard, 1988). As pointed out by Lindbeck (1998, p. 12ff), the effect of public sector wages on corruption has been debated for the longer term. In fact, the exceedingly high wage of exalted administrators in Sweden is believed to have strongly contributed to the country's low corruption, leading to the idea that, basically, there might be two kinds of corruption: due to greed and due to need. Still, experience from Kenya shows that, *ceteris paribus*, simply increasing salaries often might have no or even detrimental effects on corruption (Fisman & Miguel, 2010).

As for the **penalty systems**, given a probability of being caught, the extent of penalty imposed on the criminal will determine the probability of accepting bribes. An individual's engagement in criminal behavior will mainly be influenced by the expected gains from crime relative to what can be earned legally, the risk of being caught, and the punishment's dimension (Witt & Dryden-Witte, 2001, p. 4). *Ceteris paribus*, simply increasing penalties should already diminish the extent of corruption as the expected costs rise relatively to expected gains. Yet in reality, relatively few people are punished for acts of corruption, facing high variance of actual penalties as opposed to what is foreseen in the law.

Transparency is a central issue in many countries, especially on the side of the legislative power to introduce new laws or cut existing rights (cf. Rose-Ackerman (1996)). These exceedingly fertile grounds for corruption are characterized by a haphazard 'adaptation' and implementation of laws, depending on who is accused. It is not only almost impossible for regular citizens to understand the legal language; these circumstances also boost transaction costs through the increasingly required interaction with public officials and thus impair the government's efficiency. However, empirical findings indicate that making political institutions more transparent is *not* sufficient to reduce corruption (cf. Kolstad & Wiig (2009) and Lindstedt & Naurin (2010)). Instead, reforms aimed at increasing transparency should be accompanied by other measures such as sufficiently educating the population to act accordingly on the revealed information and increasing the accountability of the incumbent government. However, Kolstad & Wiig (2009) add for consideration that transparency might backfire if it allows to identify those people more easily who are in charge and have to be bribed.

Aside from transparency, **civil participation and press freedom** are fundamental determinants of corruption. Open economies with enough political and civil rights as well as press freedom typically encounter less corruption (Shen & Williamson, 2005).

Bhattacharyya & Hodler (2012) also find empirical evidence that especially media freedom is relevant to the spread of corruption. This also includes the (uncensored) availability and use of the internet, to which we will return shortly.

Alongside these factors, **economic freedom** is of particular importance as well. Paldam (2002) finds that highly regulated states (i.e. little economic freedom) are usually those with high corruption levels. Goel & Nelson (2005) come to the conclusion that increasing both political and economic freedom successfully deters corruption, although economic freedom with all its components (e.g. monetary and fiscal policy) seems to be most decisive.

Empirical research also points at a number of other relevant determinants. In a nutshell, countries with **unclear property right situations** rank high among corrupt countries. For example, Nas et al. (1986) point out illegal pollution of a river due to lack of property rights for natural resources. After all, clear contracts and enforced property rights can help reduce corruption, but often the costs for full enforcement are too high, most commonly for developing countries (cf. Acemoglu & Verdier, (1998)). Findings also indicate that **poverty** (cf. Gupta (2002)), **income disparities** (cf. Serra (2006)) and **political instability** (cf. Persson & Tabellini (2001)) strongly affect the spread of corruption. In addition, the **discovery of large resource endowments** may increase the level of corruption as well. Especially developing countries with abundant resources are often confronted with particularly high levels of corruption (cf. Leite & Weidmann (1999)). Although the effect is not significant for all natural resources (fuel and minerals, cf. Ades & Di Tella (1999)), it seems to be especially applicable to oil production (Montinola & Jackman, 2002).

Sociological Factors

Mainly due to lack of reliable data, the interrelation between migration and corruption had been overlooked so far. Capitalizing on a dataset consisting of migration flows for 207 countries into OECD countries for the period 1984-2008, Dimant et al. (forthcoming) find that **selective migration** heavily drives corruption levels of the destination country. The results suggest that while migrants from corruption-ridden origin countries boost corruption, corruption levels of the target country are likely to be relatively invariant against general migration. They find that favorable institutional settings might provide fertile ground for corruption to spread in the wake of negative selective migration. Immigration policy should be aware of that.

Research also indicates that affinity towards **religion** has an impact on the spread of corruption. More specifically, while protestant religions tend to inhibit corruption, more hierarchical forms of religion such as Catholicism, Eastern Orthodoxy and Islam propel the extent corruption. Among other factors, this is due to both less efficient bureaucracies and infrastructure (cf. La Porta (1999), Paldam (2001)).

What is more, the scope of **Internet and eGovernment** are relevant determinants and represent a new aspect in the fight against corruption. Sophisticated local (Cho & Choi, 2004) and national eGovernment services (Shim & Eom, 2008) are relevant to mitigate the spread of corruption. This effect remains significant even after controlling for time-varying factors, e.g. GDP growth and press freedom (Andersen, 2009). In addition, the spread of the Internet itself can suppress corruption effectively (Andersen, et al., 2011).

Gender differences are also relevant to the spread of corruption. In a cross-country analysis, Dollar et al. (2001) indicate that corruption is lower in parliaments with a greater representation of women. This finding is also supported by Rivas (2013), who uses a

laboratory setting to evaluate gender differences. However, Sung (2012) shows that at least in short-term development, the level of women (or change in that level) has no significant effect on corruption, but rather the overall strength of liberal institutions. Even newer research projects come to the conclusion that women might only tend to be slightly less corrupt in an environment where corruption is already stigmatized. It seems that in a corruption ridden environment there is no significant gender-based behavioral difference (Esarey & Chirillo, 2013).

Among others, **education** (cf. Treisman (2000)), the degree of **ethnic separation** (cf. Mauro (1995)), **gender** (Swamy et al. (2001)) and inherent **cultural values** (cf. Fisman & Miguel (2007)) decisively affect the extent of corruption. A comprehensive overview of the multifaceted determinants of corruption are presented in the table below.

ECONOMIC AND LEGAL FACTORS		SOCIOLOGICAL FACTORS
<u>Abundance of Resources/Discovery of Large Resource Endowments:</u> Ades & Di Tella (1999); Leite & Weidmann (1999); Montinola & Jackman (2002)	<u>Inefficiencies on Administrative/Political Level:</u> Nowak (2001); Gupta et al. (2001); Ismail & Rashid (2014)	<u>Culture and Values:</u> Gibbons (1982); Husted (1999); Volkema & Getz (2001); Paldam (2002); Fisman & Miguel (2007); Truex (2011); Sims et al. (2012)
<u>Accountability:</u> Henisz (2000); Rose-Ackerman & Truex (2012)	<u>Inflation:</u> Volkema & Getz (2001); Braun & Di Tella (2004)	<u>Education:</u> Treisman (2000); Truex (2011)
<u>Bureaucracy:</u> Tanzi (1998); Kaufman & Wei (1999); Dreher & Gassebner (2013)	<u>Legal System:</u> Theobald (1990); Ades & Di Tella (1997); Ali & Isse (2003); Hessami (2014)	<u>Ethnic Separation:</u> Mauro (1995); Easterly & Levine (1996); Treisman (2000)
<u>Civil Participation and Press Freedom:</u> Brunetti & Weder (1998); Shen & Williamson (2005); Bhattacharyya & Hodler (2012)	<u>Openness:</u> Laffont & N'guessan (1999); Sandholtz & Koetzle (2000); Wei (2000); Paldam (2002)	<u>Ethics:</u> La Porta et al. (1999); Treisman (2000); Garcia-Sanchez et al. (2011)
<u>Competition:</u> Shleifer & Vishny (1993); Ades & Di Tella (1997); Bjørnskov (2012); Bennett et al. (2013)	<u>Penalty System:</u> Shleifer & Vishny (1993); Tanzi (1998)	<u>Gender:</u> Dollar et al. (2001); Swamy et al. (2001); Chu & Sung (2003); Sung (2012); Esarey & Chirillo (2013)
<u>Decentralization:</u> Shleifer & Vishny (1993); Rose-Ackerman (1999); Dell'Anno & Teobaldelli (2013); Goel & Saunoris (2014)	<u>Per Capita Income:</u> La Porta et al. (1999); Braun & Di Tella (2004); Serra (2006); Ugur (2014)	<u>Geography/History:</u> Bloch & Tang (2004); Goel & Nelson (2010)
<u>Delegation of Power:</u> Klitgaard (1988); Ades & Di Tella (1997); Cartier-Bresson (2000)	<u>Political Competition:</u> Brunetti & Weder (1998); Montinola & Jackman (2002); Alfano et al. (2013)	<u>Human Development:</u> Rose-Ackerman & Truex (2012); Sims et al. (2012)
<u>Democracy:</u> Ades & Di Tella (1997); Kunicová & Rose-Ackerman (2005); Treisman (2007); Arezki & Gylfason (2013)	<u>Political Instability:</u> Leite & Weidmann (1999); Treisman (2000); Persson & Tabellini (2001); Ismail & Rashid (2014)	<u>Internet and eGovernment:</u> Cho & Choi (2004); Shim & Eom (2008); Andersen (2009); Andersen et al. (2011)
<u>(Denied) Access to Information and Missing Transparency:</u> Rose-Ackerman (1996); Evans (1999); Bac (2001); Kolstad & Wiig (2009); Lindstedt & Naurin (2010) Färdigh (2013)	<u>Poverty:</u> Evans (1999); Gupta et al. (2002); Justesen & Bjørnskov (2014)	<u>Natural Resources:</u> Ades & Di Tella (1997); Leite & Weidmann (1999)
<u>Economic Freedom:</u> La Palombara (1994); Paldam (2002); Goel & Nelson (2005)	<u>Property Rights:</u> Nas et al. (1986); Acemoglu & Verdier (1998)	<u>Population Size:</u> Fisman & Gatti (2002); Knack & Azfar (2003)
<u>Economic Growth:</u> Husted (1999); Paldam (2002); Ali & Isse (2003); Berdiev et al. (2013); Bai et al. (2014)	<u>Regulations:</u> Tanzi (1998); Treisman (2000); Djankov et al. (2002); Gerring & Tacker (2005)	<u>Religion:</u> La Porta et al. (1999); Treisman (2000); Paldam (2001); North et al. (2013)
<u>Government Size:</u> Goel & Nelson (1998); Montinola & Jackman (2002); Ali & Isse (2003); Kotera et al. (2012)	<u>Taxation:</u> Flatters & Bentley Macleod (1995); Tanzi (1998)	<u>(Selective) Migration:</u> Dimant et al. (forthcoming)
<u>Globalization:</u> Glynn & Kobrin (1997); Chu & Sung (2003); Sandholtz & Koetzle (2000); Lalountas et al. (2011)	<u>Trade Openness:</u> Ades & Di Tella (1999); Sandholtz & Koetzle (2000); Treisman (2000)	<u>Urbanizations:</u> Holbrooke & Meier (1992); Treisman (2000)
<u>Income Distribution:</u> Husted (1999); Gupta et al. (2002); Paldam (2002); Serra (2006); Gong & Wu (2012)	<u>Wages:</u> Rijckeghem & Weder (2001); Tanzi (1998); Lindbeck (1998)	

Table 1 - Determinants of Corruption

5. Consequences and Implications

Analyzing both the causes and effects of corruption, scholars point to the problem of endogeneity. “Interestingly, the same sets of antecedents used to explain corruption (i.e., economic, political-legal and socio-cultural) have also been used to evaluate the effects of corruption. This suggests that there may be feedback loops between antecedents and effects.” (Judge, et al., 2011, p. 95). In consequence, some of the corruption’s consequences discussed below can also be seen as a cause of corruption itself.

Existing research highlights a diverse set of possible consequences of corruption, such as inequality of income, lower GDP per capita, lower investment, budget allocation distortions, a worsened public sector quality, the distortion of markets or the emergence of underground economies and tax cheating (Lambsdorff, 2006, pp. 22-38). Even though research provides inconclusive results in certain aspects, mainly, nowadays scholars are in agreement with corruption causing mainly negative externalities, so-called *sanding the wheels* hypothesis. It is argued that the costs imposed on many far exceed the profits generated by few because corruption distorts the functionality of the whole economy. However, in light of the economic growth of Asian countries over the last decades despite high levels of corruption, the literature has also been providing support for the *greasing the wheels* hypothesis of corruption. Before turning to the specific consequences of corruption, some light will be shed at this scholarly debate.

Scholars favoring the idea of corruption as a means to grease the wheels argue that such deviant behavior might raise economic growth through bypassing ineffective regulations and institutional rigidities via speed-money and as an incentive for public officials to work harder in order to receive even more money through bribery. Based on this reasoning, corruption even might introduce aspects of efficiency and competition. “Since the licenses

and favors available to the bureaucrats are in limited supply, they are allocated by competitive bidding among entrepreneurs. Because payment of the highest bribes is one of the principal criteria for allocation, the ability to muster revenue, either from reserves or from current operations, is put at a premium. In the long run both of these sources are heavily dependent on efficiency in production.” (Alatas, 1980, p. 38). However, as experiences from underdeveloped countries show, the companies paying the highest bribes were not the most efficient ones, emphasizing that corruption does not introduce sustainable positive forces of efficiency or competitiveness. Rather, these companies are most successful at bribe-seeking. Treating bribes as an investment, those who decide to pay them expect a high return on investment (Tanzi, 1998, p. 582). Companies that need the business the most are inclined to pay bribes more often.

In contrast, some scholars provide empirical evidence that, from a welfare perspective, corruption is rather detrimental. Research indicates that breeding corruption impedes economic growth through higher (social) costs caused by **rent-seeking behavior** as well as **lower efficiency and volume of investment**, both private and public (Mauro, 1995). Even indirect effects are conceivable, as more corrupt countries might have difficulties to obtain funding, which in turn imposes negative effects on the economic performance (Lambsdorff, 2006, p. 5f). Especially true for open economies, **FDI** tends to stand clear of corrupt countries (Neeman, et al., 2008). In contrast to the argument of efficiency and competition picked up by Alatas (1980), Mauro (1995) claims that corruption might drive down productivity and innovation. Expecting a net benefit from successful bribing, a company, which has enough money to exert bribes, has the potential to gear down its production to some extent as long as it successfully reaches lucrative agreements through bribery. As long as fierce competition over receiving these agreements through bribery is

not faced, companies might have the incentive to drive down expenditures on research and development and remain rather inefficient.

As a result, the sanding the wheels hypothesis has more convincing substance. Incisive corruption imposes exceedingly high costs on the economy and the society, substantiating the belief that corruption bears rather detrimental effects in overall terms and is causing biased and inefficient decision-making. A country is running the risk of getting trapped in a vicious downward spiral, heading for a disastrous equilibrium, not only leading to impaired political accountability but also to blurred boundaries between right and wrong and is likely the resource of unsustainable development (Aidt, 2009). “When the level of corruption increases, government bureaucrats will in turn “supply” more corruption because the expected rate of detection and punishment decreases. On the demand side, an increase in the general incidence of corruption will lower the transaction costs of finding a corruptible official, resulting in more offering of bribes. The end result of both models is that small shifts in the relative costs of corruption can result in long-lasting, substantial changes in a country’s equilibrium level of corruption.” (Truex, 2011, p. 1134). The collusion of bureaucrats and businesses, while reducing competitive pressure, leads to an institutionalization of corruption (Nowak, 2001, p. 6).

What is more, corruption contributes to more **extensive fiscal deficits** as public revenues are reduced while public spending is simultaneously increased. This systemic inefficiency exacerbates the exercise of a sound fiscal policy (Tanzi, 1998, p. 582). Skirting regulations designed to prevent misbehavior and noxious actions might provide inconclusive results in the short term, but will certainly impose dampening effects on corruption in the long term. Threats as the predatory exploitation of nature, economy and society might contingently lead to a race to the bottom (Evans, 1999, p. 10). “Corruption infringes the fundamental human rights to fair treatment, unbiased decision-making, and secure civil and political

status. Through corruption the public services on which the poor depend are starved of funds, foreign investors are driven away, and environmental protection measures are flouted.” (Evans, 1999, p. 3). As a result, the market’s **misallocation of resources** is likely to distort economic efficiency and reduce prospective growth (Castro, et al., 2014). “Corruption not only contributes to weak economies, inequality, environmental damage, illegitimate leaders, and organized crime, it also increases social polarization and, in extreme cases, can trigger social and political upheaval.” (Stapenhurst, et al., 2006, p. 15).

From a business perspective, corruption destroys incentives and opportunities, distorts efficient market allocation, scares off innovation and subsequently leads to an **unpleasant business environment** (Blackburn & Forgues-Puccio, 2009, pp. 806-807). In particular, high costs are imposed especially on small enterprises, accounting for as much as 20 per cent of total operating costs (Tanzi, 1998, p. 584). Wei (1997) provides evidence that increasing the degree of corruption-induced uncertainty of doing effective business to the level of Mexico would represent the equivalent of imposing a 32 percentage point tax rate increase on multinational firms in Singapore.

Following Tanzi’s (1995) division between administrative (“petty”) and political (“grand”) corruption, Nowak (2001, p. 4ff) determines various impacts that acts of corrupt behavior have on society. Casting light on the former, public officials usually possess a monopoly power in carrying out routine government actions, consequently finishing work at their own speed. Such procrastination mainly results from missing bureaucratic transparency and ambiguous procedures, which consequently leads to increased social costs and thus negatively affects welfare. **Higher inefficiency** is reflected by the businessman’s increased time exposure spent with red tape and hence being unable or unwilling to carry out productive business. Consequently, citizens are not only victims of such externalities; there is also a vicious self-enforcing cycle in place, creating incentives for public officials to

work less productive in order to extract higher bribes. Attaching a value to petty corruption, various studies analyze the extent of administrative corruption by comparing the costs and time needed to start a new business, assuming a positive correlation (cf. Djankov et al. (2002), The World Bank (2012)). At the same time, while speed money may help reduce bureaucratic barriers, it might also constitute an incentive for bureaucrats to generally reduce the speed at which they process requests given their leverage to extract even more bribes (Myrdal, 1968). This is especially true, since bureaucrats often do not have the opportunity to significantly speed up things, but rather the chance to slow them down (Nowak, 2001). Such an environment gives rise to further detrimental outcomes, as contracts might be not handed over to the most efficient, but instead to the best rent-seeking company with the most funds available for bribes (cf. Tanzi (1998), Nowak (2001)).

Continuing with what Tanzi (1995) has called ‘grand’ corruption, political corruption might possess the prevalence to negatively affect the three fundamental pillars of a state: legislative, executive, and judicial. As soon as private institutions exert leverage on the formation of laws or governmental resolutions, political corruption is said to occur. In some countries, especially in communist ones, political corruption arose from longstanding political instabilities and by that has fully interpenetrated the governments.

Political corruption, like administrative corruption, provokes **increased social costs** and higher inefficiency (cf. Wayne (2000), Nowak (2001)). Such collusive behavior unhinges any competition and induces **distortion of markets** (Mêon & Sekkat, 2004). Political corruption is extremely widespread and imposes vicious threats on both society and economy. It not only fundamentally negatively affects a **country’s growth and development** (cf. Kaufmann et al. (1999), Tanzi & Davoodi (2001)); it also extensively penetrates and abandons **social values and norms** (cf. Bardhan (2005), Rose-Ackerman &

Truex (2012)), creating a lawless and immodest society. Alatas (1980, p. 36) argues that the originators of these detrimental effects are the economically higher classes. Public welfare has to join the end of the queue as the government's expenditures are prioritized according to the extortion of bribes. In a similar vein, companies who are willing to pay the price are favored over the rest with the poor having to carry the burden, as higher prices for essential services are imposed (Evans, 1999, p. 9).

Following Albert O. Hirschman's (1970) concept of exit, voice and loyalty, Dimant et al. (2013) hypothesize that individuals respond to a deterioration of socio-economic and politico-institutional conditions and potentially leading to **brain drain**. People affected by corruption in their home country are potentially more prone to leaving and migrating to a better place, where corruption is less rampant. As corruption is likely to sustainably deteriorate the returns to human capital, high skilled workers ought to be especially susceptible to corruption because of their (irreversibly) high level of human capital investment and subsequent need for particularly high skill premiums. The results indicate that corruption is among the push factors of migration and particularly relevant to explaining **brain drain**. "Corruption lowers the returns to education and consequently matters most to the calculus of (prospective) highly skilled migrants." (Dimant, et al., 2013, p. 1274). The results highlight that countries plagued by corruption do not only suffer from a broad variety of negative externalities, diverse institutional inefficiencies and structural problems, but also lose indispensable human capital necessary for sustainable economic development because of the negative socio-economic and political effects of corruption. To reduce the outflow of highly skilled workers, it is necessary to implement target-aimed anti-corruption measures, such as increasing transparency through strengthening monitoring mechanisms and penalties and enhancing bureaucratic quality. A comprehensive overview of the effects of corruption is given in the table below.

Effects of Corruption		
<u>Abolishment of Social Values and Norms:</u> Tanzi (1995); Nowak (2001); Bardhan (2005); Truex (2011); Rose-Ackerman/Truex (2012)	<u>Deterioration of Business and Investment Climates:</u> Nowak (2001); Tanzi (2013); Beekman et al. (2014)	<u>Increased Welfare Costs Through Arbitrary Taxes:</u> Wei (2000); Tanzi (1998); Sandholtz/Koetzle (2000)
<u>Adverse Effects on Assertiveness to Implement Economic Reforms:</u> Rundquist et al. (1977); Myint (2000)	<u>Distortion of Consumption Patterns:</u> Myint (2000); Gokcekus/Suzuki (2013)	<u>Infringement of Civil and Political Rights:</u> Evans (1999); Kaufmann (1999)
<u>Adverse Effects on GDP p.c./GDP Growth:</u> Husted (1999); Hall/Jones (1999); Kaufmann et al. (1999); Tanzi/Davoodi (2001); Bai et al. (2014)	<u>Distortion of Democratic Values:</u> Tanzi (1998); Johnston (2000)	<u>Inhibition of the Government's Role:</u> Tanzi (1998); Rose-Ackerman (1999); Seligson (2002)
<u>Adverse Effects on Infrastructure:</u> Tanzi (1998); Mauro (1998); Kenny (2006); Castro/Guccio (2014)	<u>Distortion of Investments and Production Decisions:</u> Mauro (1995); Wei (2000); Wei/Wu (2001); Sequiera/Djankov (2010); Faruq et al. (2013); Beekman et al. (2014)	<u>Lower Satisfaction with Government and Democratic Legitimacy:</u> Seligson (2002); Anderson/Tverdova (2003); Piga (2011); León et al. (2013)
<u>Adverse Effects on Service Delivery and Human Capital:</u> Mauro (1998); McPake et al. (1999); Tanzi/Davoodi (2001); Pandey (2010)	<u>Distortion of Markets Principles and Establishment of Black Markets:</u> Beck et al. (1991); Myint (2000); Mèon/Sekkat (2004); Tanzi (2013)	<u>Mismanagement, Wastage, Inequity, and Social Decay of Public Funds:</u> Tanzi/Davoodi (2001); Myint (2000); Castro et al. (2014)
<u>Adverse Effects on Social Welfare due to Bureaucratic Arbitrariness:</u> Kurer (1993); Nowak (2001); Tanzi (2013)	<u>Distortion of Investments in Education and Health:</u> Mauro (1998); Hunt (2006); Rose-Ackerman/Truex (2012)	<u>Reduced Public Investment Quality:</u> Tanzi/Davoodi (1997); Sarkar/Hasan (2001)
<u>Adverse Effects on the Revenue and Expenditure Side of the Government Budget (Fiscal Deficit):</u> Tanzi (1998); Myint (2000); Apergis/Danutetiu (2013)	<u>Diversion of FDI:</u> Campos et al. (1999); Habib/Zurawicki (2002); Mathur/Singh (2007); Reiter/Steensma (2010)	<u>Rise of the Shadow Economy:</u> Johnson et al. (1997); Myint (2000); Echazu/Bose (2008); Schneider/Buehn (2009); Dell'Anno/Teobaldelli (2013); Stinson et al. (2013)
<u>Brain-drain (Skilled Emigration):</u> Docquier/Rapoport (2011); Dimant et al. (2013)	<u>Higher (Bureaucratic) Inefficiency:</u> Myrdal (1968); Tanzi (1998); Nowak (2001)	<u>Unsustainable Development:</u> Dasgupta (2001); Aidt (2009)
<u>Budget Allocation (Distortions and Misallocation of Public Resources):</u> Mauro (1998); Esty/Porter (2002); Gupta et al. (2002); Castro et al. (2014)	<u>Higher Social Costs Leading to Systematic Inefficiencies:</u> Kurer (1993); Myint (2000); Wayne (2000); Nowak (2001); Zhong (2010); León et al. (2013)	
<u>Crowding-Out of Productivity Towards Rent-Seeking:</u> Tanzi (1998); Ades/Di Tella (1999); Baumol (1990); Murphy et al. (1991); Beekman et al. (2014)	<u>Increased Income Disparities, Inequality and Poverty:</u> Tanzi (1998); Gupta et al. (2002); Myint (2000); Begovic (2006); Barbier (2012); Justesen/Bjørnskov (2014)	

Table 2 - Effects of Corruption

6. Discussion

Thanks to better data availability, empirical research on corruption has advanced vastly over the last decade. More sophisticated approaches now allow to better understand the antecedents and effects of corruption, eventually explaining the disparity why corruption has more detrimental effects on some countries than on others. The extensive literature overview provided in this paper for the greater part supports the idea that corruption is more likely to impede economic and societal prosperity.

We still struggle to understand the multifacetedness of corruption and its interactions on the micro, meso, and macro level. This paper's exercise has been to convey a deeper understanding of the underlying issues and provide the status-quo of the research on corruption. During the last decades, scholars helped a great deal to dissect causation from simple correlation, consequently allowing for more sophisticated and promising anti-corruption measurements. Having been a problem for centuries one probably has to be an inveterate optimist to believe that corruption can be entirely annihilated or at least reduced to an 'optimal' level. At best, research on this topic and the implementation of an effective regulatory policy, suitable codes of conduct, political and bureaucratic transparency and effective anti-corruption measures can help to mitigate the dissemination of corruption.

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