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Working Paper

The nature of corruption: An interdisciplinary perspective

Economics Discussion Papers, No. 2013-59

Provided in Cooperation with:
Kiel Institute for the World Economy – Leibniz Center for Research on Global Economic Challenges

Suggested Citation: Dimant, Eugen (2013) : The nature of corruption: An interdisciplinary perspective, Economics Discussion Papers, No. 2013-59, Kiel Institute for the World Economy (IfW), Kiel

This Version is available at:
https://hdl.handle.net/10419/87699

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Economics
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Discussion Paper
No. 2013-59 | November 07, 2013 | http://www.economics-ejournal.org/economics/discussionpapers/2013-59

The Nature of Corruption: An Interdisciplinary Perspective

Eugen Dimant

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, ultimately impairing everybody's life. This paper provides a comprehensive state-of-the-art survey of existing literature on corruption and its antecedents and effects. Consequently, we bridge the gap between existing theories of different fields of research including economics, psychology, and criminology in order to draw a conclusive picture of corruption on the micro-, meso- and macro-level.

JEL D73 F63 H1 O17 K42
Keywords Bribery; corruption; development; interdisciplinarity; public economics; survey

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The author would like to thank Burkhard Hehenkamp and Tim Krieger for helpful comments and Nina-Madeleine Brummel and Anna-Sophie Steuber for outstanding research support. Naturally, the author bears the full responsibility for any views expressed in the paper and inherent mistakes.

Citation Eugen Dimant (2013). The Nature of Corruption: An Interdisciplinary Perspective. Economics Discussion Papers, No 2013-59, Kiel Institute for the World Economy. http://www.economics-ejournal.org/economics/discussionpapers/2013-59

Received October 23, 2013 **Accepted as Economics Discussion Paper** November 7, 2013 **Published** November 7, 2013
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"CORRUPTION IS A CRIME OF CALCULATION, NOT PASSION"

Robert Klitgaard (1996)

1. Introduction

Organized crime has been longstanding extensively on transnational grounds but has even more accelerated through globalization and has become its biggest winner, thus negatively affecting business. According to the United Nations Office on Drugs and Crime (UNODC), in worldwide terms, all criminal proceeds excluding tax evasion account for some USD 2.1 trillion in 2009, as much as Great Britain's GDP (UNODC, 2011). Even gloomier 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). In particular, corruption tremendously affects Germany's economy with an estimated loss of over €150 billion in 2012 (Schneider, 2012).

Along the same lines, corruption, as the predominant part of organized crime, has fierce impacts on economic and societal development. "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). Surprisingly, corruption was rarely the focus of attention and has rather been analyzed in a broader context of crime.

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, more precise estimates 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.

Based on the Transparency International Bribe Payers Index 2011, Russian and Chinese companies are considered the most corrupt and the most likely to pay bribes abroad (Transparency International, 2011c) 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). 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 kind of tax, repeated interactions with public officials increase transaction costs. Evidently, analyses show a positive relationship between the TI 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 170,000 papers[4] 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.

It becomes obvious that corruption has arisen to a massive trans-border threat while creating high obstacles to a sustainable and prospective development. In the same spirit, 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. It is therefore necessary to bring out possible actions that sustainably combat corruption on an individual and political level. Actions should be justified through empirical evidence in order for them to be most successful. Exemplary, 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).

Therefore, this paper provides a comprehensive state-of-the-art overview of existing literature on and the most comprehensible overview of antecedents and effects of corruption. Consequently, we bridge the gap between existing theories of different fields of research. 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." This methodology will allow the creation of a detailed and extensive analysis of the impacts of underlying individual incentives (micro or "internal world"), society and norms (meso), as well as institutional characteristics (macro or "external world") and its anthropogenic impact on corrupt behavior. It is important to mention that a significant portion of the research fields mentioned in this paper, although analyzing the underlying reasons of criminal behavior, do not explicitly evaluate corruption but rather focus on the explanation of general crime. There is some reason to believe that aid efforts, sustainable development and prosperity can only be achieved by stimulating (political, ethical, governmental) environments that allow for sound policies and proper anti-corruption movement. Corruption really is an interdisciplinary phenomenon that calls for an interdisciplinary approach.

The structure will follow the subsequent pattern: first discussing the function of corruption on different levels of density (from micro to macro), then shedding light on the causes and consequences of corruption on the economy and society, providing ways on how to eliminate or restrain the influence of corruption, and finally illustrating the interdisciplinary approach. The **second chapter** deals

[4] JSTOR search on 02 May 2013, for papers with the word "corruption" in their title.

with the history and the underlying fundamentals of corruption, highlighting its various possible forms. The **third chapter** focuses on the discussion of the diversity of the micro-, meso- and macro-perspectival discussion of corruption. The discussion then turns to consequences and implications stemming from corruption in **chapter four.** In **chapter five**, the interdisciplinary perspective is illustrated, including the interdependencies of all three levels and their impact on corruption. C**hapter six** closes with a discussion of findings including indications for further research.

2. Fundamentals of Corruption

2.1 The History of Corruption: A Wrap-Up

Multifaceted corruption assaults fundamental principles of democracy while simultaneously challenging its governance in various ways. Violating norms and rules, corruption has become a large-scale discussion point on almost any political agenda. Fighting corruption on an international level is strengthened through the US Foreign Corrupt Practices Act and the work of OECD, EU, the Council of Europe, the Organization of American States (OAS), Transparency International, the World Bank and lately the Copenhagen Consensus. This is accompanied by the commitment of national legislations fighting money-laundering and grand corruption through the implementation of specialized intelligence units and severe punishment (Evans, 1999, p. 1). There is also contention that the year 2000 represents some kind of a pivotal moment. At that point, the United Nations Global Compact was introduced, enrolling over 1500 companies and over 20 NGOs from 70 countries, solely serving the purpose to fight corruption (Judge, et al., 2011, p. 96). Still, one of the main obstacles in properly fighting corruption is the difficulty of unequivocally defining it.

This, however, does not imply that analysis of corruption has been non-existent before the surge of interest on the media surface. Corruption has always been around. The history of Western political thought highlights the fact that the appearance of corruption in politics date back to Greek philosophers such as Socrates, Plato, Polybius and Aristotle (Wallis, 2006). What is more, "Archives recovered from the administrative center of Middle Kingdom Assyria (c 1,400 B C) refer to civil servants taking bribes, with senior officials and a close relative of the head of state implicated. There are also references to bribery in the Old Testament scriptures. […] Corruption must be exposed for what it is, a form of organized crime and a serious abuse of human rights." (Evans, 1999, p. 20). It has already been discussed by Kautilya (c 350-283 B C), prime minister of an Indian Kingdom two thousand years ago, in the same spirit as did the famous poet Dante seven centuries ago, placing bribers in the lowermost parts of hell. The American Constitution explicitly names two crimes that justify a president's impeachment: treason and bribery (Tanzi, 1998, pp. 559-560).

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 (for example Germany) (Tanzi, 1998, p. 561).

2.2 Definition of Corruption: A Problem of Ambiguousness

Conceiving the virtues of corruption requires a definition to hold across cultures and countries. While different societies might share a similar understanding of good and bad, when talking about corruption in particular one might interpret the same activity as natural or as corrupt behavior based on the country of origin or the societal norms he or she has been raised with. As a result, researchers on the topic of corruption face the problem of finding a comprehensive definition of corruption. Even such ordinary things as gifts are difficult to distinguish from bribes. Stemming from various perspectives, the political science literature offers three distinctive approaches on how to spot corrupt behavior: public interest, public opinion, and legal norms (Scott, 1972, p. 3).

As highlighted by Sandholtz/Koetzle (2000, p. 34ff), corruption from the public interest point of view puts emphasis on deviant behavior impeding the public interest, caused by administrative or political bodies. Specifically, this definition highlights the intrinsic motivation of public officials to provide favors to particular groups in exchange for private rewards. With this being a shared characteristic of corrupt behavior and as such providing a commonly agreed definition, it certainly lacks lucidity, as it is impossible to identify public interest based on a country's heterogenic population objectively.

Casting light on the public opinion approach, variation in corruption standards implies that corruption is what the public thinks it is. This variation results from cultural differences. Consequently, this not only eliminates the possibility of a clear cross-cultural definition but also creates new uncertainties as, for example, who exactly represents the relevant public (Scott, 1972, p. 4). From this standpoint, the public opinion does not provide any clear guidance on how to resolve the problem of unambiguously defining corruption.

Turning to the legal norms approach, corruption is defined as a behavior that violates "specific rules governing the way public duties should be performed", including illegal exchanges of political favors for private rewards (Williams, 1987, pp. 15-16). It remains debatable who exactly defines the normative character of 'specific rules' that improve the welfare provision for the population.

From a similar point of view, Sandholtz/Koetzle (2000, p. 34ff) highlight three elements of a proper definition of corruption. The first element goes back to Nye's (1967, p. 966) widely cited separation between public and private spheres: "Behavior which deviates from the formal duties of a public role because of private-regarding (personal, close family, private clique) pecuniary or status gains." The second element acknowledges corruption as an act of which one party provides (mostly monetary) stimulations in exchange for a political good provided by an official. Completing the core definition of corruption, evaluation on a norm-basis is introduced as the third element. The implication of this element is the necessity to understand corrupt behavior as a deviation from accepted and prevailed norms.

Similarly, Evans (1999, pp. 1, 12) introduces the definition of "the act by which 'insiders' profit at the expense of 'outsiders'", conveying the belief that corruption is all about division of classes and thus creating asymmetries when separating the privileged (the 'insiders') from the underprivileged (the 'outsiders'). In a more neutral sense, corruption is defined as the "intentional noncompliance with arm's length relationship aimed at deriving some advantage from this behavior for oneself or for related individuals." (Tanzi, 1998, p. 564).

Having this on the radar, the following definition introduced by Transparency International builds upon the elements mentioned above: "the abuse of entrusted power for private gain" (Transparency International, 2011b). This definition is most commonly used in the literature and will thus serve as the underlying classification of corrupt behavior throughout this paper. In this vein, 'abuse' implies a deviation from moral and legal standards, which entails costs for a public official as they are subjected to sanctions.

Unbundling the nature of corruption, it is of high importance to distinguish different patterns of corruption in order to combat it most sustainably. Even though the abuse of entrusted power for private gain serves as the underlying definition of corruption, it still has several facets concerning the understanding of what exactly falls under the term corruption. The impact and fashion of corruption is multifaceted and its impact varies substantially across countries, and so do the patterns. Whether organized or disorganized, predictable or not, and despite the scholars' efforts to provide empirical evidence, relatively little is known about the actual burden corruption places on society, on a country's development or on the overall long term effects. By carrying out empirical analyses, usually hardly anything can be said about the de facto direction of causality; rather, empirical evidence is provided concerning the interdependency of corruption and other variables included into the models. Consequently, this issue is tackled by a combination of econometric approaches (e.g. the appropriate introduction of representative instrumental variables) and both laboratory and field experiments.[6] The hope is that causality can be elicited by shedding light on the same issue from several perspectives and at different times.

Jain (2001, p. 73) claims that fraud, money laundering, drug trades, and black market operations do not belong to the term corruption in the first place, because they do not involve public power's use and abuse. Still, officials often have to be involved (e.g. via bribery) in order to carry out these activities and thus business can rarely be performed without the corruption of public officials. For that reason, these acts are considered as part of a wider definition of corruption.

Tanzi (1998, p. 565) provides a more accurately subdivided classification of corruption, offering a hybrid-like definition. He differentiates between "bureaucratic (or "petty") or political (or: "grand") […], cost-reducing (to the briber) or benefit enhancing, briber- or bribee-initiated, coercive or collusive, centralized or decentralized, predictable or arbitrary [corruption and corrupt behavior], involving cash payments or not." Subsequently, Tanzi's classification and Transparency International's definition is used as the underlying understanding of corruption throughout the paper.

[6] For a state-of-the-art overview of corruption experiments, which are not the focus of this paper, cf. Serra/Wantchekon (2012)

2.3 The Evolution of Corruption - A Stage-Model Approach

Basically, three different stages of corruption can be identified. At the first stage, corruption does not impose any comprehensive or substantial effects on the everyday life and most business can be conducted without any distortion. On the face of it, adverse effects of corruption are rather limited, even though corruption might flourish. At this stage, corruption has not yet successfully infiltrated the deeper societal structures in a sophisticated manner, although it primary occurs in upper government circles and big businesses. However, it does not significantly impede governmental work and most likely happens under the surface (Alatas, 1980, p. 31f).

The second stage is characterized by an extent of corruption which has become immanent and has evolved into an everyday issue. The black market flourishes and laws are bypassed on a regular basis. Corruption becomes a sophisticated societal issue, pervading fundamental social interactions.

At the third stage, it is not corruption alone that causes this degeneration of values and norms, but rather its functional interaction with other factors. The succession from subliminal to destructive corruption has its origin in the group which is least affected by the consequences of corruption: the public officials. Corruption then merely induces an accelerating effect of widespread malfunctions and consequently hampers the entire society. Stages of corruption are illustrated in the figure below.

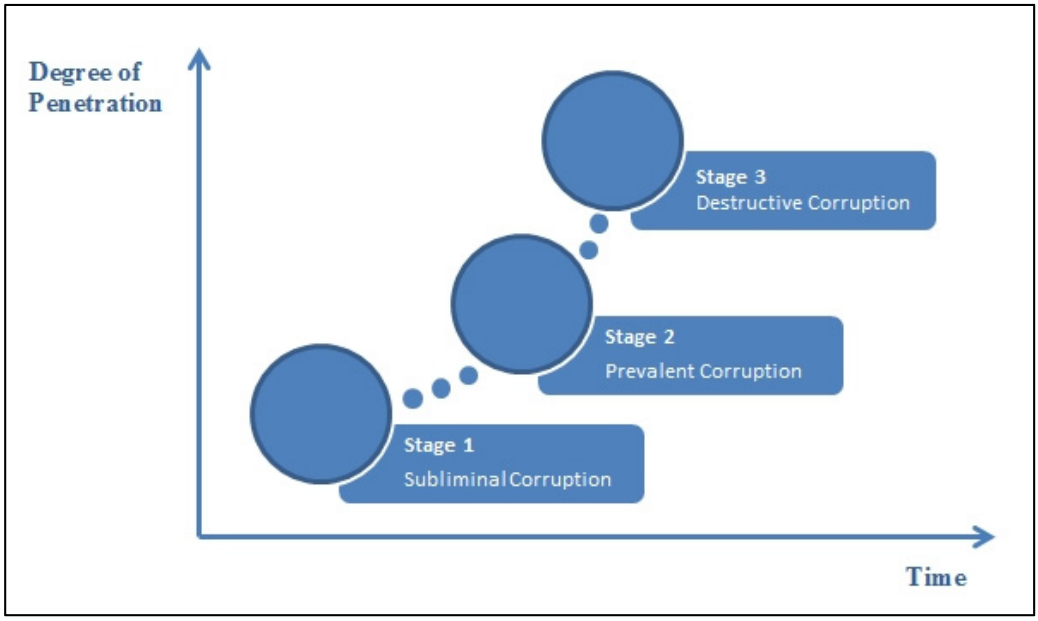

Figure 1: Dynamics of Corruption - Stage Model (own illustration)

Clearly, successive movement throughout the stages is conceivable over time and the society will feel the effects at some point. The scholars' motivation not to subdivide different stages of corruption more distinctively is due to the difficulty and missing practicability of effectively measuring them. As will be further argued, the adequate measurement of corruption constitutes a big challenge as, per definition, acts of corruption happen under the surface.

2.4 Measuring Corruption – Literature Review

Properly measuring corruption imposes various challenges. 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. Mostly, cross-country investigations represent the growing body of empirical work on the topic of corruption.

Presently, three distinct measures and one indicator of corruption have gained public and scholarly attention: Transparency International's Corruption Perceptions Index (CPI), the Control of Corruption Index (CCI), which is annually reported by the World Bank, the Corruption Index (CI) developed by the Political Risk Services Group (Judge, et al., 2011, p. 95ff) as well as the Heritage Foundation's Index of Economic Freedom (EFI). All indices apply consistent measuring methods in order to allow for time consistent comparison. Measuring the level of corruption is provided via the usage of multiple sources, fully relying on the views of experts. Because of their accessibility, these indices are frequently cited in media and academic papers and are used as fundamental data for econometrical analyses (Ko & Samajdar, 2010, p. 508).

Having started in 1995, the Corruption Perceptions Index (CPI) is published by Transparency International, a Berlin-based NGO. The index is based on surveys filled out by country experts, journalists and business executives and has been widely accepted by the research as a valid and reliable source for corruption measurement. In comparison, since its inception in 1996, the World Bank's Control of Corruption Index (CCI) focuses on the importance of the role of good governance and the anti-corruption aspirations as a means of supporting their poverty alleviation mission. The CCI is also considered both, reliable and valid, showing a 0.97 correlation with the CPI. Such a high correlation indicates that the proposition of the CCI essentially coincides with what the CPI is suggesting. Along the same lines, the Corruption Index of the Political Risk Services Group (CI) includes specific indicators measuring, among other things, the business' ability to influence political processes and the frequency of bribes conducted in the respective country. Incepted in 1980, the CI is an aggregated perceptual index, primarily based on evaluations of country experts conducting business in the respective country, showing a 0.75 correlation with the CPI (Judge, et al., 2011, p. 95f). Finally, incepted in 1995, the purpose of the Heritage Foundation's Index of Economic Freedom (EFI) is to measure the degree of economic freedom in over 179 world's nations. Countries are ranked on a scale from 0 (repressed) to 100 (free) according to 10 measures of economic freedom such as the regulatory efficiency, the openness of markets and the extent of corruption. In 2012, the global average economic freedom score decreased to 59.5 in comparison with last year's 59.7. Despite enhanced aspirations, the score has had an all-time high of 60.2 in 2008 and is decreasing ever since (Heritage Foundation, 2012, p. 1). This index provides workable approximation of the fertile grounds on which corruption spreads.

Overall, it can be said that the indices all suffer from the same deficiencies. As corruption is not directly measurable, indices rather incorporate beliefs and perceptions of corruption and thus con-

tain various biases. In this vein, the meaningfulness of corruption measurement approaches is at least debatable.

Having shown different methodological approaches to combat the obstacle of properly measuring corruption, a second challenge arises: the timing variation in measuring corruption. It is obvious that corruption has started before the inception of various indices measuring it. Based on the increased attention corruption received over the last decades, research suggests that the omnipresence of this topic and the actual time of measurement significantly affects the perception of corruption. This implies that the coherence of antecedents and effects of corruption are strongly influenced by the timing of investigation (Judge, et al., 2011). Hence, this represents a crucial fact that should be taken into consideration when comparing time series of corruption.

While cross-country research has provided extensive evidence for corruption being harmful to economic development, the direction of causality still appears to be problematic. A simple regression does not provide any causal link but rather reports the extent of correlation of unknown origin. As stated by Rose-Ackerman (2006), it is hard to keep causes and consequences of corruption apart as the causality frequently appears to go in both directions. These problems mainly result from measurement problems, as the indices frequently used are purely based on perception rather than on "real" corruption measurement. Building on underlying errors, the introduction of instrumental variables (IV), e.g. measures of fractionalization (cf. Alesina et al. (2003)) might be helpful. Thus, one needs to substitute the endogenous variable by a fitting IV. Scholars tried to solve the problem of endogeneity, i.e. to separate a prevailing correlation between independent variables and the error term, by introducing a new variable which solely affects the initial independent variable (e.g. corruption) but not the dependent variable (e.g. GDP) (Azfar, et al., 2001, p. 51). On the face of it, it is exceedingly difficult to find variables, which meet the required conditions to test for endogeneity.

After all, perception based measurements are likely to be biased, since e.g. foreign business people might easily be exposed to paying higher bribes than domestic business people pay. Micro-level analyses gained in importance over the last years and built a strong fundament of exploring the determinants and effects of corruption. Consequently, these approaches should be accompanied by laboratory and field experiments in order to allow for more salient investigations of corruption.

2.5 Determinants of Corruption

As proposed by Tanzi (1998, p. 565ff), factors contributing to corruption can be distinguished into direct and indirect elements. Direct factors are considered to be interrelated with activities carried out by the state, especially under the circumstances of monopoly and discretionary power exertion. In all likelihood, even though reducing the state's influence to minimum would also reduce the incidence of corruption, a sophisticated society cannot function without a state. 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. In his analysis, Tanzi subdivides direct factors, which present a possible source of hazard, into 1. regulations and authorizations, 2. taxation, and 3. the provision for goods and services at below-market prices.

Starting with regulations and authorizations, the extent of bureaucracy impedes the effectuality and effectiveness of administrative work, eventually inducing redundancies in the form of consistently dealing with red tape, and as such creating obstacles to frictionless procedures. While predominantly placing a burden on developing countries, clearly, the resulting artificial monopoly power of public officials stimulates and incentivizes these civil servants to use their immanent power to the worst, meaning that they have an open mind concerning accepting bribes.

In contrast, being fully aware of the time consuming negotiations with public officials, inefficient regulations also create 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. 567). 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).

Following Nowak (2001, p. 4f), inefficiencies on both the administrative and the political level represent the central causes for and reasons of corruption, inducing a vicious cycle of inefficiencies and corruptibility. Unsurprisingly, corruption is most frequently observed at the governmental level, since the political influence and the inherent decisive power directly contributes to the appearance of rents, which are then simply created or transferred to the profiteer at the expense of somebody else (Nowak, 2001, p. 2). In this vein, having pervaded high-level institutions might be an explanation to the persistence of corruption, even in the presence of sophisticated anti-corruption measures.

Talking about the role of the second direct factor contributing to corruption, taxation, well known issues of opaque tax systems require frequent contacts with public officials. Taking account of underlying transparency issues to exhaustively control civil servants, the officials' discretionary power, and the occurrence of low wages, corruption might very likely arise and become a major problem. This would not only infringe the work on tax administrations per se but also contribute to comprehensive inefficiencies on the state level. 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. Following his remarks, 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.

Turning to the state's provision of goods below market prices, a sophisticated social system not only positively contributes to the society's wellbeing, but also creates some adverse effects. Exemplarily, the provision of disability pensions is a very fertile ground for corruption. Those who unjustifiably request these services at the expense of the whole society are inclined to bribe those who are in charge of the approval: the public officials.

In summary, public officials are usually assumed to have a relatively low reservation price, creating temptation to be more open towards 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[7], these people might favor personal gain over collective harm (Tanzi, 1998, p. 570).

Turning to the indirect effects that influence corruption, Tanzi (1998, p. 571ff) sheds light on factors such as 1. the quality of bureaucracy, 2. level of public sector wages, 3. the penalty system, 4. the institutional controls and 5. the transparency of laws. As stated by Tanzi, these factors might indirectly contribute to the corruption's magnitude, as they are both affected by and actively affect the occurrence of corruption.

Bureaucratic quality strongly varies across countries. Poorly designed policies may intensely contribute to the rise of incentives to accept bribes. Being two sides of the same coin, detecting and eliminating bad regulations is crucial to successfully tackling corruption. Highlighting factors determining the ideal bureaucracy, it is believed that tradition and social norm compliance affect the efficiency of public offices through influencing a person's pride related to working for the government. In contrast, empirical analyses show that if merit based compensation is not in place, the non-performance based decision making regarding personnel (patronage, nepotism, absence of clear rules, politically motivated hiring), negatively contributes to the quality of bureaucracy and consequently strongly correlate with the extent of corruption (Tanzi, 1998, p. 571).

In a similar vein, 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. Noteworthy, it is also argued that independent of the wage level, due to the heterogeneity of public officials, there will always be some corruption (Tanzi, 1998, p. 572). Still, experience from Kenya shows that, ceteris paribus, simply rising salaries often might have no or even detrimental effects on corruption.[8] While norms and culture undoubtedly matter, more often than not monetary enrichment plays a decisive role in corrupt behavior.

Turning to the effects of incumbent penalty systems, given a probability of being caught, the extent of penalty imposed on the criminal will determine the probability of accepting bribes. On the face of it, ceteris paribus, solely increasing penalties should already diminish the extent of corruption. 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. As already mentioned, this is due to the problem of verification and the process' duration. The consequence is that these circumstances re-

[7] "Homo homini lupus est", Titus Maccius Plautus (495).

[8] This effect was observed by Fisman/Miguel (2009, p. 199ff) in Kenya and was verified for Georgia by the World Bank (2007, pp. 17, 26): after doubling the wage of Kenyan police officers from a $65 per month to $130 per month, the observed corruption level did not change. Empirical results point to the problem of not having simultaneously raised legal punishment in order to deteriorate the individual cost-benefit consideration.

sult in higher tolerance for initially mediocre acts of corruption which can indeed evolve into major ones. (Tanzi, 1998, p. 574).

In the same vein, the volume of institutional controls not only outlines a further indirect factor contributing to the spread of corruption but is also another key factor in Gary Becker's theory of crime, determining the chance to catch corrupt officials. 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). Corruption is mostly discovered by chance or intervention of third parties like the media or whistleblowers. Thus, in order to encourage this behavior, proper guidelines on how to act honestly and ethically correct, especially for auditors and supervisors, should be developed and supported. (Tanzi, 1998, p. 575). In this context, the influence of free media and the protection of whistleblowers, tedious even in western countries, must not be undervalued.

Finally, in respect of the transparency of rules and laws, to date, many countries lack the gratification of even fundamental rights. 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. In the same spirit, the behavior of top political leaders plays a decisive role. While serving as role models, acting unlawfully on a repeated basis consistently drives down the officials' inhibition threshold (Tanzi, 1998, p. 576).

Similarly, Lambsdorff (2006, p. 4f) provides nine possible causes of corruption: 1. the size of the public sector, 2. the quality of regulation, 3. the degree of economic competition, 4. the structure of government, 5. the amount of decentralization, 6. the impact of culture, 7. values and 8. gender, and 9. the role of invariant features such as geography and history. While patronizing Tanzi's argumentation of the adverse welfare effects corruption has on society, Lambsdorff questions the fatiguing belief in market powers, where a smaller public sector would favor the crowding-out of inefficient activities of public officials. Privatization alone does not seem to fully resolve these issues, as the newly founded private units still may be forced to serve political interests. Privatized companies may be similarly exposed to political arbitrariness (cf. Rose-Ackerman (1997)). Based on mixed empirical evidence, the relationship between corruption and the state is non-linear, as a bigger state, which usually comes along with higher inefficiencies and thus more room for inducing rents, not automatically implies higher corruption (Lambsdorff, 2006, p. 5).

Even though research predominantly agrees that the extent of competition reduces the extent of corruption because it diminishes the producers' rent and thus the opportunities for corruption, both reverse causality and a contrary relationship might be true as well, pointing to the problems of properly separating causes and effects. "The prospects of corrupt income may motivate private firms to pay bribes and politicians to offer market restrictions, [implying that] competition may sometimes increase rather than decrease corruption." (Lambsdorff, 2006, p. 8). In this vein, Moe (1984, p. 762f) argues that the power of competition is sometimes overvalued because existing cor-

ruption and the power to be in charge over corrupt income likely subvert the officials' selection process.

However, there is more conclusive evidence supporting an inverse relationship of competition and corruption as well as economic freedom and corruption. Thus, dissolving unnecessary regulations lowers corruption rents. This idea is supported by the World Bank, stating that "any policy that creates an artificial gap between demand and supply creates a profitable opportunity for opportunistic middlemen." (The World Bank, 1997, p. 103). It is more a question of the kind of state rather than the size that has an impact on the magnitude of corruption, as theoretical and empirical indicates the causal direction going from weak governance and a higher level of corruption to lower growth (Rose-Ackerman, 2006). Unfortunately, due to inherent authority, it is difficult to eliminate or even reduce administrative corruption, especially if highest political levels are 'infected'.

What is more, capitalizing on a dataset consisting of migration flows for 207 countries into OECD countries for the period 1984-2008, Dimant et al. (2013b) 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.

Thanks to better data quality, various kinds of macroeconomic modeling have been carried out during the last decade trying to explain corruption more precisely. Judge et al. (2011) provide a systematic overview of 42 studies conducted between 1995 and 2006. Subcategorizing these studies into three distinct scopes, namely political/legal, economic, and socio-cultural, allowed for a strict separation of antecedent correlations (characteristics influencing levels of corruption) and effect correlations (characteristics being the result of corruption). Anecdotally, the same characteristics representing the antecedents of corruption in some studies were treated as effects of corruption in other studies. The results show a tendency: most of the performed studies regard the tested characteristics as antecedents rather than effects of corruption, with legal origin, political openness, economic openness and economic wealth and growth being observed the most and mostly in a negative relationship.

A rather comprehensive overview of the multifaceted determinants of corruption can be found in the table below.[9]

[9] As there is extensive literature on the determinants of corruption, predominantly examining cross-connections of multiple indicators at the same time, only selected primary literature is mentioned below.

ECONOMIC FACTORS	LEGAL FACTORS	SOCIAL FACTORS
Absence of large resource endowments: Ades/Di Tella (1999); Leite/Weidemann (1999); Monitola/Jackman (2002)	**Wages:** Rijckeghem/Weder (2001); Tanzi (1998); Lindbeck (2001)	**Education:** Treisman (2000); Truex (2011)
Competition: Shleifer/Vishny (1993); Ades/Di Tella (1997)	**Accountability:** Henisz (2000); Rose-Ackerman/Truex (2012)	**Ethnical Separation:** Mauro (1995); Easterly/Levine (1996); Treisman (2000)
Economic Freedom: La Palombara (1994); Paldam (2002); Goel/Nelson (2005)	**Bureaucracy:** Tanzi (1998); Kaufman/Wei (1999)	**Ethics:** La Porta et al. (1997); Treisman (2000)
Economic Growth: Husted (1999); Paldam (2002); Ali/Isse (2003); Berdiev et al. (2013)	**Civil Participation and Press Freedom:** Brunetti/Weder (1998); Shen/Williamson (2005)	**Gender:** Dollar et al. (2001); Swamy et al. (2001); Chu/Sung (2003)
Government Size: Goel/Nelson (1998); Monitola/Jackman (2002); Ali/Isse (2003)	**Decentralization:** Shleifer/Vishny (1993); Rose-Ackerman (1999)	**Geography/History:** Bloch/Tang (2004); Goel/Nelson (2010)
Globalization: Glynn/Kobrin (1997); Chu/Sung (2003); Sandholtz/Koetzle (2000)	**Delegation of Power:** Klitgaard (1988); Ades/Di Tella (1997); Cartier-Bresson (2000)	**Human Development:** Rose-Ackerman/Truex (2012)
Income Distribution: Gupta et al. (2002); Husted (1999); Paldam (2002); Serra (2006)	**Democracy:** Ades/Di Tella (1997); Kunicová/Rose-Ackerman (2005); Treisman (2007)	**Natural Resources:** Ades/Di Tella (1997); Leite/Weidemann (1999)
Inefficiencies on Administrative/Political Level: Nowak (2001); Gupta et al. (2001)	**Denied Access to Information:** Evans (1999)	**Population Size:** Fisman/Gatti (2002); Knack/Azfar (2003)
Inflation: Volkema/Getz (2001); Braun/Di Tella (2004)	**Legal System:** Theobold (1990); Ades/Di Tella (1997); Ali/Isse (2003)	**Religion:** La Porta et al. (1999); Treisman (2000); Paldam (2001)
Openness: Laffont/N'guessan (1999); Sandholtz/Koetzle (2000); Wei (2000); Paldam (2002)	**Penalty System:** Shleifer/Vishny (1993); Tanzi (1998)	**Selective Migration:** Dimant et al. (2013b)
Per Capita Income: La Porta et al. (1999); Braun/Di Tella (2004); Serra (2006)	**Political Competition:** Brunetti/Weder (1998); Monitola/Jackman (2002)	**Urbanizations:** Holbrooke/Meier (1992); Treisman (2000)
Poverty: Gupta et al. (1998); Evans (1999)	**Political Instability:** Leite/Weidemann (1999); Treisman (2000); Persson/Tabellini (2001)	**Values:** Gibbons (1982); Fisman/Miguel (2007); Truex (2011)
Regulations: Tanzi (1998); Treisman (2000); Broadman/Recanatini (2001); Gerring/Tacker (2005)	**Property Rights:** Nas et al. (1986); Acemoglu/Verdier (1998)	**(Non-)Transparency** Rose-Ackerman (1996); Kolstad/Wiig (2009); Bac (2001)
Taxation: Flatters/Bentley Macleod (1995); Tanzi (1998)	**Culture:** Husted (1999); Volkema/Getz (2001); Paldam (2002)	
Trade Openness: Ades/Di Tella (1999); Sandholtz/Koetzle (2000); Treisman (2000)		

Table 1 - Determinants of Corruption

3. Economics of Corruption

3.1 Micro Perspective – Analysis at the Individual Level

After having discussed the nature of corruption and various underlying factors promoting and accelerating corruption, the discussion now will turn to the economic discussion of corruption. Here it will be of importance to first discuss the economic approach to explain an individual's incentives and motivation to engage in criminal behavior, which will allow to draw conclusions on corrupt actions.

3.1.1 Ideas from Crime Economics – Extensions of the Rational Choice Approach

Traditional models of corruption are derived from neoclassical economics, assuming "that corruption is driven by the legal powers of the state that give public officials the ability to disrupt otherwise efficient markets. This allows them to create rents or obstacles for private investors and citizens, in most cases, acting inside the law." (Khan, 2006, p. 219). The decision power of public officials to extract bribes allows for individual rent-seeking behavior, which is detrimental to the society. Unequivocally, such behavior is considered as illegal and constitutes corrupt behavior. Fundamental to actual corrupt behavior is not only the ability but also the incentive to break the law. These incentives are shaped by intrinsic willingness (internal world), sociological conditions (meso world), and extrinsic opportunities (external world).

Having its origin in the seminal contribution of Gary S. Becker (1968) analyzing the disposition to deviant behavior based on cost-benefit calculations, encompassing economic theories on crime causation evolved ever since. These models laid the foundation for a deeper analysis of a specific form of crime: corruption. Such incentive-based models build upon decision making in risk-involved situations. Allocating time between legal and illegal activities, individuals engage in deviant behavior based on the maximization of an objective function (e.g. wealth or individual utility). Whether a person decides to engage in corruption or not is a function of the underlying opportunity cost of the corruptive act, personal attitude towards illegal activities and endangerments for the returns of the corruptive act. (Witt & Dryden-Witte, 2001, p. 4). In this vein, criminal activity is similar to a paid engagement, requiring time and commitment to generate a (monetary) outcome.

Casting light on economic crime models, the reasoning underlying individual behavior has been rationality. In this context, the decision process whether to engage in criminal behavior is based on the consideration of expected costs, e.g. opportunity costs resulting from the time allocation between legal and illegal activities, and expected return. Optimizing time allocation will go hand in hand with the maximization of the expected individual utility, where judgments are the result of the likely gain to be realized from either legal or illegal engagement (Witt & Dryden-Witte, 2001, p. 3). Clearly, one's decision to allocate time towards criminal activities depends on the expected utility from such acts. Witt/Dryden-Witte (2001, p. 5) distinguish four factors that decisively influence one's decision to engage in criminal behavior:

I. expected gains from crime relative to earnings from legal work
II. chance/risk of being caught and convicted
III. extent of punishment
IV. opportunities in legal activities

Economic models of crime, of which Becker provided the most influencing model, mainly focus on sanction effects and the work-crime relationship. In this vein, Becker provided a comparative-static model putting emphasis on the deterrent effects a criminal justice system could have on criminal behavior. Using a static one-period allocation model, Becker treated crime and work as substitutive activities, where allocating more time towards legal work would, in turn, lead to less criminal behavior due to finite time restrictions (Witt & Dryden-Witte, 2001, p. 6). The static model has developed over time, allowing for multifaceted analyses of criminal behavior in multiple periods. Subsequently, these models were not only able to provide a deeper insight into individuals underlying trade-off to commit crime but also to highlight the adverse effects of crime in terms of social consequences (e.g. higher social costs) and welfare effects in particular. Some extensions even included interdisciplinary perspectives allowing for a multifaceted analysis of individuals' incentives to accept and pay bribes (cf. Bowles/Garoupa (1997) for an interdisciplinary setting. Cf. Chang et al. (2000)).

In general, a criminal is perceived to commit crime if the expected gain resulting from deviant behavior exceeds the gain from legal activity and the expected concomitant costs (Becker, 1968, p. 176ff). Such costs not only include actual transaction costs but also opportunity costs resulting from discounting possible future earnings that would be lost in case the delinquent is caught and punished. In Becker's view, "offences are viewed as economic activities with external effects and punishment is conceived of as a form of taxation." (Skogh, 1973, p. 305). Hence, while maximizing utility, variations in individual behavior are only subject to variations in tastes or values (Gibbons, 1982, p. 175).

According to Becker's model, the number of delinquencies committed by an individual represents a function of the following: probability of conviction, p_j, the concomitant cost of the punishment, f_j, and the costs and benefits, respectively, resulting from the delinquency u_j. The extent of p's and f's influence allows assessing the respective risk preference, where a higher influence of 'p' represents risk appetite, whereas a higher influence of 'f' represents risk aversion (Gibbons, 1982, pp. 173-174).If f_j is reduced to a degree that compensates an increase of p_j , the expected income of an illegal act would remain the same, but not the expected utility due to a change in the level of risk (Becker, 1968, p. 178). The number of conducted offenses, O_j, is described by the following function:

(3.2.1) $$O_j = O_j(p_j, f_j, u_j)$$

As such, one could derive the implication that if the penalty (being defined by the probability and severity) is higher, the expected income from illegal activities must outweigh the income from legal activities in order to reinforce a preference for crime (Witt & Dryden-Witte, 2001, p. 5). On the face of it, risk perception is a pivotal element of the economic discussion of crime. However, this is a

straightforward rational choice argument, leaving no room for inferences from norms, values, personality traits and the like. This approach implies that criminals are simply not driven by social conditions or other-regarding considerations but solely by self-centered utility maximization.

By trying to reduce the negative externalities that are imposed on the victim by the thief, Becker makes use of the Pigouvian solution by introducing a 'fee' through a simultaneous increase in probability of conviction and fines. Becker concluded that, if simultaneously executed, a fierce increase in the probability of criminal sentencing, p, and an increase in punishment costs, f, would deplete the ground for criminal behavior (Gibbons, 1982, p. 173).

Unsurprisingly, based on the ideas of rational choice, such a crime model serves as a means to explain corruption from the perspective of both briber and bribee. For example, a thief striving to carry out a criminal act might offer a bribe to the official (e.g. police officer) in order to buy himself out of trouble. He will offer a (monetary) portion of his prospective gain from the criminal act, creating a win-win situation for both him and the official; at least as long as overall welfare aspects exceed the individual's personal suffering from breaking rules. Highlighting the thief's decision process, including the occurrence of bribes, creates a straightforward sequence of actions, as can be seen below in Figure 2.

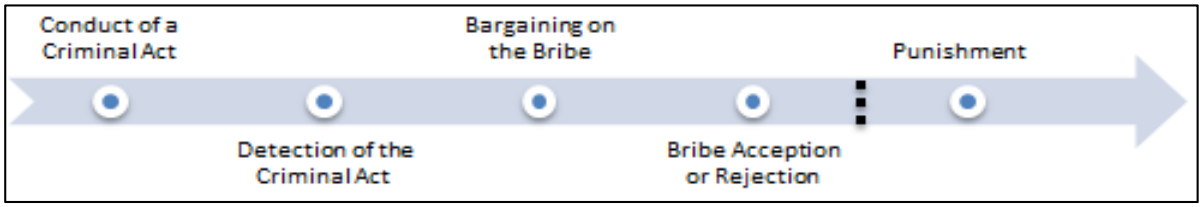

Figure 2: Bribe Occurrence - Sequence of Actions (own illustration)

Becker's approach of simultaneously increasing the extent of punishment and the probability of a criminal's sentencing to reduce the frequency of crime is not necessarily unanimously supported within the economic discussion of corruption. Some scholars emphasize that based on an individual's discount of a possible future punishment, an increase in the probability of a criminal's sentence, going hand in hand with an earlier actual conviction, might impose a larger preventive effect on crime commitment than increasing the punishment, which likely might precipitate contrary effects (Steinrücken, 2004, p. 301). The idea is that an increase in punishment also increases the costs of a possible wrong condemnation, leading to a situation where judges might be more careful in sentencing criminals for their corrupt act unless it is entirely proven. In a setting of exceedingly high punishments, fewer acts might actually be sentenced. This is especially true for acts of petty corruption, leading to a decrease in the detection of such acts due to less efforts made to deal with such minor delinquencies.

Bearing in mind that the expected costs of punishment highly depend on the detection probability, the effect of an increase in punishment might induce a detrimental effect where, in particular, petty corruption might become more lucrative. This in turn might induce a vicious cycle where the government tries to curb corruption by raising the punishment but actually causes an increase of corrupt acts (Steinrücken, 2004, p. 304). What is more, research indicates that people respond differently to changes in the three main characterizations of punishment: celerity, severity and certainty (cf. Pat-

ernoster (2010), Nagin (2013)). This should be considered when implementing proper deterrence measures. A criminal's mind having to decide upon the execution of a criminal act most likely is a symbiosis of the ideas mentioned before. Enhancing the governmental transparency, including the judiciary, legislative, and executive authorities accompanied by an increase of the probability of a criminal's sentence and an earlier actual conviction, might lead to a deterioration of the criminal's utility function to become corrupt.

It is worth mentioning that pure rational choice approaches trying to explain a human's behavior are more often than not at odds with what can be observed in reality. Such a theoretical body suggests that individuals apply a bundle of calculations to any situation, weighing means and ends and consequently calculate costs and benefits in order to reach rational decisions.[10] It should, however, be noted that Becker did not expect criminals to always possess perfect knowledge. Rather, rationality in this sense assumes that the criminal's behavior is in accordance with a systematic set of preferences (Gibbons, 1982, p. 174). Thus, as outlined before, having regard for rational choice deliberations, the choice of an illegal over a legal action is simply determined by the weighing of utility, risks and costs derived from these actions (Cornish/Clarke (1987)). It is worthwhile critically examining the explanatory power of pure rational choice approaches within the criminal context.

Mehlkop/Graeff (2010, p. 190) argue that Becker's model lacks the consideration of "social factors such as varying opportunities and incentives in various social and socio-structural situations", leading to surprising inferences that can be drawn from Becker's rational choice approach. "Individuals do not become 'criminals' because they differ from other people in terms of their basic motivations; they commit crimes because of their different costs and benefits." (Mehlkop & Graeff, 2010, p. 191). However, research indicates that individual decision-making is diverse and seemingly inconsistent at times, thus not consequently realizing a systematic set of preferences. The existence of hyperbolic discounting and reversed preferences decisions advocates this argument (cf. Lichtenstein/Slovic (1971), Tversky et al. (1990), Laibson (1996)). Seemingly, time structures also play a decisive role in individual decision-making and preference building, allowing for time inconsistent choices of actions (cf. Loewenstein (1987)).

Along the same lines, Lambsdorff (2012) argues that the rational choice theory brings about two seemingly conflicting outcomes, one with and one without existing corruption. On the one hand, one should observe corruption more frequently as it is the case since – at least in the absence of norms, values and the like – criminal behavior is solely driven by rational calculus. "But contrary to this calculus, we find heads of state who aim for serving their people, public servants who stick to the rules, business people who abstain from profitable bribery, and citizens who risk their lives when fighting corruption." (Lambsdorff, 2012, p. 280). On the other hand, since bribery is not a subgame perfect Nash equilibrium, its actual occurrence might already be surprising. In one-shot bribery settings, as it is usually the case, reputation does not play any role, suggesting that the bribee has no incentive to reciprocate the behavior of the briber. Consequently, the briber antici-

[10] For a critical discussion concerning the limitations of the rational choice theory, see Boudon (1998). For a discussion of the applicability of rational choice theory in the general crime context, see cf. Farrell (2010). Piliavin et al. (1986) provide and test a rational choice model of crime, reaching mixed conclusions.

pates the bribee's deviant behavior (e.g. pocketing the money without providing the respective service) and thus he should not pay any bribes in the first place. Even in repetitive settings, the exchange will terminate eventually, leading to what is called an *endgame effect*, suggesting that the bribee will deviate from the reciprocal arrangement at some point. This entails that by using backward induction, the briber will refrain from paying bribes in the first place as well. Accounting for this seemingly conflicting outcomes, "the rational, self-regarding calculus of detection and punishment seems to be only half of the answer to explain human decision-making. What is the other half?" (Lambsdorff, 2012, p. 280).

The other half is likely to be answered by using a behavioral approach. Thus, one has to allow for the fact that human decision-making is more likely a function of the underlying environment, institutions, norms, values and the like. The individual's identity matters insofar as it decisively interacts with any given environment and thus influences individual decision-making (Akerlof & Kranton, 2000).

As a result, a more comprehensive understanding of individual decision-making in the crime context procedure calls for an encompassing approach. The growing consent on the persistence of bounded rationality and the application of heuristics rather than the human's ability to employ comprehensive calculations of costs and benefit in order to maximize utility at any time benefit a behavioral perspective (cf. Gigerenzer/Selten (2002), Schmid (2004), Wacker (2010), Cartwright (2011)). Clearly, the growing body of approaches represent an addition rather than substitution of the rational choice approach. It is the next chapters' aim to provide evidence that individual decision-making in the context of crime in general and corruption in particular is subject to circumstances beyond clear-cut reasonable calculations of costs and benefits.

3.1.2 Some Remarks on Psychological Determinants

In contrast to the ideas of pure rational choice, psychological approaches, which shed light on the prevalence of an individual's bounded rationality, have amplified over the last years. The impact of biological, genetic, and neuronal structures as well as psychological conditions have come to the forefront, trying to explain the ambivalence and variability of the individual mindset. In the following, some fundamental concepts will be discussed before attention will turn to two specific psychological models that are able to explain individual misbehavior.

The individual's cognitive limitations unleash certain behavioral patterns. In this context, generally, science refers to what is called *bounded rationality*. "Two features of the brain provide foundations for behavior and decision-making. One is its *limited information processing capacity*. Humans are purposeful but bounded. They are generally not irrational or random in behavior. […] The second is *modularity* – different brain components have some ability to affect behavior independently of other modules" (Schmid, 2004, p. 28). The human brain relies on fundamental patterns, simplifying and accelerating processing, often leading to decisions that are more intuitive, people frequently refer to as 'gut feeling'. By any means, humans simultaneously or sequentially implement various techniques: they make mental accounts, organize choices in a lexicographical style, and enforce selective perception and the like. However, research indicates that the individual's extent of self-control

is highly decisive for reaching a deliberative decision, thus weighing the pros and cons in a rational fashion (Achtziger, et al., 2011, p. 16).

In general, self-control is of high importance in quite many economic situations, where its relevance ranges from intertemporal supply of labor productivity to consumer behavior. On the face of it, self-control is treated "as the capacity of one "more rational" self to override the decisions of a more impulsive one (or several)" (Achtziger, et al., 2011, p. 5). To put differently, self-control can analogously be used to willpower, self-discipline and self-regulation. All this is in line with the idea that resources needed to exhibit self-control are the same that are used for controlling and restraining thoughts and impulses, persisting cognitive tasks and the like. As it is evidently true, these resources are limited, being used for one task only leaves a reduced (if at all) amount of self-control for subsequent tasks. Using up cognitive resources necessary for self-control induces a state of *ego depletion*. Consequently, in a state of ego depletion, self-control is less pronounced, thus leading to more automatic and thus less deliberate and less rational decisions (Achtziger, et al., 2011, p. 16). Evidently, people frequently find themselves in situations, in which their cognitive resources are depleted. As a consequence, subsequent decisions are taken less appraisingly, possibly leading to more inconsiderate outcomes such as corruption. Arguably, people in situations of extreme psychological and physical situations are more prone to corruption due to a decreased level of self-control resulting from ego-depletion, for example in the context of sports.[11]

As past experience shows, the rational behavior approach is crucial but falls short in exhaustively explaining individual behavior as a result of an economic decision making process, such as in situations where individuals do not possess full information (cf. Barberis (2011)). The so-called homo oeconomicus has been augmented in order to broaden the perspective. Challenging pure rationality, new approaches shed light on a more sophisticated view. Since the inception of second and third generation models explaining social behavior, major focus was put on effects of reciprocity, emotions and social-image concerns. Lambsdorff (2012, p. 281) emphasizes that reciprocity is the decisive factor explaining the existence of corruption. Using these extensions, individual behavior is abstracted from pure fairness norms towards a more sophisticated self-image, which is concerned with obtaining and maintaining a proper social-image towards his peers (cf. Bénabou/Tirole (2006), Andreoni/Bernheim (2009)). However, theory also suggests that individuals are likely to engage in herding behavior by following the example of the peers. In their so-called 'Broken Windows Theorem', Wilson/Kelling (1982) have impressively outlined the interdependence of disorder and criminality within a society. Here, a window that has been broken through outside influence can set a signal to the peers, communicating the existing social norms of enduring misbehavior. They state that this kind of misbehavior has immediately to be condemned before having the chance of spreading out, as the current state of social norms is quickly communicated, possibly incepting beliefs about the peer's (mis)behavior and thus, in turn, inducing conditional misbehavior itself. In this

[11] Take for example the case of doping, which can be considered as a form of corruption as well due to the inherent manipulation of competition. Athletes might resort to doping more often due to degradation of self-control. However, this effect has yet to be examined.

context, social preferences and contextual information play a decisive role. Utilizing these approaches, corrupt behavior can be explained on a completely different level.[12]

Evidently, various cognitive, situational and social aspects considerably impact individual decision making in general and in the case of corruption in particular. A person is distinctively driven by these underlying factors, leading to a more or less pronounced inclination towards engaging in corruption. It is thus the interplay of a set of factors that lead to corrupt behavior, rather than the sole result of a rational calculation of costs and benefits.

In what follows, two specific theories that build the foundation of psychological analysis of individual attitude will be discussed in more detail: the Theory of Reasoned Action by Ajzen/Fischbein [(1975), (1980)], and the Theory of Planned Behavior by Ajzen (1985). Both being mainly inducted by the work of Ajzen, the latter theory represents an extension of the former, rather than a new approach.

Starting with the Theory of Reasoned Action, this theory has been used to predict behavioral intentions and explicit behavior, which are the result of motivational influences. The idea of this model is that "behavioral intentions, which are the immediate antecedents to behavior, are a function of salient information or beliefs about the likelihood that performing a particular behavior will lead to a specific outcome." (Madden, et al., 1992, p. 3). Beliefs that are precedent to behavioral intentions were distinctively clustered into two groups: behavioral and normative.

Behavioral beliefs represent the "underlying influence on an individual's attitude toward performing the behavior", while, in contrast, "normative beliefs influence the individual's subjective norm about performing the behavior." (Madden, et al., 1992, p. 3). Here, 'attitude' represents a person's positive/negative evaluation of the particular action's execution and 'subjective norm' the perceived approval from third parties. Both drive the person's motivation to perform a certain action. On the face of it, information and salient beliefs interact with individual attitudes and subjective norms, resulting in the manipulation of intentions and actual behavior.

The magnitude of interaction between intentions and actual behavior is subject to three conditions: It first depends on how specific the measure of intention and the behavioral criterion are. In addition, it is also subject to the extent of stableness of the intentions regarding the difference of time of measurement and performance. Ultimately, the degree of the individual's deliberateness in carrying out the act plays a decisive role (Madden, et al., 1992, p. 4). Testing this approach, conducted meta-analyses point to the model's successful prediction of both behavioral intentions and actual behavior, which is seen as useful to identify target strategies for changing behavior (Sheppard, et al., 1988). Following this theory, the more inconsiderate the individual's attitude (e.g. if he evaluates the particular behavior as positive) and subjective norms (e.g. if he obtains consent) are and the stronger the behavioral intention's influence on actual behavior, the more inclined the person will

[12] Pioneer work concerning the interconnection of human incentives and corruption has been provided by the approaches of psychological foundations of incentives (cf. Fehr/Falk (2001)) and conditional corruption (cf. Dulleck et al. (2008) and Dong et al. (2012, p. 609ff), where "the justifiability to be corrupt is influenced by the perceived activities of others.").

be towards corrupt behavior owing to the perceived likeliness that this will enhance his utility (e.g. increased wealth).

Extending the boundary conditions of pure volitional control that were defined previously, the Theory of Planned Behavior introduces a third aspect, which influences behavioral intentions: the perceived behavioral control. Following Ajzen's argumentation, perceived behavioral control is mainly subject to the (perceived) possession of essential resources and opportunities to perform a certain behavior and represents an exogenous effect, influencing both behavioral intentions (indirectly) and actual behavior (directly). "The indirect effect is based on the assumption that perceived behavioral control has motivational implications for behavioral intentions. When people believe that they have little control over performing the behavior because of a lack of requisite resources, then their intentions to perform the behavior may be low even if they have favorable attitudes and/ or subjective norms concerning performance of the behavior." (Madden, et al., 1992, p. 4).

Both approaches are suitable to explain corrupt behavior as a result of psychological determinants rather than purely rational behavior in economic terms. Here the idea is conveyed that actual behavior is a result of cognitive processes, where attitudes, subjective norms and personal beliefs about their individual control over certain behavior play a decisive role. Empirical evidence underpins the idea that particularly personal confidence in the ability to perform a specific action (e.g. accepting a bribe) highly influences and predicts actual behavior (for empirical aspects cf. Bandura et al. (1980).

As Eliasberg (1951, pp. 326-329) points out, according to the psychological view, individual's actual behavior is unlikely the result of a sound business calculation, as the risk is not properly assessed. Rather, "corruption is a psychologically unsatisfactory and incomplete, legally wrongful and motivationally unethical substitute for public sympathy." Psychological impacts on individual behavior to become corrupt are diverse, creating interdependencies between the inner and outer world, which are illustrated in the figure below.

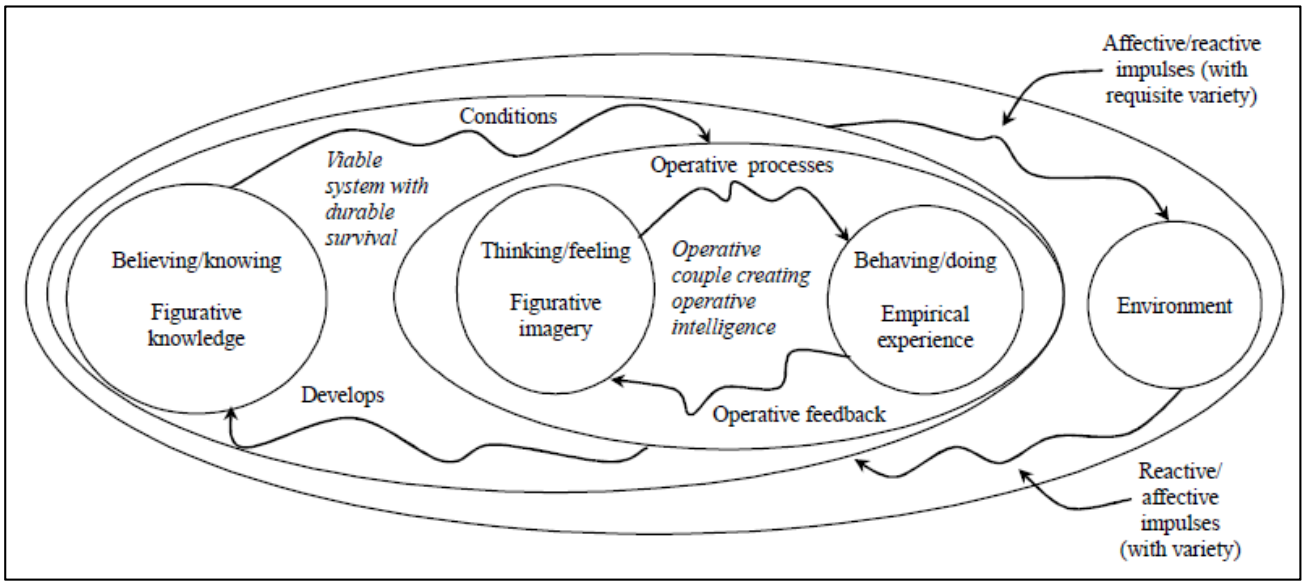

Figure 3: Impacts on Behavior from a Psychological Point of View (Yolles, 2009, p. 703)

Clearly, the psychological approach differs from the economic assumption of pure rationality, notably the calculation of expected costs and benefits, in making the decision to become corrupt. Rather, the approach sheds light on the prevalent diversity of individual characteristics running into the argumentation that corruption and criminal behavior as such is more likely to be the result of a mental disorder and subjective (mis)judgment rather than the outcome of economic calculations. On the face of it, the perverted individual's state of mind is the underlying reason why people engage in corruption. "Psychoanalytic theorists believe that criminal behavior is the result of a mental disturbance. From a Freudian perspective, this may have been caused by a conflict between the id, ego, and superego, or it may be the result of an improper fixation during a stage of emotional development. […] The criminal does not have the ability to feel empathy, remorse, or guilt for his or her actions, and has not developed a sense of right and wrong." (See, 2004, p. 16).

Focusing on the individual's state-of-mind, Bandura's (1986) Theory of Social Learning theory emphasizes that deviant behavior most likely is the result of what was learned through the observation of others rather than trying something on one's own initiative. This 'role-model' idea might explain why, once corruption started due to, for example, an infringement from foreigners, corruption seems to accelerate as a *perpetuum mobile*. Combined with Ajzen's ideas of reasoned action and planned behavior, these approaches lay the foundation for explaining corrupt behavior from a psychological point of view.

3.2 Meso Perspective - The Impact of Sociological Factors

3.2.1 A Brief Review of Existing Theories

Comprehensive research has been carried out in order to explain deviant behavior from the sociological perspective. Challenged by a great variety of cultures and norms, the Symbolic Interactionism Theory was the first sophisticated sociological approach to connect deviance with the world of social interactions using symbols like rules, roles, gestures, or words.

As stated by LaRossa/Reitzes (1993), the Symbolic Interactionism Theory assumes that behavior is foremost learned and performed through social interaction for which meanings are the underlying factors. These meanings are individually assigned and not inherent in objects but rather depend on subjective interpretation. Thus, individuals are not born with such meanings but develop them on the basis of social interactions and communication with others. As these valuations are constantly shaped and subject to exogenous influence, individual behavior (e.g. accepting bribes) is a process of development, where an individual might be corrupt at some point in life and be fully genuine in another without having inconsistent preferences. Because such a concept represents an important motive for individual behavior, acceleration effects might occur in a society. Once corruption is incepted, people adapt their behavior due to changes in meanings based on the social environment. As society affects individual behavior through inherent norms and values, a concept of social structures evolves, possibly creating fertile ground for corrupt behavior. Consequently, individuals tend to do certain things based on the meanings they assign under specific circumstances.

The so-called Evolutionary Theory supports the idea of an evolutionary process of norms, where societies are believed to evolve like biological organisms in stage processes of increasing complexity. Contrary to the early contributions by Herbert Spencer (1857) on the topic of Evolutionary Theory, contemporary evolutionists anticipate such a process not to necessarily result in a superior outcome. Understanding the interrelated complexity allows for anticipating certain behavioral patterns, such as corruption, as part of an evolutionary process of adaptation (Gould, 2002, p. 1339).

In this vein, a rather new approach highlighting the evolutionary process of norms is pursued by the field of social-neuroeconomics. Powerful explanations and predictions of human behavior are generated through the combination of economics, sociology and neuroscience. "Economics and other social sciences might benefit from social-neuroeconomics because of the potentially unifying force of neural data for choice-based approaches. Most of economics assumes, for example, that beliefs about other people's behavior are based on a rational assessment of the available information; they are neither directly affected by preferences nor are they disturbed by emotions. However, beliefs about other people's trustworthiness are strongly affected by reward and emotion circuitry." (Fehr & Camerer, 2007, p. 425). Present literature still entails an ongoing debate concerning the usability and conformity of results derived from studies in neuroeconomics. Skepticism exists to what extent such approaches illuminate causality rather than spurious interdependencies. These tools might be useful to provide a more comprehensive understanding of human behavior but, as it is true in general, be critically revised before making strong inferences (cf. Rustichini (2009), Davis (2010), Harrison/Ross (2010)).

3.2.2 Characteristics of Sociological Factors and their Impact on Corruption

Sociology is the study of complex social relationships and interactions. From a sociological point of view, "corruption is not restricted to the acts of specific decisions. It is a process involving attitude build-up, deliberate planning, historical antecedents, social mobility, group affiliation, and other sociological factors." (Alatas, 1980, p. 25). Therefore, a closer investigation of norms, culture, and the like will lay the foundation for further discussion. Because the individual is subject to these relatively invariant factors, the causality direction is somewhat clearer than it was before. As will be pointed out subsequently, empirical evidence points to the fact that distinct sociological conditions have certain impacts on corruption, rather than the other way round. Although hardly any extensive research has been conducted on the topic of corruption explicitly, sociological theories explaining criminal behavior can be used and transformed in order to explain corrupt behavior.

3.2.2.1 Culture, Religion and Gender

Until recently, the influence of culture on economic outcomes has been neglected by modern neoclassical economics. This has to be accounted for by the difficulty to filter out the pure effects of culture within a number of interrelating effects of institutions and traditional economic variables (Fernandez, 2008, p. 1). Usually, culture is seen as "a set of social norms and beliefs that lead a society to a specific equilibrium when multiple equilibria exist." (Barr & Serra, 2010, p. 863). A more sophisticated definition of culture takes account of "the values, attitudes, beliefs, orientations, and

underlying assumptions prevalent among people in a society." (Harrison & Huntington, 2001, p. xv).[13]

Cultural aspects have a fundamental impact on the pervasiveness of corruption in a country, which have been extensively analyzed in various contexts and a number of studies (Lambsdorff, 2007, p. 6f). Here, not only religious views or the acceptance of authorities, but also the acknowledgment of family values and multilateral respect for and consideration of foreign cultures and ownership play a decisive role. These aspects shape one's mindset and, if lacking, possibly drive the individual towards corrupt behavior. In this sense, cultural values "justify and guide the ways that social institutions function, their goals and modes of operation. Social actors draw on them to select actions, evaluate people and events, and explain or justify their actions and evaluations." (Licht et. al., 2007, as quoted by Barr & Serra, 2010, p. 862). Thus, if a culture tolerates deviant behavior such as corruption, corruption might be observed more frequently as it is socially justified.

As Treisman (2000, p. 51f) points out, religious traditions influence the occurrence of corruption to some extent, finding that Protestant traditions lower the level of perceived corruption. Especially in more hierarchical systems (e.g. Catholicism, Eastern Orthodoxy Islam), "religion may shape social attitudes towards social hierarchy and family values and thus determine the acceptability […] of corrupt practices." (Dreher, et al., 2007, p. 6). In this vein, dominant hierarchical religions are more prone to corruption due to, at least according to existing literature, a combination of lower individual and institutional efficiency (cf. La Porta et al. (1999), Treisman (2000)). As was found by La Porta et. al. (1999, p. 233f), religious diversion significantly interacts with the legal system's quality, stating that a high proportion of Muslims or Catholics negatively correlate with a countries' quality of government. This is insofar important, as the ability to supervise and enforce laws and thus the aptitude to fight corruption highly depends on a government's quality. In overall terms, not only does religion have a direct impact on corruption, but it also imposes an indirect effect through governmental leverage from a legal perspective. According to existing research, it can be argued that Protestant traditions have a dampening effect on the spread of corruption while the presence of Catholicism, Muslims, Buddhists, Hindus as well as missing diversity of religion (so to speak a religious 'monopoly') within a given country seemingly drive corruption (cf. Paldam (1999), Paldam (2001)).

In a similar vein, Park (2003) finds that both masculinity and power distance are predictive factors of a country's corruption level. These findings are consistent with the belief that men are more aggressive, more ruthless and greedier than women. As was shown by Swamy et. al. (2001), women consistently engage less often in corrupt behavior. In addition, Gatti et. al. (2003) show that a higher proportion of women, older people, and working population in a society have detrimental effects on the inclination towards accepting bribes. Again, this effect might also suffer from reverse causality. "Low levels of corruption may impose restrictions on male-dominated networks, and provide women with legal recourse and improved access to higher positions. Women's rights would be dif-

[13] Even though, according to both definitions, norms and values belong to culture, a composite definition will be applied leading to a separated consideration of norms and values in the following subchapter.

ficult to establish in corrupt countries, and they would contribute little by themselves to lower corruption." (Lambsdorff, 2006, p. 21).

3.2.2.2 Norms and Values

Highlighting the challenge to clearly define corruption, the holistic view of norms plays a key role. Such behavior can only be labeled deviant when social norm compliance does not exist. Clearly, the exact definition of social norm compliance is subject to the respective country, culture or ages. Even though the distinctive impact of norms is not yet unambiguously identified, they are believed to insistently warp the presence and pervasiveness of corruption (Fisman & Miguel, 2007, p. 1021).

Norms are assumed to be social when underlying values are shared. Consequently, behavioral deviation will lead to social deprecation, accusation, and will eventually flow into repudiation. As argued by Gibbons (1982), "a crime is not merely behavior but is behavior that is qualified by some rule or norm. Norms, whether in their general form as principles or more particularized as rules, influence behavior by providing reasons why action should or should not take place. When choices about action are being made, they specify standards for what is approved by stating ready-made resolutions of practical conflicts in advance of the decision" (Gibbons, 1982, p. 175).

In this sense, norms determine what is being accepted in its sphere of action and individuals have a guidance concerning how to properly behave to be part of the particular community.[14] Where clear norms did not evolve over time, the distinction of wrongdoing is not self-explanatory. In general, norms build a culture's foundation, shaping the functional principles of societies. In cases, where norms have to be preserved and protected, the right methods of enforcement have to be chosen. Since social justification of norms is a *sine qua non* for successful enforcement. As the essential feature in the enforcement of social norms is the fact that violators are punished for what they did to third parties and (usually) not to what they did to the actual punisher, a proper assessment of what is socially justified represents the key challenge (Fehr & Rockenbach, 2004, p. 786).

An important but often neglected point in the discussion of norms and the incidence of corruption is that "'corruption norms' are perpetuated not because citizens believe corruption and malfeasance are desirable outcomes, but because the behaviors deemed legally and officially corrupt are often justified by local social practices." (Truex, 2011, p. 1134). It is therefore important to preserve welfare-benefiting norms and fight those, which impose detrimental effects on the society's well-being. As stated by Bardhan (2006, p. 343), cultural anthropologists and sociologists are of the opinion that moral decay can be seen as the cause for the ongoing escalation of corruption. Economists, however, stress the underlying incentives and organizational structures as the decisive factors. The peculiarity and relevance of social norms is not universally distinct but is rather subject to geographical, historical and versatile sociological characteristics.

[14] Della Porta/Pizzorno (1996) coined the term 'moral cost' and Fisman/Miguel (2009) the term 'social cost', both aiming at the same idea. From an individual perspective, the lower both costs are, the more inclined would an individual be towards accepting bribes, as punishment from the intrinsic moral and extrinsic social side would be low. In essence, norms and values (de)legitimize acts of corruption. For more information on moral costs, see also Goel/Rich (1989).

In conclusion, internalized social norms and values, e.g. during childhood, play a decisive role in determining the individual inclination towards or against corrupt behavior. With proper norms and values in place, an individual might experience a situation of cognitive dissonance when being seduced to act in a socially contemptuous way, which in turn might prevent him from misbehaving, e.g. accepting bribes, in the first place. This internalization's extent is a dominant feature of actual behavior in the future. As a country normally consists of a heterogeneous group of nationalities, existing social norms have to be comprehensively conveyed to foreigners. Evidently, not only are migrants exposed to the new country's inherent norms but they also shape its norms over time. The degree of extensiveness to which existing corruption gradually influences underlying norms and values is still open for debate and research.

3.2.2.3 Education

So far, the impact of education on corruption has not received as much scholarly attention as the factors discussed previously, leaving room for further research.

As was stated by Dreher et al. (2007, p. 10) and has been empirically verified by Treisman (2000) and Knack et al. (2003), a separation between "public" and "private" and a higher level of education will result in a lower level of corruption. Because education evidently is a vital driver of the magnitude of moral, tolerance and modesty in a society, these factors negatively correlate with the extent of corruption and thus impose dampening effects. Following this reasoning, the presence of corruption can be reduced through an enhanced access to education, especially in developing countries (Truex, 2011, p. 1134). This argumentation is in line with the findings of Long (1992), stating that higher education enables students to learn about incumbent social responsibilities and thus raise their awareness for compliance with moral codes.

Having a closer look at the impact of education on corruption throughout various levels of schooling, Truex (2011, p. 1139) found that education indeed reduces corruption through lowering the tolerance of corrupt behaviors. Although the degree of the positive impact of education on the reduction of corruption varies across the schooling levels, empirical evidence conveys a clear statement concerning the effectiveness of education even across different types of corrupt behavior. Such a mechanism creates artificial pressure on people and might prevent them from accepting bribes by making them more sensitive to the longings of society and fellow human beings.

In contrast, the opposed effect might apply as well, where higher education leads to more corruption, although empirical science is relatively quiet on these aspects. As argued by Eicher et al. (2009), higher educated people are more productive and efficient, thus generating higher outputs and rents, which in consequence might be more likely exposed to corruption. Although higher education also raises the ability to monitor misbehavior, an imbalance might emerge. "We find that economies with intermediate levels of education remain in a poverty trap since the level of skills creates sufficient corruption rents but not enough monitoring." (Eicher, et al., 2009, p. 205). Because holding higher offices requires a certain level of education, the observation might be in line with the status quo, since even in countries, where higher education exists, still an alarming level of

corruption can be observed. However, the magnitude of this effect needs to be examined by empirical research in more detail.

3.3 Macro Perspective - External Aspects

3.3.1 Criminological Aspects and Theories

Within the research field of criminology, organized crime has been the most essential research area and, in fact, stimulated the attention for corrupt behavior. From a criminological point of view, corruption represents both an underlying causality for and a side effect of crime, where corruption represents a facilitator of illegal activities (Huisman & Walle, 2010, p. 118). As such, the further discussed theories on the topic of criminal behavior in general can be adapted to an analysis of corruption in particular.

The field of criminology provides a comprehensive insight into the origins of social structures, causes of crimes and the dispersion of criminal acts. Crime is perceived to have several roots (e.g. mental deficiency, broken homes, minority status, age, class, inadequate socialization, alcoholic parents, and the like), highlighting the proximity to the sociological perspective (Matsueda, 2010, p. 125). Therefore, it is important to have a closer look at the driving criminological theories explaining incentives for corrupt behavior.

Similar to the ideas of the theory of Symbolic Interactionism, Edwin Sutherland introduced the Differential Association Theory (1939) to the spheres of criminology by using sociological features and the design of systematic crime. Commonly accepted as one of his major contributions, the Differential Association Theory obtained scholarly attention in the criminological field similar to the Social Control Theory or the Strain Theory. The Differential Association Theory connects the inclination towards criminality with learned behavior, which is appropriated from other groups the delinquents associate themselves with. Because individuals engage in pack behavior, such identification groups exert leverage effects. Through interaction, values, attitudes and opinions are adapted, leading to a change in individual behavior, possibly towards deviation from their initial intrinsic motivation.

Originally, nine different principles were proposed defining three concepts that explain an individual's inclination towards deviant behavior in its basic form: normative conflict, differential association, and differential social organization, subdividing the area of attention into the levels of society, the individual, and the group (Salinger (2004, p. 254), Matsueda (2010, p. 126)). Importantly, not only the actual deviant behavior is learned through interaction but also the motives and the rationale underlying such a behavior.

The normative conflict occurs at the level of society and is referred to as conflict over the adequacy of the law. From Sutherland's perspective, every sophisticated society is exposed to normative conflicts over inappropriate behavior, as the existence heterogenic opinions and positions concerning values, norms, idealism and the like, is distinctive for such societies. The more simple societies are, the less they face problems of crime. As sophisticated societies are characterized by multifarious

specialization rather than similarity, conflicts arise and thus heredity of deviant behavior is introduced into the picture. Based on these observations, Sutherland concluded that criminal behavior is rooted in normative conflicts, which arise in developed societies due to divisiveness over appropriate behavior. As appropriate behavior is based on an individual's definition and decision whether or not to entirely follow the law, tensions arise (Matsueda, 2010, p. 126).

The differential association process comes to light at the individual level, where it explains normative conflicts in a society translating into criminal acts. As it is proposed by this theory, an individual's affinity towards committing crime is learned through communication and interaction with intimate peer groups. The content of learning such behavior is determined by both skills and techniques for committing crime as well as favorable intrinsic motives and states-of-mind. As unfavorable conditions might neutralize the effect of the favorable ones, Sutherland concluded that the ultimate deviant act is the result of a positive ratio of favorable to unfavorable preconditions to crime (Matsueda, 2010, p. 126).

Subsequently, differential social organization is taking place at the group level, highlighting the transition of normative conflicts in a society into actual rates of crime of particular groups from a structural perspective (Matsueda, 2010, p. 127). The ultimate extent of the actual crime rate of a group is determined by the ratio of the magnitude a group is organized in favor of crime versus the groups organized against crime.

In summary, according to the Differential Association Theory, three aspects are essential for an individual to commit crime. First, the individual must be able to commit the crime (e.g. according to one's skills and techniques); second, the individual has adapted the required personal inclination towards crime; third, on objective opportunity to commit the crime must be given (Matsueda, 2010, p. 127). The causal structure of crime commitment within the framework of the Differential Association Theory looks as follows:

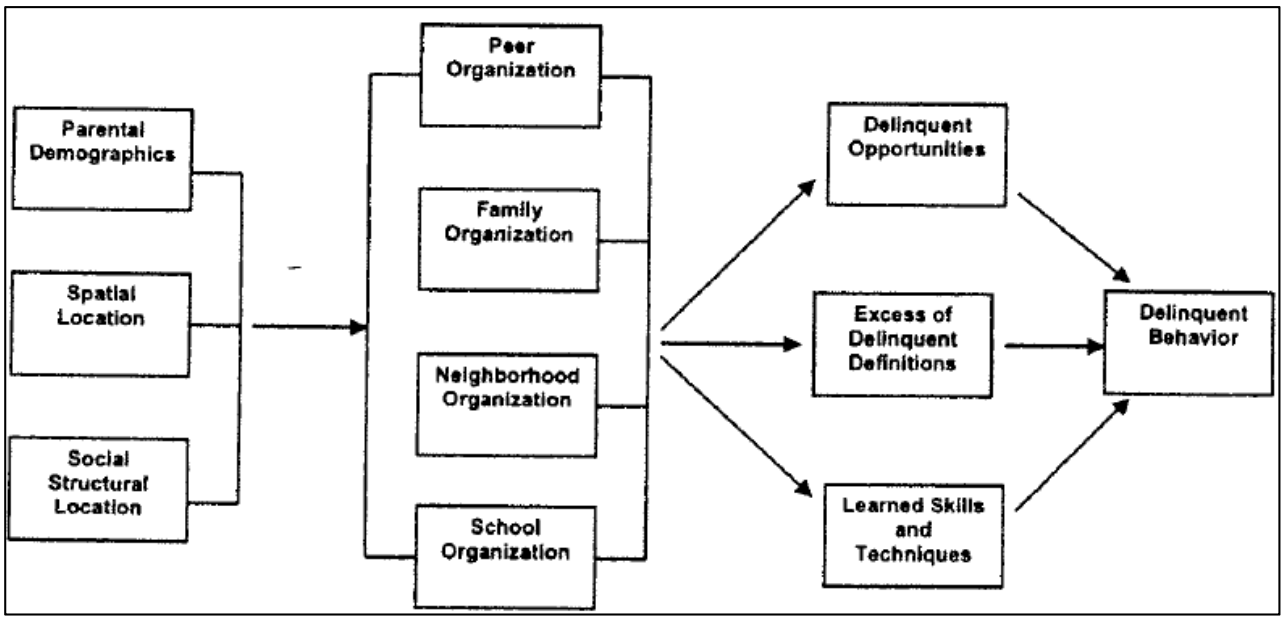

Figure 4: Diagram of Differential Social Organization and Differential Association Processes (Matsueda, 2010, p. 128)

This theory was further developed by Cohen/Felson (1979) into the Routine Activity Theory, highlighting the importance of the characteristics of crime rather than the characteristics of the actual criminal. Interestingly, here, crime is perceived as 'normal' behavior and its frequency is merely subject to given opportunities, as long as the benefits outweigh the costs. As prior theories lacked the ability to explain changes in crime rates caused by changes in opportunities, the scholars' aim was to provide a theory, which was capable of explaining a rise in crime incidence despite a soaring welfare. According to this theory, this can only be explained by the fact that crime is fairly unaffected by sociological conditions, such as unemployment or poverty, and that a rising societal welfare also increases the opportunities for criminal acts. This development, in turn, induces higher crime rates, as observed in the post-World War II period of the United States (Cohen & Felson, 1979, p. 593ff).

Another influential theory explaining criminal behavior is the so-called Social Control Theory. Initially introduced by Albert J. Reiss (1951), it has come to public and scientific attention through the work of Travis Hirschi (1969) and has finally evolved into the General Theory of Crime, introduced by Gottfredson/Hirschi (1990). The main idea of the Social Control Theory is that delinquent behavior is most likely the result of missing social bonds. Anecdotally, every person is potentially a delinquent and only the ties to the society, family and friends are hampering such deviant behavior.

Having purposely positioned his theory in contrast to the two specific perspectives referred to as 'strain' and 'cultural conflict', Hirschi provides a more profound approach by introducing four specific types of relevant constraints and testing them on empirical grounds rather than simply highlighting a list of examples, as it was done before. In this vein, Hirschi highlighted that the variation in the acceptance of the individual basic moral system most decisively influences the relation between moral beliefs and delinquency (Jensen, 2003, p. 7).

The four constraint elements are referred to as social bonds, which, if in place, constitute barriers to deviant behavior, because individuals will successfully tie with the social environment. In this sense, social bonds are characterized by the attachment and proximity to families, approval of existing institutions and social norms as well as participation in activities, with the underlying belief that these things are of importance (Hirschi, 1969, p. 16f). In fact, according to Hirschi's belief, those elements represent separable effects in the explanation of deviant behavior, which allowed for sophisticated empirical testing. "His analysis showed that measures of attachment, commitment and belief had significant and independent effects of delinquency, but that mere involvement in conventional activities did not inhibit delinquency." (Jensen, 2003, p. 9).

In 1990, the Theory of Social Control developed into the General Theory of Crime. Here, self-control is viewed as the defining component of behavior and as a non-deterministic element of an individual leading to the proposition that self-control directly influences the inclination towards deviant behavior. The extent of self-control is internalized in early life through the interaction with and affection towards their parenthood and determines the affinity towards criminality once the children are grown-up (Gottfredson & Hirschi, 1990, p. 155). Consequently, when facing low self-control, people are inclined to strive for short-termed pleasures of crime without paying too much attention to the consequential outcomes (Hirschi & Gottfredson, 2001, p. 90).

Evidently, the discussed theories concentrate on criminal behavior as a whole rather than explicitly explaining corruption. Fortunately, corruption is treated as a part of crime and thus the presented theories can be adopted to describe corruption. "The application of criminological theories results in a plausible hypothesis on causations of corruption. This hypothesis illustrates the interconnections of elements of motivation, opportunity and control at the individual, organizational and environmental levels. This dynamic and mutually reinforcing relationship can have a spiraling down effect, amplifying deviance and increasing the likelihood of corruption." (Huisman & Walle, 2010, p. 137).

3.3.2 The Role of Institutions

Institutions, either of legal, political, or of entity form, represent the foundation of a society. They determine, promote, and curb the economic creation of value, based on the principles of competition, legality, sociality, and humanity; at least at best. Having the wrong institutions in place or giving them too much power might create fertile grounds for corruption. Empirical evidence from OECD countries points to the understanding that improved institutions directly and indirectly (through their impact on the shadow market) mitigate corruption, as they consequently reduce room for harmful (at least from a welfare perspective) rent-seeking behavior (Dreher, et al., 2005). Subsequently, the impacts of institutions of various kinds will be analyzed and possible solutions to alleviate these impacts will be outlined. Although hardly able to be tested, the mechanisms connecting institutional efforts and their effect on the spread of criminality and economic outcomes can at least be theorized (Rose-Ackerman, 2006).

Developing the topic of institutions, the provision of a clear definition is the starting point. "Institutions are the rules of the game in a society or, more formally, are the humanly devised constraints that shape human interaction." (North, 1990, p. 3). This definition highlights the idea that, contrary to external factors such as geography, which are outside the individual influence, institutions can de facto be affected to a certain extent, at least in the long run. Institutions play a decisive role in setting the rules and constraints on human behavior and creating effects via incentives. Thus, in the event of existent corruption, institutions heavily affect the society's viability. Highlighting their meaningfulness, "institutional corruption is a condition that exists when our institutions (governments, corporations, and not-for-profits) formalize a set of policies and practices that weaken the effectiveness of society and the public's trust in these institutions" (Bazerman & Tenbrunsel, 2011, p. 144). Essentially, they can be subdivided into two groups: economic and political institutions. While economic institutions are decisive exchange situations where agents and markets meet, e.g. commercial organizations, political institutions set the rules and restrictions for such exchanges.

There are diverse definitions in place concerning what exactly is meant by institutions, whereby mostly concepts of economic processes and exchange mechanisms are introduced. One view regards institutions as specific players of such interaction, for example universities, governments, companies, or the like (Mantzavinos, et al., 2004, p. 7f). Another view highlights the distinction between institutions (e.g. courts, governments), which set the rules, and players (e.g. organizations, companies, agents) playing the 'game', where the institution's purpose is to provide incentives to create organizations. In this vein, rules define and confine the scope of movement for the players,

emphasizing institutions as the underlying determinants of the society's incentive structures in the main and economic performance in particular (North, 1991, p. 97f).

If properly incepted, economic institutions provide fertile ground for economic growth and induce welfare-enhancing stimuli via influencing "investments in physical and human capital and technology, and the organization of production. Economic institutions not only determine the aggregate economic growth potential of the economy, but also the distribution of resources in the society." (Acemoglu, 2010, p. 2). They provide and alleviate pecuniary incentives for the appearance of corruption and thus they directly and indirectly influence a country's level of corruption (Judge, et al., 2011, p. 94). However, the capabilities of economic institutions go far beyond the allocation of goods and services via induced market mechanisms. Beyond, economic institutions also induce and influence the evolution of values and environmental characteristics. Being an anthropogenic feature, they are restricted to existing structures and resources. In this vein, economic institutions, as is true for institutions in general, are socially constructed and thus are subject to the underlying societal conditions (Granovetter, 1992, p. 4).

Political institutions play a crucial role as well, representing deep determinants of economic prosperity and consequently impact the extent of corruption. It is believed that political institutions most decisively constitute the key precondition of economic development and consequentially are of higher relevance than geography, openness to trade and the like (Bloch & Tang, 2004, p. 246). Only with the appropriate social norms will openness and political competition successfully and sustainably impair corruption. It is apparent that political aspects have to be considered when talking about the reciprocity of external factors and corruption. [15]As political leaders might be corrupt, the more power they have and the less they can be held accountable for their doings, the more detrimental effects on society will be imposed. Profound institutional quality, including a strong political macrostructure, might prevent an accelerating effect, eventually leading to a vicious cycle of bad governance and a rambling spread of corruption. Unsurprisingly, since the efficient allocation of resources in the economy and thus its performance might be negatively affected by corruption, solid political institutions very likely have the ability to alleviate incentives and opportunities to both paying and accepting bribes (Neeman, et al., 2008, p. 1).

Scholars highlighted the society's comprehension and the system of government to represent decisive factors in fighting corruption. "The smaller the society, the fewer probably will be the distinct parties and interests composing it; the fewer the distinct parties and interests, the more frequently will a majority be found of the same party; and the smaller the number of individuals composing a majority and the smaller the compass within which they are placed, the more easily will they concert and execute their plans of oppression" (Rose-Ackerman, 2006, p. 168). As this might be true in theory, empirical and experimental research is relatively quiet on whether this actually applies to the promotion of corruption. Whereas, when talking about the systematization of political systems and parties, presidential systems appear to be more corrupt than parliamentary democracies, while

[15] In his publication, W. R. Easterlin (2001, p. 21f) points to the fruitless efforts that have been made in order to curb economic prosperity in third world countries, such as financial aid, FDI, and education. He believes that these failures are subject to missing basic institutional requirements like the protection of property rights, a properly working judicative, executive and legislative, the enforcement of laws and: a corruption-free government.

proportional representation systems appear to be more corrupt than first-past-the-post systems. In total, proportional representation combined with powerful presidents represent the worst case (Rose-Ackerman, 2006, p. xxv).

Empirical studies point to the idea that the volume and the frequency of corruption is higher in non-democratic regimes due to its generally missing bureaucratic fragmentation and monopoly of power. In a democratic system, officials are elected by the citizen and thus should be more sensitive to their longings as in a more autocratic form of government. Higher motivation will eventually spill over to the creation of more sophisticated laws and more effective institutions, thus imposing a greater deterrent to corruption. The effectiveness of democratic institutions will largely depend on the inherent social norms, which condemn corruption. To a certain extent, a long history of a democratic system will guarantee the manifestation of social norms averse to corruption. By nature, acts of corruption are secrets. The more disinclined the public is towards corruption, the harder it is to keep it secret in an open society. The presence of democratic norms and values will precipitate lower levels of corruption independent of the underlying structure of opportunities for deviant behavior (Sandholtz & Koetzle, 2000, p. 38).

In this vein, the extent of corruption depends on the quality of a priori information about the bribe's effectiveness and correlates with its frequency. "The frequency of bribes increases where firms know in advance the size of bribes and believe that the service for which the bribe is offered will be delivered once the payment is made. Additionally, the frequency of bribes decreases if firms have effective recourse through government channels or a managerial superior to obtain proper treatment without agreeing to make unofficial payments" (Herrera & Rodriguez, 2003, p. 2). Having ensured their effectiveness as a means to improve relevant bureaucratic procedures, companies are more likely to invest in these countries, since they can use bribes to solve problems with public officials (Herrera & Rodriguez, 2003, pp. 22-23). Successfully deteriorating the a priori information concerning the certainty of a successful bribe might very likely reduce the incentives to pay them in the first place.

Recalling the model approach of Fisman/Gatti (2006) mentioned before, a democratic regime with a decentralized bureaucratic system and a sophisticated institutional quality in place induces high uncertainties about the bribe payment's success. Called forth by an increased magnitude of frictions and frequency of interaction with public officials, transaction costs will surge, elevating the overall amount of costs of bribing. Evidently, the overall costs of bribing also incorporate transaction costs corresponding to the respective effort to bribe public officials. In fact, due to a larger bureaucratic system, the number of intersections with public officials will rise, forcing companies to bypass regulations through the payment of bribes as long as marginal benefits outweigh marginal costs.[16]

[16] However, as the extent of underlying fraction rises, incentives and the necessity to pay bribes rise, too, in order to accomplish a certain business in the shortest time possible. From the public official's perspective, the reservation price might rise as well and thus create upward pressure on the bribe payment. Corrupt public officials might demand a premium to conduct the same service, anticipating the companies' growing desperateness to bypass the regulations as an external person cannot anticipate whether at all and when exactly the legal application will get through. This effect has yet to be empirically verified.

Because uncertainty increases the costs, a number of intended bribes is no longer economically reasonable, which lead to a lower bribe occurrence. This is because more time and effort has to be spent to induce successful bribery and by that increase the overall costs due to accrued transaction costs. Evidently, many actions of bribery will be extinguished before a public official finds himself facing the choice of accepting or refusing the bribe payment. This aspect is also supported by Rose-Ackerman (2006), stating that the given uncertainty about the bribe amount needed to circumvent government-imposed expenses increases of overall costs as compared to more stable and predictable environments. Less bribes are to be expected in an environment where the success of bribe payments is uncertain, deterring the thrive of corruption. It can therefore be argued that normally democracy with decentralized responsibilities reduces corruption, at least in the longer term (cf. Shleifer/Vishny (1993), Rose-Ackerman (1999)).

Overall, the institutions' roles are diverse and their impact on everyday life is substantial. It is their responsibility to serve the public's interest, to incept and promote proper guiding principles concerning laws, markets, competition, and the like, and to insulate people from intrinsically and extrinsically precipitated perils such as corruption. Clearly, based on heterogeneous participants, these goals are rarely unambiguously identified and it is even more challenging to recognize what is best for society. However, as coined by Joseph Stiglitz, at least near-Pareto improvements are preferable. As this is usually not the case either, guiding policies should at least pursue so-called 'wise trade-offs', where gains significantly exceed losses for most citizens (Bazerman & Tenbrunsel, 2011).

3.3.3 The Role of Geographical and Historical Characteristics

According to Bloch/Tang (2004, p. 248), geography has been identified as an important determinant to economic prosperity. The prevalence of corruption is affected by geographical features, meaning that "large, more spread out, countries might face greater corruption due to the inability to monitor government officials (potential bribe-takers) effectively." (Goel & Nelson, 2010, p. 440). A dense popularization might work in favor of exposing corrupt behavior. Based on empirical findings, a country's natural resource endowment is also positively linked to higher corruption due to increased incentives for rent-seeking behavior. The inverse causality is true, too, as corruption consequentially brings about overexploitation of natural resources through their negative impact on conservation (Laurance, 2004, p. 399). As an extensive natural resource endowment is conditional to possible exploitation, the causal arrow likely goes from geographical conditions to the occurrence of corruption. Although the link between geographical factors and rent-seeking behavior seems reasonable, the final outcome concerning the actual occurrence of corruption in a particular country still has to survive further analyses.

Seemingly, as argued before, norms are highly decisive for the occurrence of corruption, based on evolved reluctance towards corruption from a social perspective. As norms are historically incited, a country's historical development is closely linked to a population's defensive attitude, which is conducive to mitigate the adverse effects of corruption. Both, bribe-giving and bribe-taking might be socially disapproved and would thus create social pressure on people's behavior to comply with norms, even in absence of appropriate laws. Along this, history also shapes the evolution of institu-

tions. In a conscientious environment, institutions effectively combating corruption might emerge (Goel & Nelson, 2010, p. 439). However, historical factors are hardly distinguishable from political and judicial factors due to their interdependency. Scholarly results point to the fact that former British colonies possess a more effective judicial system due to the implementation of the common law system as compared to civil law systems in the former continental European countries (Dreher, et al., 2007, p. 6).

4. Consequences and Implications

4.1 Consequences on Society and Economy

Analyzing both the causes and effects of corruption, scholars point to persistent intersections. "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). It is therefore important to be mindful of their interrelations in order to successfully mitigate the detrimental effects.

Scholars point to 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, scholars are in agreement about the overall negative effects caused by corruption. The costs imposed on many far exceed the profits generated by few because corruption distorts the functionality of the whole economy. 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 if not successfully and sustainably strived against (Evans, 1999, p. 10).[17] From this perspective, corruption has entirely negative effects, because "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, where "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).

[17] There are also negative effects for the briber. "As soon as he pays he begins to lose control. If he does not get what he paid for he is in no position to complain. Having broken the law he is vulnerable to blackmail. If he tries to break the corrupt relationship he may face a variety of threats, including the threat of violence." Evans (1999, p. 10).

From a business perspective, corruption destroys incentives and opportunities, distorts efficient market allocation, scares off innovation and brain drain into the country 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 (1997b, p. 10f) provides evidence that raising 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 (2000), The World Bank (2012)).

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, leading to an unfair distribution of (financial) remuneration towards the bribe-payers. Such collusive behavior unhinges any competition and induces market failure. Political corruption is extremely widespread and imposes vicious threats. It not only fundamentally affects a country's growth and development in a negative manner; it also extensively penetrates and abandons social values, 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. Consequentially, the poor have to carry the burden as higher prices for essential services are imposed (Evans, 1999, p. 9).

Evidently, corruption has a substantial impact on migration decisions and thus precipitates transnational spillovers. Following Albert O. Hirschman's (1970) concept of "exit, voice and loyalty", Dimant et al. (2013a, p. 1274) hypothesize that individuals respond to a deterioration of socio-

economic and politico-institutional conditions, which are noticeably induced by corruption. Consequently, people affected by corruption in their home country are more prone to leaving and migrating to a better place, where corruption is less rampant. It may thus be possible to observe a "voting by feet" resulting from corruption. What is more, 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. As corruption is likely to sustainably deteriorate the returns on human capital, it is hypothesized and evidently shown by the data that corruption is among the push factors of migration and particularly relevant to explaining the "brain drain. Relying on robust findings, the authors highlight the fact that "corruption lowers the returns to education and consequently matters most to the calculus of (prospective) highly skilled migrants." (Dimant, et al., 2013a, p. 1274). The analysis draws attention to the fact that countries plagued by corruption do not only suffer from a broad variety of negative externalities, diverse institutional inefficiencies and structural problems, but may also lose—because of the negative socio-economic and political effects of corruption—indispensable human capital necessary for sustainable economic development. To reduce the outflow of highly skilled workers, it is necessary for the government to implement target-aimed anti-corruption measures (such as increasing transparency through strengthening monitoring mechanisms and penalties and enhancing bureaucratic quality).

Turning to effects on the aggregate level, the question whether corruption curbs or impels growth is not yet fully resolved. Although comprehensive research has been carried out over the last decades, two separate views emerged about corruption either 'greasing' or 'sanding' the wheels.

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 (variable income). 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). 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 ROI (Tanzi, 1998, p. 582). Companies, which need the business the most, are more often inclined to pay bribes.

In contrast, some scholars provide empirical evidence that corruption will impede 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, p. 2ff).[22] Even indirect effects are con-

[22] As rent-seeking behavior in the corruption's environment is not only the reason for economic impediment but also its result due to widespread poverty, limited risk of being caught and the like, a circular argumentation prevails (Evans, 1999, p. 6). For more information on the rent-seeking perspective see Lambsdorff (2007, pp. 109-135).

ceivable, as more corrupt countries might have problems 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, p. 681f) 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, can subsequently 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 R&D and remain rather inefficient.

As a result, 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, pp. 271-272). "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).

Corruption is an evolutionary process and so are the underlying norms, values and socio-structural characteristics. Thus, one has to be careful with universal statements concerning the effect of corruption. A comprehensive overview of the effects of corruption is given in the table below.[23]

[23] Evidently, one can hardly fully disentangle the effects of corruption on different levels in a clear manner, as many factors are heavily interrelated and thus have a negative impact on various stages.

Effects of Corruption			
Abolishment of Social Values and Norms: Tanzi (1995), Nowak (2001); Truex (2011)	**Budget Allocation (Distortions and Misallocation of Public Resources):** Mauro (1998); Esty/Porter (2002); Gupta et al. (2002)	**Inequality and Poverty:** Tanzi (1998); Gupta et al. (2002)	**Rise of the Shadow Economy (Drug and Smuggle):** Myint (2000); Schneider/Buehn (2009); Johnson et al. (1997)
Adverse Effects on a Country's Ability to Undertake Economic Reforms: Rundquist et al. (1977); Myint (2000)	**Composition of Investments is Affected:** Wei (2000); Wei/Wu (2001)	**Infringement of Civil and Political Rights:** Evans (1999); Kaufmann (2004)	**Rise of the Shadow Economy (Legal Side):** Myint (2000); Echazu/Bose (2008); Schneider/Buehn (2009);
Adverse Effects on GDP p.c. / GDP Growth: Husted (1999); Hall/Jones (1999); Kaufmann et al. (1999); Tanzi/Davoodi (2001)	**Crowding-Out of Productivity towards Rent-Seeking:** Tanzi (1998); Ades/Di Tella (1999); Baumol (1990); Murphy et al. (1991)	**Inhibition of the Government's Role:** Tanzi (1998); Rose-Ackerman (1999); Seligson (2002)	**'Robin Hood-in-reverse' Character (Money Transfer from Poor to the Rich):** Tanzi (1998); Evans (1999)
Adverse Effects on Infrastructure: Tanzi (1998); Mauro (1998); Kenny (2006)	**Deterioration of Business and Investment Climates:** Nowak (2001); Tanzi (2013)	**Lower Satisfaction with Government and Democratic Legitimacy:** Seligson (2002); Anderson/Tverdova (2003); Piga (2011)	**Slowing Down of Democracy and Market Economy:** Tanzi (1998); Johnston (2000)
Adverse Effects on Service Delivery and Human Capital: Mauro (1998); McPake et al. (1999); Tanzi/Davoodi (2001)	**Distortion of Consumption Patterns:** Myint (2000); Gokcekus/Suzuki (2013)	**Mismanagement, Wastage, Inequity, and Social Decay of Public Funds:** Tanzi (1999); Myint (2000)	**Unfair Distribution of Remunerations Inducing Higher Social Costs:** Kurer (1993); Wayne (2000); Nowak (2001)
Adverse effects on Social Welfare due to Bureaucratic Arbitrariness: Kurer (1993); Nowak (2001); Tanzi (2013)	**Distortion of Production Decisions:** Mauro (1995); Sequiera/Djankov (2010)	**Overall Degradation of Social Norms and Morals:** Bardhan (2005); Rose-Ackerman/Truex (2012)	**Unsustainable Development:** Dasgupta (2001); Aidt (2009)
Adverse Effects on the Revenue and Expenditure Side of the Government Budget (Fiscal Deficits): Tanzi (1998); Myint (2000)	**Diversion of Investment (Reduction of a Country´s Capital Stock and FDI):** Campos et al. (1999); Habib/Zurawicki (2002)	**Price Controls, Subsidized Goods and Black Markets:** Myint (2000); Tanzi (2013)	
Arbitrary Tax Raising Welfare Costs: Wei (2000); Tanzi (1998); Sandholtz/Koetzle (2000)	**Higher (Bureaucratic) Inefficiency:** Myrdal (1968); Tanzi (1998); Nowak (2001)	**Private Sector: Distortion of Markets:** Beck et al. (1991); Mêon/Sekkat (2004)	
Biased Decision-Making: Evans (1999); Tanzi (2013)	**Higher Social Costs Leading to Systemic Inefficiencies:** Myint (2000); Zhong (2010)	**Reduced Expenditure on Education and Health:** Mauro (1998); Hunt (2006); Rose-Ackerman/Truex (2012)	
Brain-drain (Skilled Emigration): Docquier/Rapoport (2011); Dimant et al. (2013a)	**Increased Income Disparity:** Gupta et al. (2002); Myint (2000); Begović (2006)	**Reduced Public Investment Quality:** Tanzi/Davoodi (1997); Sarkar/Hasan (2001)	

Table 2 - Effects of Corruption

4.2 Combating Corruption and Political Implications

Successfully fighting corruption on the individual level is a formidable challenge. As has been outlined in the previous chapters, incentives to commit acts of corruption vary widely depending on the perspective and the underlying theory. In order to reduce the individual inclination towards corruption, suitable social norms and values should be formed, accompanied by appropriate laws. As has been exemplified by various scholars, education and parenting shapes the individuals' minds and provides them with more sophisticated mental tools, which enables them to withstand the stimulus of becoming corrupt. The extent of self-control, as argued by Hirschi/Gottfredson (2001), is most decisively from a psychological point of view and can only be strengthened with good parenting and schooling. "Those poor countries with large and cumbersome bureaucracies, weak and inefficient judicial systems, and poor educational systems can reduce corruption and increase their growth potential by improving their legal systems, investing in education, reducing the size of the government, reducing dependence on foreign aid, and decentralizing the power of the state." (Ali & Hodan, 2003, p. 461).

The extent to which corruption should be actively fought against is a typical point of scholarly debate. A number of scholars provide the argument that the optimal level of corruption would be reached where marginal social benefits of reducing corruption would equal its marginal social costs. For the simple reason that combating corruption is costly, corruption is very likely to remain at a level above zero. Following this argumentation, presumably no country is completely free of corruption because individuals might use almost any given chance to profit at the expense of others for many reasons. Corruption arises due to various motivations and through diverse actions, making it almost impossible to fully eradicate it from the surface. Thus, rather the overall social costs of corruption than the actual bribe size have to be minimized. For this to be the case, the costs and benefits of specifically designed policies have to be examined for particular circumstances in particular countries (Rose-Ackerman, 2006, p. xxxii).

Due to its complexity and heterogeneity, successfully combating corruption with a single solution is hardly achievable (Doig & Riley, 1998, p. 54). "Corruption cannot be tackled in isolation, but only in the context of efforts to reduce world poverty. […] Action aimed specifically against corruption will have to go hand in hand with action to secure freedom of information" (Evans, 2003, p. 21). Thus, measures that are effective in one country can be rather ineffective or, at worst, impose detrimental effects on the combat of corruption in another country.

Typical approaches to combat corruption are, among other, the lawyer's approach, businessman's approach, market/economist's approach, increased transparency and bottom-up accountability, shift of service provision to the private sector, general public's reconnaissance of the associated burden, increased accountability of the government to its citizen and the like (cf. Ades/Di Tella (1997), Jain (2001), Rose-Ackerman/Truex (2012)). As a rule, governments resort to a combination of these approaches, which will be explained in more detail below.

Shedding light on specific approaches to combat corruption successfully, Jain (2001, p. 98) discusses three complementary approaches. The 'lawyer's approach', which follows the idea of increasing

costs and risks for corruption, the 'businessman's approach', which introduces higher wages for public officials in order to alleviate incentives to become corrupt, and the 'market/economist's approach', which aims to increase the competition's intensity and the role of the market in order to lower the value of exploitable transactions. "The lawyer's approach would be useful in reducing the impact of the discretionary powers and in increasing the costs associated with one of the deterrents of corruption. The businessman's approach aims to improve performance along another dimension of the deterrents. The economist's approach reduces the discretionary powers as well as the values of the rents associated with those powers." (Jain, 2001, pp. 98-99).

Starting with the **lawyer's approach**, the existing literature provides mixed evidence. At a first glance, one might assume that the inclination towards corruption should deteriorate when sanctions rise. The reason is that expected costs rise while, ceteris paribus, expected benefits stay the same. However, having a closer look at the corruption rankings, severe punishments alone are not sufficient for successfully combating corruption, as conditions in some countries show, as for example China, where death penalty seemingly does not impose a noticeable effect on corruption (Jakob, 1996, p. 1).

As has been previously discussed, Steinrücken (2004) assumes that simply increasing sanctions could lead to detrimental effects on the actual realization of crime in general and corruption in particular. The higher the punishment for corruption, the higher the consequences in the case of misjudgment. In consequence, the effect of higher punishment might be neutralized by a higher judge's reluctance to impose such high punishment. It therefore might not be sufficient to solely increase the level of sanctions without simultaneously increasing the probability of condemnation. Empirical evidence highlights that the latter represents a stronger deterrent effect on criminal behavior than the former (Steinrücken, 2004, p. 303f). In addition, Curti (1999) and Grogger (1991, p. 304f) state that increasing jail sentence, which in fact is extremely costly, very unlikely represents the cost-minimal way of combating corruption. Due to fact that the actual verdict of guilty is not immediately stated, expected costs of future imprisonment are discounted from an individual perspective. As such, these findings comply with the idea of rather raising the probability of condemnation[24] than simply increasing the sanctions. Wilson/Herrnstein (1985, p. 422) found that higher rates of criminality can be explained by the 'matching law'-effect, meaning a variation of time horizons (shorter) and discount rates (higher) from an individual point of view.

In theory, low public sector wages are commonly seen as a source of corruption. Thus, following the **businessman's approach**, paying high wages to public officials to reduce corruption is an approved policy measure. The intention here is that sufficiently high earnings from legal work might override one's inclination towards accepting illegal payments due to a rise in opportunity costs (cf. Tanzi (1998), Rijckeghem/Weder (2001), Azfar/Nelson (2003)). However, the evidence is greatly at odds with such expectation as empirical and experimental findings are mixed, seemingly not supporting what the main body of theoretical work has proposed. Anecdotal evidence for the ineffectiveness of rising wages exists for, among others, Kenya, Georgia, Argentina, Peru, and Singapore (cf. Tanzi (1998), The World Bank (2007), Fisman/Miguel (2010)). There, public officials' corrup-

[24] Undoubtedly, this comes at substantial costs as well and should be weighed against the concomitant benefits.

tion did not significantly decrease even after a substantial wage increase. Consequently, simply raising wages does not necessarily induce the expected effect.

Concerning the **market/economist's approach**, the interrelation between the type of a country's bureaucratic system and its ability to attract foreign direct investments as a means to induce economic progression is rather mixed. As argued before, an organized bureaucracy provides relatively few bargaining frictions through eliminating the need to engage in various negotiations about the bribe payment. Here, the responsibilities are clustered, bribe payments are more transparent and predictable and thus the frictions are minimized because the time wasted on negotiations is lower. Following this finding, a more organized regime, although being attractive for more frequent bribing, is less harmful to growth because the bribe's transaction costs are reduced (Blackburn & Forgues-Puccio, 2009, p. 806). Based on empirical investigations, such an organized system would induce a positive effect on FDI, as a more predictive environment is more attractive to foreign investors who are used to bribing anyway when conducting business. However, it is questionable to which extent of corruption such a relationship holds, as higher corruption creates an unpleasant environment where only bribe payments, which by definition are additional costs, will open the doors for business.[25]

In turn, some scholars indicate that putting pressure on the spread of corruption through the inception of a decentralized bureaucracy might negatively impede economic growth as it might crowd-out FDI's from corruption-willing/corrupt investors. The result might be a weak local government, which consists of few strong local players. Such exposition to a monopoly of powers might be equally unattractive to investors (Lambsdorff, 2007, p. 6). As uncertainty of the bribe payment's success rises, foreign companies, which are inclined towards paying bribes in order to catalyze the start of the business, might be discouraged by a large and opaque bureaucratic body. Corruption-induced uncertainty is subject to the organizational structure of the government's bureaucracy, leading to the idea that promoting bureaucratic disorganization will endogenously reduce the occurrence of bribe payments and thus its acceptance. Still, as research points to ambiguous results concerning the ultimate effect on FDI, a conclusive reasoning is difficult to be provided.

The overall effect is ambiguous and should be investigated more closely from a country-specific perspective. Paradoxically, countries that are ranked high in corruption-surveys reveal exceedingly high rates of economic growth and FDI (Evans, 2003, p. 9f). The effects are illustrated below.

[25] This view refers to the greasing the wheels theory, where higher corruption might have positive impacts on a country's prosperity. Attempts to model the entry-strategy adaptation of MNEs in a corrupt environment has been carried out by Uhlenbruck et al. (2006). In fact, some scholars argue that "foreign investors value the quality of institutions more than the level of corruption in the location selection." (Al-Sadig, 2009). Facing these obstacles, corruption is at least at Stage 2, leading to an economical and, eventually, a societal downfall. More likely, the relationship between corruption and FDI is non-linear and depends on the institutional structure.

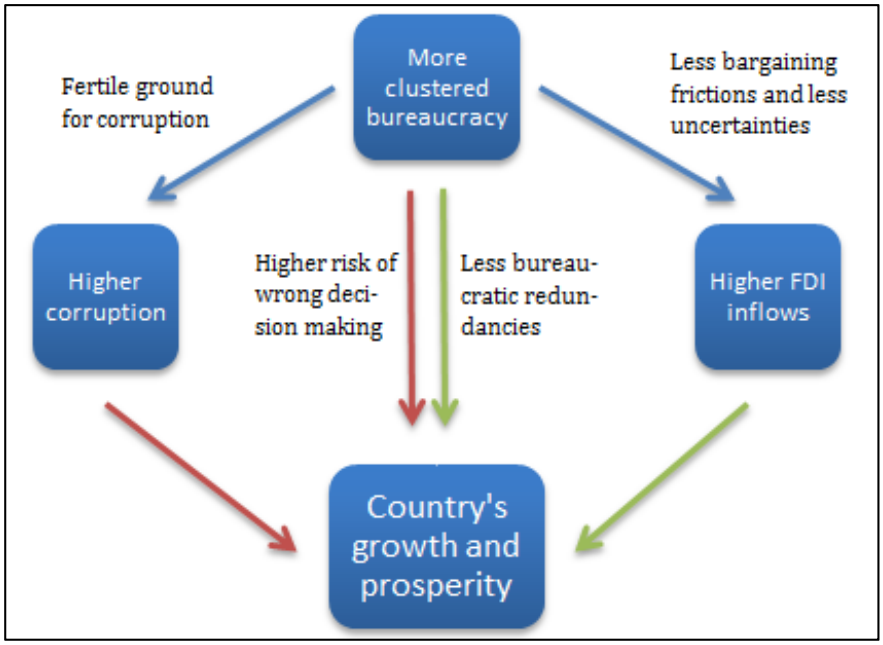

Figure 5: Effects of Clustered Bureaucracy on Economic Condition (own research and illustration)

As has been shown before, bureaucratic transparency, an increased riskiness of corrupt acts and improved competition among bureaucrats[26], as well as the reduction of individual power, induce comprehensive effects on the public officials' inclination towards corruption, making it more difficult to be corrupt in such an environment. However, changing the attitude towards corruption can only go hand in hand with changing the character of the state (Tanzi, 1998, p. 588). Thus, shedding light from a different perspective, empirical results point to the fact that economic development and the transition from developing to developed countries endogenously reduces corruption. Thus, in order to achieve sustainable success in fighting corruption, a country's goal should be economic development. As highlighted by Bardhan (1997), economic growth is the key to sustainably overcoming corruption, as people are not only inclined to making money but also to making meaning. Today's status quo seems to confirm this idea. History tells us that many of todays developed and industrialized countries have successfully combated the threat of corruption and by that, to a certain degree, successfully escaped from the vicious cycle of economic and societal impairment. However, countries on a similar stage of development experience different extents of corruption, indicating that development is necessary but not sufficient for eliminating corruption (Tanzi, 1998, p. 586f). As argued, this might most likely be the case because the corruption's pervasiveness is subject to the impact of micro, meso, and macro influences in their entirety and complexity rather than the result of a single aspect such as economic development and prosperity.

So far, various approaches have been tested in order to unveil an effect of deterrence, unfortunately with mixed success. "[…] it is generally assumed that the deterrent effect of criminal law – or any legal sanctions for that matter – is rather limited. While in theory, total control would deter organizational crime; in practice the deterrence strategy suffers from too many flaws to be effective." (Huisman & Walle, 2010, p. 138). Provocatively, Gary Becker once stated in one of his Business

[26] For the latter, this, of course, only makes sense for substitutive goods/services and most likely has no effect for complementary goods/services, as is often the case. See Blackburn/Forgues-Puccio (2009, pp. 807-808).

Week columns: "If we abolish the state, we abolish corruption." (Tanzi, 1998, p. 566). This argument clearly collides with the fact that the least corrupt countries in the world have one of the most sophisticated administrations, largest public sectors (measured by tax revenues) and most extensive social systems. The solution to combat corruption might unlikely be as simple as Becker's proposition, in all likelihood causing more damage than benefit. It is therefore less a question of the size but more of the quality and fertility of government's work.

In this vein, it is not about reducing the state's magnitude but detecting bad regulation, streamlining the processes, eliminating redundancies and mitigating the decision power of public officials. In consequence, this will minimize the incentive room for paying and accepting bribes. This might be accomplished by the decentralization of public institutions, possibly leading to limitation of corruption due to enhanced monitoring of government officials. According Litvack et al. (1998), 12 per cent of the projects carried out by the World Bank between 1993 and 1997 involved efforts to decentralize the apparatus of the state. In essence, fighting corruption and state reformation evidently represent two sides of the same coin. Following Tanzi (1998, pp. 590-591), in order to achieve success in fighting corruption, at least four objectives have to be tackled:

"**1.** Honest and visible commitment by the leadership to the fight against corruption, for which the leadership must show zero tolerance;

2. policy changes that reduce the demand for corruption by scaling down regulations[27] and other policies such as tax incentives, and by making those that are retained as transparent and as nondiscretionary as possible;

3. reducing the supply of corruption by increasing public sector wages, increasing incentives toward honest behavior, and instituting effective controls and penalties on the public servants; and

4. somehow solving the problem of the financing of political parties."

However, one cannot expect to solve the problem of corruption via simply changing political systems and the work of institutions. Evans (1999) expresses a rather gloomy view as he assumes that economic and political liberalization alone is not sufficient to resolve the problem of corruption. The reason for this is the understanding and the concession that corruption seemingly flourishes in both regulated and unregulated markets as well as under democracies and dictatorships. Rather, the individual mindset has to be in coherence with social structures and indulgent behavior, leading to a culture of human dignity and compassion.

The outlook is indeed rather gloomy concerning the provision of an overarching set of actions to be taken in a cross-country setting, given the heterogeneity of corruption. "For the very worst cases the only hope may be a thorough overhaul of the state apparatus, but for the large number of countries in the middle that is not a viable or desirable option." (Rose-Ackerman, 2006, p. xxiv). To fight corruption most successfully, countries have to be analyzed separately, specific steps have to be decided on consciously, cross-border efforts of transnational institutions have to be streamlined and

[27] Even though increased bureaucratic deregulation would crowd-out opportunities to bypass rules and thus mitigate the inclination towards rent-seeking behavior, the overall results might be ambiguous, as too much deregulation might eliminate the positive effects of red-tape (Blackburn & Forgues-Puccio, 2009, p. 808).

countries need to be forced to ratify anti-corruption contracts to be held accountable.[28] There is a long way to go and a lot of research to be conducted. "Despite the wealth of research on the causes of corruption, we know surprisingly little about how patterns of corruption incidence change through the processes of economic development and modernization." (Truex, 2011, p. 1140). A comprehensive anti-corruption roadmap has yet to be designed.

5. Interdisciplinary Perspective – An Illustration

As has already been discussed, an individual's decision to become corrupt is impacted on three different levels, all of them influencing the inclination's magnitude towards deviant behavior.

Representing the 'internal world', the micro level is characterized by the individual's intrinsic willingness to become corrupt. As has been argued before, two perspectives play a decisive role: the rational assessment and the behavioral assessment. While the former goes back to a rational evaluation, in which behavior is the result of an economically rational comparison of expected benefits and expected costs, the latter, in contrast, takes account of aspects that influence the processing of information and consequently the heuristics used as a result of the cognitive work. In this sense, actual behavior is contingent on multifarious characteristics, such as psychological aspects, the extent of self-control, heuristics and reference-point-evaluations, the 'matching law'-effect, and the like. In consequence, these factors' interplay might eventually lead to behavior, which might seem to be irrational from an external point of view. Normally, the underlying brain functions are hardly observable and thus were referred to as black box for a long time. Nowadays, neuroeconomists try to shed light on these hidden processes. In the 'meso world', sociological conditions such as underlying social norms, the culture, education, and the like, affect behavior. As previously discussed, guiding principles and fundamentals interrelate with parenting and schooling. Consequently, extrinsic opportunities represent the external world. These opportunities are mainly characterized by institutions, history, and geography, which may provide fertile ground for acts of corruption.

As illustrated in the figure below, the individual is simultaneously exposed to various influences within the internal, meso and external world. The circular illustration highlights the idea that these worlds and their effects are interleaved. The interplay of these factors leads to a decision-making process and eventually to corrupt behavior. Such behavior not only arises out of the offender's preferences alone but most likely results from underlying and encompassing constraints. Evidently, corrupt behavior induces retroactive effects, which influence the shape of the institutions, the appreciation and proliferation of values and norms and thus they bias the individual's perception of what is right or wrong, eventually making corruption more attractive. Consequently, such a vicious cycle leads to a situation, in which corruption is omnipresent and comprehensively impairs daily life.

[28] Anecdotally, Germany, being the role model in economic terms, still refuses to ratify the UN convention against corruption (United Nations, 2004).

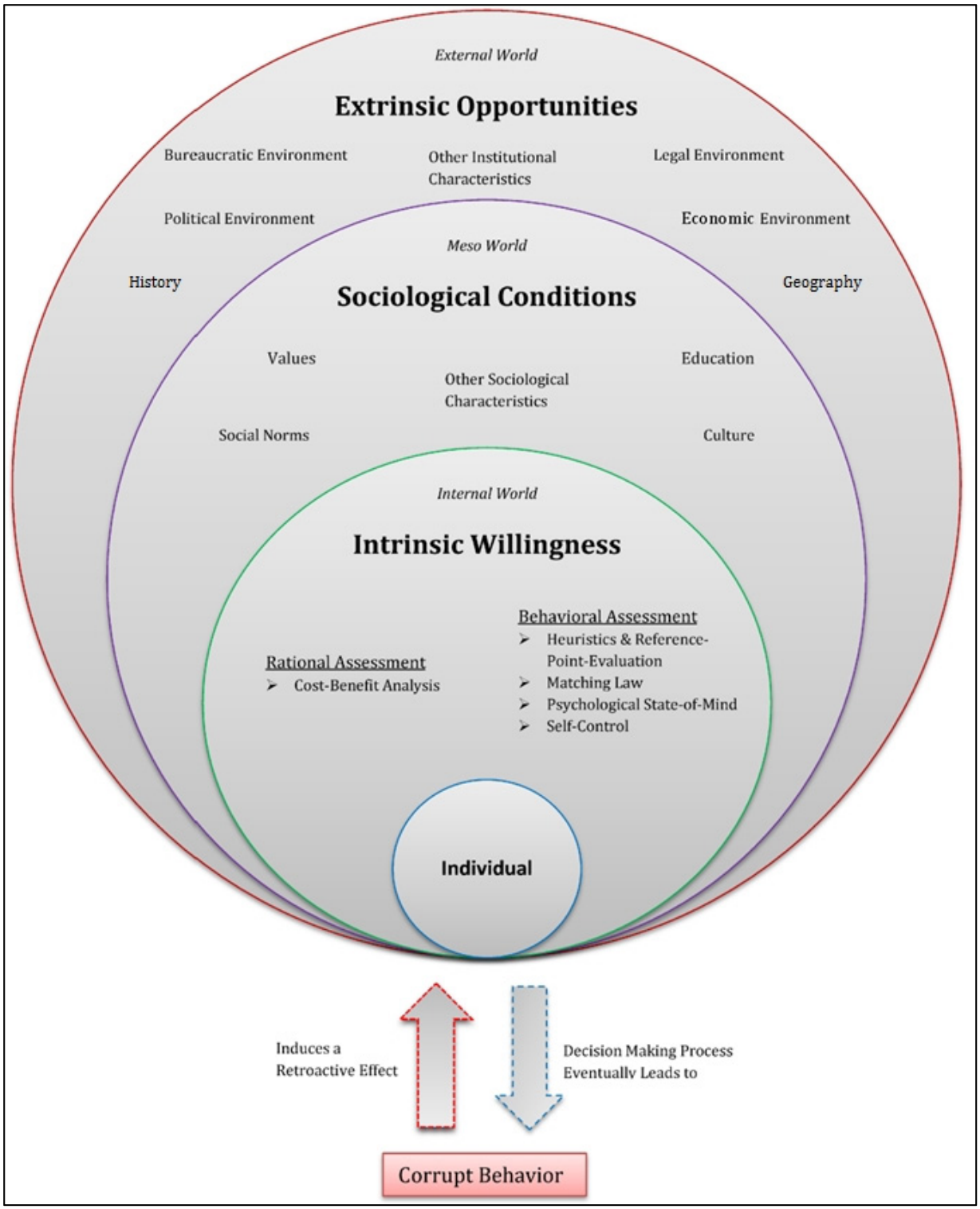

Figure 6: Interdisciplinary Perspective (own research and illustration)

6. Conclusion

As corruption is subject to the context of analysis, definitions vary across countries, cultures, and epochs. The progression of corruption has to be subdivided more precisely into distinct stages in order to distinguish different forms of the corruption's pervasiveness. Doing so allows explaining why corruption has more detrimental effects on some countries than on others depending on the stage of progress, as a stronger pervasiveness of corruption in a country's political, economic, and

societal sphere is hardly reversible, especially in the short run. Having provided an extensive literature overview, scholars favoring corruption as a form of sanding the wheels rather than greasing the wheels were in the majority, offering more profound argumentation backed up with empirical data. Corruption is more likely to impede economic prosperity, as deviant behavior always causes costs, the misallocation of goods and services and eventually leads to a downfall of market principles.

Overall, the results provided imply that individual behavior has to be analyzed more closely from a behavioral rather than from a purely rational perspective in order to bring science closer to reality. These disciplines try to explain deviation from rational choice and open the 'black box' by incepting theories, explaining why some people are more inclined towards corruption than others, which is mainly the result of intrinsic psychological interactions, the characteristics of perceived behavioral control, the form of heuristics and reference-point-evaluations, and the like. While neuroeconomics represents a promising approach, eventually providing a comprehensive look "behind the curtains", thus allowing to directly study the impact of distinct measures on human behavior, research is still at the outset of its capabilities. Rather, the more indirect approach of investigating the measures' effectiveness on actual human behavior seems to already provide vital results. Accounting for bounded rationality and the presence of heuristics allows to account for the existing interdependencies between a criminal mind and actual criminal behavior.

Discussing corruption from various angles not only enables a comprehensive understanding of this complex matter but also allows for a deeper understanding of the resulting societal and economic consequences and the implementation of sophisticated and sustainable enforcement operations such as increasing transparency, streamlining the criminal's accountability through proper punishment and the like. The aim of such a substantial discussion was to convey a deeper understanding of the underlying interactions on the micro, meso, and macro level. This perspectives' coherence determines the persistence and shape of corruption. Accounting for its diversity, the existing struggle to unanimously define and characterize corruption not only adds to the explanation of the empirically verified cross-country variations but also connotes the necessity to tackle corruption in specific rather than in general terms.

Having been a problem for centuries one probably has to be an inveterate optimist to believe that corruption can be entirely annihilated – without undermining the fact that this would not be desirable from a welfare perspective when accounted for the associated costs. 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. Being exposed to myopic and self-seeking behavior, the imperfection inherent to each human being will always be a threat to the like.

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