

Corruption in Europe in Comparative Perspective

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List of Abbreviations

BPI	Bribe Payers Index
CoC-Index	Control of Corruption Index
CPI	Corruption Perception Index
GRECO	Group of States against Corruption
EIPC	Executive Index of Political Competitiveness
EU	European Union
GDP	Gross Domestic Product
ILO	International Labour Organisation
IMF	International Monetary Fund
IRCG	International Country Risk Guide
LIPC	Legislative Index of Political Competitiveness
OECD	Organization for Economic Co-Operation and Development
OLAF	European Anti-Fraud Office
TI	Transparency International
WVS	World Values Survey
WTO	World Trade Organization

1 Introduction: Thinking about Corruption in Europe

Political scandals in nearly all European states illustrate that corruption still seems to be on the rise. In contrast to the previous practice of secrecy and denial (Myrdal, 1968), corruption is, at present, an issue which is seriously discussed in the international press, the scientific community, and on the highest political and executive levels. In the 1990s, when corruption reached increased visibility and salience in many countries in the world, the number of publications and conferences covering this topic¹ exploded. Simultaneously, numerous international organizations began to react with plenty of anti-corruption programs and agreements such as the OECD Convention on Combating Bribery of Foreign Public Officials in International Business Transactions (1999), the Council of Europe's Convention on Corruption (1999), or the United Nations Convention against Corruption (2005) (Europa.EU, 2013). Since that time, organizations' efforts have included programs to foster free and open trade, promote good governance and transparency in government accounting and contracting, improve government ethics, and expose the bribery of government officials by foreign businesses seeking contracts (e.g. Collier, 2002).

Previous research has identified what kind of circumstances supported the increased visibility and salience of corruption in the 1990s (e.g. Heywood, 2009).² The most frequently mentioned factors contributing to this are directly related to the end of the Cold War, democratization efforts of certain countries at that time, such as in Central and Eastern Europe, and the progress of neoliberal political and economic reforms. These developments were followed by the globalization of markets including growth of international trade and business, economic changes such as by the privatizations of public or state enterprises, increased mobility, the growth of global communication technologies, and people's access to these. At this juncture, the strengthening of civil societies and public awareness campaigns organized by NGOs to mobilize anti-corruption sentiments also fostered the visibility of corruption³ (e.g. Tanzi, 1998; Sandholtz and Taagepera, 2005; Arikan, 2008).

¹ Particularly notable is the book of Little and Posada Carbó (1996) "Political corruption in Europe and Latin America", the special issue on political corruption of the Third World Quarterly in 1999, and the works of Rose-Ackerman (1999) and Della Porta and Vannucci (1999). In the German context the book of Alemann (2005) "Dimensionen politischer Korruption. Beiträge zum Stand der internationalen Forschung" gives a great overview of corruption from different research fields. It is one of the best contributions to corruption research.

² See also Tanzi (1998); Williams (1999); Collier (2002); Johnston (2001a).

³ In the following considerations, the terms appearance, emergence, level, salience and occurrence of corruption are used synonymously. When I use the word "extent of corruption" I primarily refer to the dependent variable of the analysis.

Presently, international organizations such as the World Bank or the well-known non-governmental organization Transparency International (TI), which fights corruption and provides information on cross-country corruption, are engaging in open debates about this issue. TI views corruption as "one of the greatest challenges of the contemporary world. It undermines good government, fundamentally distorts public policy, leads to the misallocation of resources, harms the private sector and private sector development and particularly hurts the poor" (Transparency International, 2013c).

Unlike today, previous studies considered corruption as a phenomenon that does not necessarily have negative consequences (e.g. Leff, 1964; Nye, 1967; Huntington, 1968).⁴ Notably, the revisionist approach of the 1960s and 1970s attributed corruptive activities to a certain stage of a country's development and viewed it as a structural characteristic of early modern societies. Among the revisionists, some scholars, the so called functionalists, viewed corruption as a necessary vehicle for reinforcing efficiency and fostering economic growth by cutting bureaucratic red tape, redistributing resources, improving social welfare and facilitating socioeconomic, and political development in countries as a whole ("efficiency-enhancing-approach") (e.g. Bayley, 1966; Abueva, 1966; van Klaveren, 2009). However, empirical studies could never comprehensively substantiate this claim and with the end of the Cold War which had provided much of the rationale of corruption, the functionalist approach became obsolete (e.g. Manzetti and Wilson, 2007; Wolf, 2012).⁵

Now, it is generally agreed that corruption is detrimental to economic, social and political development (e.g. Wolf, 2012). From an economic perspective, corruption disturbs macroeconomic and fiscal stability, lowers economic growth (e.g. Mauro, 1995; Mauro, 1997), raises inflation (e.g. Braun and Di Tella, 2004) and promotes social inequality and poverty (Gupta *et al.*, 2002)⁶. In addition to economic effects⁷ (e.g. Rose-Ackerman, 1999;

⁴ His book "Corruption and Development Aid" Cremer (2008, pp. 17–27) gives a thorough overview and discusses certain advantages of corruption as a catalyst for competition, less red tape, incentives for qualified civil servants, illicit income as an essential source of capital accumulation, as a means of protecting minorities, and as a balanced assessment of corruption. See also Friedrich (1972); Lui (1985) and Beck and Maher (1986).

⁵ Nevertheless, after the collapse of communism, some authors asserted that in countries with ineffective market mechanisms and administrative structures, corruption would be beneficial to avoid regulations and accelerate long bureaucratic procedures. For instance, Holmes (2000) and similarly Cremer (2008) stated that in communist societies certain types of corruption were central for the functioning of the system. However, this argument is contested by numerous researchers (e.g. Rose-Ackerman (1999)).

⁶ See also Klitgaard (1988); Paolo (1997); Tanzi and Davoodi (1997); Aidt *et al.* (2008).

⁷ "Corruption discourages investment, limits economic growth, and alters the composition of government spending, often to the detriment of future economic growth" Mauro (1997, pp. 3–4). Similarly, Rose-Ackerman (1999) refers to some studies which verified a negative correlation between corruption and foreign direct investments; similar Tanzi and Davoodi (1997). In addition corruption leads to a higher risk of financial crises Wei and Wu (2001).

Méon and Sekkat, 2005), the social and political consequences of corruption have increasingly become major aspects of research (e.g. Tavits, 2008; Richey, 2010; Uslaner, 2012). For example, Sandholtz and Taagepera (2005) state that corruption violates the fundamental principles of democracy such as equality, fairness, transparency and accountability and further threatens regime stability.⁸ Moreover, it can lead to the systematic manipulation of political institutions and law, the rules of procedures and regulations, and to the misallocation of resources. In addition, it influences decision-making processes and frequently leads to institutional decay (Amundsen, 1999). Some studies conclude that high degrees of corruption foster low levels of trust in political institutions and even erode general trust in the whole community (e.g. Miller and Listhaug, 1999).⁹ In turn, this can have perilous consequences for the legitimacy of a political system, particularly for young democracies (e.g. Montinola and Jackman, 2002; Delhey, 2002).¹⁰ For instance, in their study of Central and Eastern Europe, (Rose *et al.*, 1998) claim that high levels of corruption negatively affect support for the democratic system and conversely increase the acceptance for authoritarian alternatives. Analyses of Moreno (2002) and Manzetti and Wilson (2007) show similar results.

In 2013, Thorbjørn Jagland, Secretary General of the Council of Europe even claims that “Corruption is the biggest threat to democracy in Europe today” (Council of Europe). Furthermore, Tavits (2008) finds out that governments can have a significant impact on people’s well-being. Examining the effect of corruption and representation on people’s subjective well-being she demonstrates that people report higher levels of subjective well-being when especially their governments perform well (i.e., are clean rather than corrupt).

It has been generally believed that corruption is confined to authoritarian countries or developing countries. Manzetti and Wilson (2007) attribute this to the fact that many scientists believe corruption to be antagonistic to democracy by nature and that when it arises, it is rather an exception than the norm (e.g. Elliott, 1997). Yet, a large number of scandals in young as well as well-established liberal democracies illustrates that corruption appears regardless of the regime type. Alatas (1990, p. 11) even observes corruption as “trans-systematic”: “It inheres in all social systems – feudalism, capitalism, communism and

⁸ See also Sandholtz and Koetzle (2000); Anderson and Tverdova (2003), Warren (2006); Basu (2006) and Chang and Chu (2006).

⁹ Similar Turow (1985); Seligson (1999); Mishler and Rose (2001); Anderson and Tverdova (2003); Davis *et al.* (2004); Catterberg and Moreno (2005); Chang and Chu (2006); Richey (2010); Morris and Klesner (2010) and Linde and Erlingsson (2012).

¹⁰ See also Rose-Ackerman (1999); Della Porta (2000); Tulchin and Espach (2000); Seligson (2002) and Chang and Chu (2006). However, some authors claim that in particular, low levels of political trust offer an opportunity for democracies’ further development (e.g. Norris (1999); Welzel (2007b)). Rosanvallon (2008) suggests that citizens are not just voters, but also serve as quality controllers for political systems.

socialism. It affects all classes of society; all state organizations, monarchies and republics; all situations, in war and peace; all age groups; both sexes; and all times, ancient, medieval and modern.” In sum, it has been demonstrated, that democracy cannot guarantee clean and transparent governance (e.g. Harris-White and White, 1996; Little and Posada Carbó, 1996; Shen and Williamson, 2005; Seldadyo and Haan, 2011).¹¹

It is conspicuous, that although political scientists have generally focused on the effects of corruption, there is still little knowledge about the area-specific factors that determine the extent of corruption. On the one hand, the prevailing research focus is currently dominated by highly aggregated large-n analyses that tend to gloss over significant cross-regional differences and variations within countries (e.g. Goel and Nelson, 2010; Littvay and Donica, 2011). On the other hand, researchers concentrate on case-studies that particularly investigate individual cases of corruption and rarely provide generalizable results (e.g. Pujas and Rohdes, 2009; Miller *et al.*, 2009). Due to this fact and its negative economic, political, and particularly social effects, corruption needs further investigation. In fact, a middle ground has to be found in order to better understand which area-specific factors are responsible for its occurrence.

For studying the causes of corruption, European countries present excellent cases. An initial examination of the patterns of corruption development in European states, clearly demonstrates that Europe exhibits a wide spectrum of corrupt activities and is characterized by large differences as to the extent of corruption across countries and across time. Particularly, both new and established democracies, in Western and Central and Eastern Europe show varying levels. In addition, an initial examination of corruption development in Southern Europe also clearly demonstrates a continuous deterioration of corruption scores in countries such as Portugal, Spain, Italy or Greece. For instance, while in 2005, Spain received 7.0 points by Transparency International, ranking countries on a scale from zero (high corruption) to ten (low corruption), its corruption score amounted to 6.2 in 2011, with a further declining tendency. The other Southern European countries show very similar developments. Moreover, it is striking, that Eastern European states, that originally had considerably worse corruption values than European countries in the South in the 1990s, are now overtaking them. As (Transparency International, 2013a) reveals, “No country is immune to corruption and the damaging effects it has for citizens and society. Across Europe [...] corruption is undermining confidence in national institutions and contributing to a sustained economic crisis. [...] Three-fourths of Europeans consider corruption a growing problem in their societies. And gaps in governance continue to plague European countries’ attempts to

¹¹ Furthermore, {Larmour 2007 #165} points out that the two most often mentioned success stories in anti-corruption took place in Singapore and Hong Kong – a one party state in Singapore and a colonial government in Hong Kong.

pull the region out of its ongoing economic crisis.” Due to this pronounced intra-and inter-European variation and continuously increasing corruption values in certain countries such as Spain, Greece, Iceland or even the United Kingdom, the following research question arises: *“What causes corruption in European states over time and across and within countries?”*

Considering corruption as a multilevel phenomenon that takes place at the country level (macro level) and is measured by certain indices such as the Corruption Perception Index, in this project corruption is also examined at the individual level (micro level), measured by survey data by the World Values Survey. Therefore, to discover the factors that determine corruption from a comparative perspective, I have designed a model at the micro and macro level, allowing for panel-analyses as well as cross-and within-national comparison (“bathtub model of corruption”).

In contrast to previous research, this study attempts to investigate the extent of corruption in European states in both longitudinal as well as in cross-national sections and at certain levels. Geographically, the study includes – according to data availability – 37 European countries at the macro level and 20 countries at the micro level. The time span for both analyses (panel and cross-section) encompasses the period from 1995-2010. Moreover, for comparative purposes and in order to uncover specific European determinants of corruption, I run all calculations with an additional sample (“non-European country sample”), including countries world-wide.

Structure of the Study

This work is divided into five sections. In order to render the phenomenon of corruption into an analytically useful concept for political science research, I firstly provide an overview of the literature on corruption which includes definitions and characteristics (chapter 2.1–2.2). Subsequently, I discuss a range of theoretical approaches and arguments made in the literature that are worth considering for the explanation of corruption (chapter 2.3). After that, I systematically review and evaluate empirical comparative studies on what determines corruption in order to identify the range of relevant indicators (chapter 2.4). Notably, it has become apparent, that theoretical approaches and empirical analyses of corruption research have developed independently from each other. For this reason and the purpose of analysis, I have designed a model that integrates and helps to explain corruption on different levels and across and within different societies. This is introduced in the third chapter (3.1), which also comprises case selection (chapter 3.2), the measurement of corruption (chapter 3.3), the operationalization of the variables at the macro and micro levels, and the description of the development of the hypotheses (chapter 3.4). In the fourth chapter, I provide a detailed description of the conducted panel and multilevel analyses including certain models (e.g.

economic, political, socio-cultural, historical, random intercept and random slope models) and a final European-specific model of the country level and as well as a multilevel model considering both country and individual level. Subsequently, I discuss the results of the analyses for both samples – European and non-European – entailing the continuous comparison of both and integrate them in the bathtub model of corruption. In the fifth chapter, I give a summary of the work and draw conclusions based on my presented results. Finally, I take a look at potential policy implications and give an outlook on research prospects in the field of corruption studies.

2 Research on Corruption: State of the Art

2.1 Definition of Corruption

Overall, the literature on corruption is diverse and fragmented. Corruption as a complex phenomenon still stands for a multitude of incidences depending, in particular, on how it is perceived by certain societies, the zeitgeist, and the prevailing academic research (e.g. Engels, 2006; Graeff, 2012). Sandholtz and Koetzle (2000, p. 33) even assert that “virtually every published work on corruption, from the 1960s to the present, wrestles with the problem of defining it.” In addition, Philp (2006, p. 91) summarizes the research field on corruption as follows: “Corruption is not a field that generates a high level of agreement. There is controversy over the definition of corruption, about how one measures it, how to explain it, whether and in what ways it is important, and how to control it.” This is primarily due to the fact that “the line between what is and is not corrupt can be so fine as to be indiscernible even to those involved.” To date, the long and elaborate scientific debate has still not resulted in a common understanding.

Yet, some clarity on the term corruption can come from its linguistic origin and historical evolution. The word corruption derives from the Latin word “corrumpere” – com-, “intensive pref.” and rumpere means “to break”. It characterizes actions such as to “spoil, weaken, distort, erode, undermine, bribe, ruin, destroy” and carries connotations of widespread moral deterioration and decay.¹² From a historical perspective, corruption once had a much broader moral meaning than today.¹³ It described processes or a state’s condition and referred to the

¹² The Oxford Dictionaries (2012) define corruption as follows:

1. Dishonest or fraudulent conduct by those in power, typically involving bribery: the journalist who wants to expose corruption in high places; the action or effect of making someone or something morally depraved.
2. The process by which a word or expression is changed from its original state to one regarded as erroneous or debased: a record of a word's corruption [count noun]: the term ‘hobgoblin’ is thought to be a corruption of ‘Robgoblin’; the process by which a computer database or program becomes debased by alteration or the introduction of errors.
3. Archaic the process of decay; putrefaction.

¹³ Corruption has been part of human relationships as long as people have been in power. Almost every work of political theory has addressed the topic, such as in works of Aristotle, Cicero, Augustine, Tocqueville, Machiavelli, Montesquieu and Rousseau. In different historical periods the term has assumed different connotations: For example, in 350 BCE, Aristotle indicated, “To protect the treasury from being defrauded, let all money be issued openly in front of the whole city, and let copies of the accounts be deposited in various wards.” For Machiavelli, corruptive practices means the destruction of citizens’ virtues; for Montesquieu, the

moral health of whole societies rather than to individual actions (Johnston, 2001b; Alemann, 2005). In this context, Friedrich (1972, p. 18) views corruption as “a general disease of the body politic persisted into modern times.” In the 1960s this moral perspective was replaced by a legalistic approach, taking the public positions of officials into account.

A review of the current literature makes clear, that defining corruption has become an issue of classifying human behavior that includes the description of individual actions rather than state’s condition or the moral health of whole societies (e.g. Moodie, 1980; Johnston, 2001b; Alemann, 2005). So, corruption is most often seen “[...] as an attribute of specific actions by specific individuals: those holding public positions and (by some definitions) those who seek to influence them” (Johnston, 2001a, p. 13). In general, the term is used for a large range of individual, illicit or illegal activities varying according to context.

In this respect, for the further specification and definition of the term corruption I apply to three behavior-focused definitions developed by Heidenheimer (2009) and that are standard in the current corruption and political science literature: market-centered, public-interest-centered and public-office-centered definitions.¹⁴ Although, they are not completely clear-cut,

transformation of a good political order into an evil one; and for Rousseau, the inevitable consequence of the struggle for power (Della Porta and Vannucci (1999)).

From a normative perspective, Noonan (1984) gives a great and very detailed historical overview of corruption in several societies, dating a period from 3000 B.C. until the end of 20th century. The book of Grüne and Slanička (2010), on the other hand, considers corruption from a cultural-historical perspective.

¹⁴ Besides the three definition approaches of Heidenheimer (1989) legal and public-opinion definitions can also be found in the literature. Legal definitions of corruption adopt positivist approaches and exclusively refer to laws including very straightforward criteria: “if an official’s act is prohibited by laws established by the government, it is corrupt; if it is not prohibited, it is not corrupt even if it is abusive or unethical” Gardiner (2009, p. 29). Even if legal definitions are very clear, they only concentrate on a particular geographical scope and, therefore, do not include a transnational dimension that can be used in a comparative perspective.

Another classification of definition refers to the *public opinion* of corruption. Heidenheimer (2004) originally differentiates three categories of corruption according to its social perceptions in the context of several sorts of political systems, its dominant values and traditions. In fact, Heidenheimer’s categories were grounded in regime types, which he interpreted in terms of relationships between leaders and followers and dominant conceptions of power, its justifications and limits. He differentiates between white, grey and black corruption:

White corruption means that corruptive behavior is largely tolerated by the society. This is typical for systems usually influenced by family ties as well as in patron-client structures.

Grey corruption which is typical for modern constitutional states as well as for countries in transition includes that corruption is tolerated far less. It is regarded as reprehensible according to accepted moral standards, but nevertheless the involved actors are still lacking any sense of doing something wrong.

Black corruption is characteristic for societies which are shaped by modern media and means that corruption is generally condemned and punished as a serious violation of moral standards and the law.

Later, Heidenheimer modified his “achromatic” view and suggested a “polychromatic” one which includes that corruption can be viewed in manifold ways and that the underlying basic conditions differ as well. He describes the ambiguity of the term corruption in the following words: “It became massively applied in more

they are intended to provide orientation in the field of corruption and allow researchers to identify its patterns from a comparative point of view (e.g. Johnston, 2001b).

Market-Centered Definitions

From an economic perspective, *market-centered definitions* (or functionalistic definitions) focus on markets and view corruption as a non-legal instrument used by individuals or collective actors to influence politics and administration. Following a rational-choice logic, corruptive civil servants understand their positions to obtain maximum profits (e.g. Leff, 1964; Klitgaard, 1988). A typical market-centered definition is offered by Van Klaveren: “A corrupt civil servant regards his public office as a business, the income of which he will [...] seek to maximize. The office then becomes a ‘maximizing unit’. The size of his income depends [...] upon the market situation and his talents for finding the point of maximal gain on the public’s demand curve” (Heidenheimer, 1978, p. 5; see also Williams, 1999).

However, it is criticized and argued that these market-centered definitions rather describe the logic and mechanism of corruptive interactions than the term in its proper sense. For instance, Johnston (2001b, p. 19) argues that this definition “overlooks not only the intangible benefits (prestige, promises of political support) that can flow from the abuse of authority, but also varieties that are not quid pro quo exchanges, such as embezzlement.” Moreover, the basic assumption that individuals are always self-interested and behave rationally to maximize their utility has to be questioned as well (Johnston, 2001b).

Public-Interested-Centered Definitions

In contrast to market-centered definitions, *public-interest-centered definitions* address both the nature of corruption and its consequences and allow, thus, for broader interpretations (Johnston, 2001b). They emphasize the moral aspect of corruption and take into account the harm done to the public by corruption. As a result, corruption is seen as an erosion of public interest. These definitions consider any activities of political or administrative officials as improper when they conflict with the public interest, as illustrated by Friedrich’s definition: “The pattern of corruption can be said to exist whenever a power holder who is charged with doing certain things, i.e., who is a responsible functionary or officeholder, is by monetary or other rewards not legally provided for, induced to take actions which favor whoever provides the rewards and thereby does damage to the public and its interests” (Friedrich, 1966, p. 74). The shortcoming of these definitions, however, is the lack of a clear definition of public interest, because it varies from society to society. Also the definition itself and consequences

multi-faceted and polarized ways, so as to overwhelm the metaphorical capacity of a black-grey-white dimension to reflect its variants“ Heidenheimer (2004, pp. 99–100).

of corruption such as the harm to the public of corruption are different issues and should be analyzed separately (e.g. Theobald, 1990; Johnston, 2001b; Gardiner, 2009).

Public-Office-Centered Definitions

Public-office-centered definitions are based on the bureaucratic ideal types of modern administration of (Weber and Parsons, 1964) and implies to its concept of public office. They describe corruption in terms of deviations from the norms to which professional office holders are usually bound (e.g. Bayley, 1966; Myrdal, 1968; Nye, 1967). Here the standards defining abuse are the law or regulations that have the force of law. Proponents of these definitions suggest that laws in most countries are more precise and stable than public opinion or conceptions of public interest (Johnston, 2005). In this context, Nye (1967, p. 419) concentrates on formal-legal norms and provides the best-known example of public-office definitions. He describes corruption as “behavior which deviates from the formal duties of a public role (elective or appointive) because of private-regarding (personal, close family, private clique) wealth or status gains: or violates rules against the exercise of certain types of private-regarding influence.”¹⁵ Yet, corruptive behavior is influenced by norms and values that are, in turn, affected by historical developments and cultural changes (e.g. Philp, 2006; Johnston, 2005). Thus, determining where to draw the line between legitimate and illegitimate behavior is one of the greatest difficulties in the effort to formulate a definition of corruption. In this context, the activities that constitute illegal corruption differ depending on the country and jurisdiction. For instance, certain political funding practices that are legal in one country may be illegal in another one. Furthermore, in some cases, government officials have broad or poorly defined powers, which make it difficult to distinguish between legal and illegal actions.¹⁶ However, while most behavior-classifying definitions of corruption fall into Heidenheimer's (1989) three definition groups, (Williams, 1999) correctly points out that all of them ultimately rest upon a conception of public office.¹⁷ Similarly, (Johnston, 2005) claims that if we would take the aspect of consequences from Friedrich's definition, we are essentially left with Nye's public-office-centered definition.

¹⁵ In addition, he points out: “In short, while this definition of corruption is not entirely satisfactory in terms of inclusiveness of behavior and the handling of relativity of standards, it has the merit of denoting specific behavior generally called corrupt by Western standards (which are at least partly relevant in most developing countries)” Nye (1967, p. 419).

¹⁶ More precisely, Robinson (1998, p. 3) added in this context, that there are “differences between the form assumed by corruption in developing countries, and between forms of corruption that are growth-retarding or threaten political stability and those that are more benign and do not undermine the economic or political viability of nation states.”

¹⁷ Williams (1999) mentions that even those who attempt to refrain from giving preference to western-oriented or legalistic conceptions of office still define corruption with reference to some underlying conception of office.

Currently, the public-office-centered definition is standard in comparative political science studies and is used by international organizations such as the World Bank and Transparency International, basically considering corruption as “*the abuse of entrusted power for private gain*” (e.g. Rose-Ackerman, 1999; Treisman, 2000; Sandholtz and Koetzle, 2000; Transparency International, 2013b). This classical definition was already proposed in a similar way by Senturia (1931, p. 448): “the misuse of public power for one’s own personal profit” and is based on the concept of corruption as specific social deviant behavior (Friedrich, 1972). Alemann (2004, p. 29) emphasizes the laconic elegance of the term: “Corruption is the coming together of just three terms – public power, private profit and misuse. Therefore, Senturia’s definition seems to be universally applicable to corruption.”¹⁸ Primarily working with data from Transparency International and the World Bank, this work refers to this broader definition of corruption focusing on corruption in the public sector or corruption that involves public officials, civil servants or politicians (Transparency International, 2013b). Yet, in this context, private corruption is not necessarily excluded, because the public sector is often in exchange with the private industry, particularly by the awards of contracts (e.g. Amundsen, 1999)¹⁹. This is discussed in more detail in the following chapter.

Moreover, it has to be carefully noted that even though this broader definition is appropriate for comparative purposes, it does not meet the complexity of corruption in its comprehensiveness. So, this definition of corruption neglects important elements of a narrower understanding of corruption implying some other valiant aspects (e.g. exchange, interaction of at least two partners, secrecy, trust).²⁰ Furthermore, it is still unclear by which standards terms such as “abuse”, “entrusted power” or “private gain”, which are matters of contention and are difficult to operationalize, can be identified.²¹ In fact, the meaning of these

¹⁸ See also Collier (2002); Kunicová and Rose-Ackerman (2005) and O’Connor and Fischer (2012).

¹⁹ Similarly, Tanzi (1998, p. 564) claims that “sometimes, the abuse of public power is not necessarily for one’s private benefit but for the benefit of one’s party, class, tribe, friends, family and so on. In fact, in many countries some proceeds of corruption go to finance the activities of the political parties.” Likewise authors such as Rose-Ackerman (1978); Rose-Ackerman (1999); Holmes and Roszkowski (1997) or Johnston (2005) rightly stresses that a precise distinction between public and private is almost impossible.

²⁰ See Rabl (2008, pp. 23–25) who gives a good overview of certain other aspects of corruption: 1. Initiative; 2. Exchange; 3. Voluntariness; 4. Secrecy; 5. Reciprocity; 6. Violation of norms / deviant behaviour; 7. Corruption as social decline; 8. Abuse of power; 9. Absence of direct victims; 10. Trust. See also Alemann (2004).

²¹ In this context, Johnston (2001a, p. 17) argues that “Many scholars have sought objective standards, arguing that answers to these questions can be found in the law or other formal regulations, or by making reference to the public interest. Others propose subjective or cultural definitions, pointing out that “the public interest” is vague and contested while laws may enjoy little legitimacy. Public opinion or cultural standards are also

certain terms often depends on societal culture and varying interpretations (e.g. Gardiner, 2009; Rothstein and Torsello, 2013). Additionally, the standard definition of corruption disregards certain differentiation between active versus passive corruption and various forms of corruption such as bribery, fraud, extortion or favoritism that are described in the following chapter.

However, Rothstein and Torsello (2013) could recently demonstrate that corruption is a phenomenon that is universally understood in a similar manner across different cultures. Based on a quantitative analysis of ethnographic data from the Human Relations Area Files, they reveal that the variation in how bribery, for instance, is understood in different cultures does not relate to different morale understandings of the problem of corruption, but to how different societies value the difference, convertibility or blurring goods belong to the public and private spheres and also what most people expect that most other people in their society will do when faced with opportunities for bribery. Moreover, referring to the term “entrusted power”, there is also an agreement in the scientific community on the fact, that the abuse of trust is viewed as morally reprehensible in all culture groups. Therefore, the term is conceived as an essential and universal element of corruption (e.g. Alatas, 1990).

Despite some weaknesses, for the purpose of this work the public-office-centered definition, that particularly Transparency International and the World Bank apply to, is the most convincing and eligible one and will thus be used in the following analysis.

promoted as one way to assess the significance of corruption – that is, whether and how a corrupt act matters in a given context. Not surprisingly, no universally applicable standard has been found.”

2.2 Characteristics of Corruption

The difficulties in defining corruption also stem from various attempts to devise dichotomies such as public versus private, petty versus grand, or passive versus active corruption or varying forms of corruption such as bribery, fraud, embezzlement, kickbacks, extortion or favoritism.²² However, the dichotomies and various forms of corruption often share common characteristics with each other and help to narrow down a useful and workable definition of corruption. The following two-dimensional distinctions are relevant to the following considerations and assist in defining corruption for the context of this research more clearly.

Public versus Private Corruption

The differentiation between public and private corruption is fundamental for the definition of corruption. *Public corruption* appears when a corrupt person holds a public office, regardless of whether the corrupting person is a private or public official. It includes the misuse of a public position, more directly political positions of governance, political authority, legitimacy, and state-society relations. In contrast, *private corruption* occurs in private organizations such as business companies. In this context, people misuse their position for personal gains and consciously violate the norms of the organization they work for. For instance, private corruption takes place when bribes are demanded or supplied by employees of firms (Williams, 1999; Argandoña, 2005).

In the following project, I concentrate on public corruption because corruption usually occurs at the public sector of states (e.g. Amundsen, 1999). In addition, Amundsen (1999, p. 2) even claims that almost every definition and concept of corruption concentrates on the state and politics and concludes that “the state is always involved.” She argues that corruption fundamentally implies a particular state-society-relationship. One side of the relationship is

²² *Bribery* describes a payment in money, services, or other valuables to make things pass smoothly, swiftly or more favorable through private, public, or government bureaucracies. *Fraud*, in contrast, is an act of misrepresentation or deception. It is an economic crime involving a kind of trickery, swindle or false pretence used by ruling groups to enrich themselves. *Embezzlement*, is a specific type of fraud, includes the misappropriation of property or public funds legally entrusted to someone in their formal position as an agent, trustee or guardian. *Kickbacks* or secret commissions, in turn, are a special form of embezzlement (e.g. Amundsen (1999)). *Extortion* involves coercive incentives such as the use or threat of violence or exposure of an individual by revealing damaging information in order to induce cooperation. *Favouritism* means that power is abused by preferring friends, family, and any-body close and trusted, which results in biased decisions regarding state or company resources. *Nepotism*, *cronyism* and *patronage* are subforms of favouritism (e.g. Andvig *et al.* (2001)).

A great overview and detailed description of the different forms and typologies are found in Tanzi (1998); Amundsen (1999); Eskeland and Thiele (1999); Andvig *et al.* (2001) and particularly Argandoña (2005).

the state that includes individuals holding positions of authority to allocate rights over public resources in the name of the state such as civil servants, functionaries, bureaucrats or politicians. The other side is society that is betrayed when these persons misuse the public entrusted power for private benefit by accepting some form of reward. The involvement of the state in corruption is also illustrated in an alternative definition, where corruption is seen as “a form of secret social exchange through which those in power (political or administrative) take personal advantage, of one type or another, of the influence they exercise in virtue of their mandate or their function” (Mény, 1996 quoted in Sardan, 1999, p. 49).

Petty versus Grand Corruption

Another widely used dichotomy of corruption refers to the distinction between petty and grand corruption. *Petty corruption* involves facilitating small-time payments that are paid out to clerks and other minor officials. “Low level corruption”, “tea money” (Tilman, 1968, p. 439), “administrative or bureaucratic corruption” (Shah, 2007, p. 235; similar Tanzi, 1998) are often used as synonyms for petty corruption. It refers to minor decisions of officials and can be found in the public administration, in fact, at the implementation end of politics. Petty corruption may include bribes to police-officers at traffic controls or to doctors in the day-to-day performance of their duties (see also Johnston, 1982; Argandoña, 2005). Contrary to petty corruption, *grand corruption* involves large payments and have large effects to high-level decision makers. “Top level corruption”, “situational or structural corruption” (Höffling, 2002, p. 32) or “outright bribery” (Tilman, 1968, p. 439) or even “political corruption” (Tanzi, 1998, p. 564) represent other synonymous terms for grand corruption. It mostly describes long-term, consciously planned corruption at the highest social and political level among the country’s leading elites.²³ Langseth (2006) argues that the most critical distinction between petty and grand corruption is, that petty corruption develops and exists within the context of established governance and social frameworks, while grand corruption involves the distortion of the central functions of government. Therefore, especially grand corruption may lead to broad erosion of confidence in good governance and the rule of law (e.g. Rose-Ackerman, 2000). Corruption in the public sector can encompass both petty and grand corruption, but often refers to grand corruption (e.g. Amundsen, 1999; Jenkins, 2007). The definition of corruption by Transparency International as “the abuse of entrusted power for private gain” includes petty as well as grand corruption.

²³ Jain (2001) even distinguishes three types of corruption: Grand corruption that relates to politicians, making decisions motivated by self-interests; bureaucratic corruption that includes activities of bureaucrats with their political leaders or with the public (e.g. citizens) and that is also known as “petty corruption” and legislative corruption that is defined as actions that influence the voting behavior of legislators.

Passive versus Active Corruption

The differentiation between passive and active corruption is another important dichotomy. The initiative to corrupt acts can either be passive or active. *Passive corruption* is demand-driven and implies that the initiative comes from the person who receives the payment. *Active corruption* means that it is supply-driven and the initiative comes from the person who pays. In fact, active corruption is the offense committed by the person promising or giving the bribe as in contrast to passive corruption, which is the offense committed by the person who receives the bribe.

In the terminology of criminal law, the dichotomy is used to differentiate between a corrupt act and an attempted offence. For instance, active corruption does not include cases, where bribes were offered, but not accepted, or solicited, but not paid (Langseth, 2006). Corruption in the public sector can include both active and passive forms of corruptive behavior (Argandoña, 2005).²⁴

²⁴ Undoubtedly, there are many more typologies of corruption, but those more specifically apply to corruption in the private sector. Examples include positive versus negative corruption Argandoña (2005) or market versus parochial corruption (Scott (1972); {Lambsdorff 2002 #143.}).

2.3 Theoretical Approaches on the Causes of Corruption

Due to the complexity of corruption, an overall theory of this multifaceted phenomenon does not exist. Previous research offers different theoretical-conceptual approaches and includes a variety of causal explanations for the extent of corruption – ranging from institutional settings, certain motives, and culturally influenced norms and values affecting corrupt behavior of individuals. In order to build a solid foundation for the analysis and the explanation of the causes of corruption on different levels and across certain countries, I will introduce and discuss certain theoretical perspectives from different disciplines that provide useful concepts for the research of corruption and offer a solid theoretical framework for further empirical studies. These approaches, namely economic (e.g. principal-agent-model) and sociological (e.g. cultural approaches such as sociological, historical institutionalism), can be applied to certain analysis levels. Thus, they form the theoretical ground for the explanation of the extent of corruption in European states. However, these approaches are not mutually exclusive, but complement each other.

Economic Perspectives: The Role of Rational Interests on Corruption

Since the early 1970s, economists have made numerous contributions to the analysis of corruption. In compliance with the market-centered approaches by Heidenheimer (chapter 2.1), they are grounded in rational-choice approaches, such as the property rights approach,²⁵ transaction cost analysis²⁶, and particularly the principal-agent theory. These approaches generally include a strong actor-based perspective that I will primarily focus on (e.g. Shleifer and Vishny, 1993; Lambsdorff, 2002).

Rational-choice approaches are based on the concept of methodological individualism that assumes that social phenomena at the macro level can only be accurately described and explained by showing how they result from the intentional states that motivate individuals at

²⁵ In the property rights literature decisions by individuals concerning goods are assumed to be especially affected by the kind of property rights individuals can exercise. “These property rights can be user rights, usufructuary rights and transfer rights. An individual who owns a house will make different decisions about maintenance than an individual who is a tenant. In the property rights literature institutions constitute property rights of individuals, as well as the means for these individuals to defend themselves against infringements of these rights” Groenendijk (1997, p. 208).

²⁶ The transaction costs theory emphasizes the importance of transaction costs for the allocation of resources and the structure of economic organization. “Transaction costs depend on the incidence of the transactions, the degree of uncertainty that the individuals face, and the “asset specificity”, e.g. the extent to which the good and the transaction concerned are geared to one another” Groenendijk (1997, p. 208).

the micro level (e.g. Arrow, 1970). As a result, social phenomena such as norms, values or social structures and institutions can also be analyzed through individual actions.

From a micro perspective, economic scholars consider human beings generally as narrowly self-interested actors who attempt to maximize their benefits and minimize their costs by making rational judgements toward their subjectively defined ends (*homo oeconomicus*) (e.g. {Downs 1957 #174; Olson, 1971). Therefore, corruption is considered as individual misbehavior, motivated by material interests, that arises where and when the costs of engaging in corruption do not exceed the gains expected from it. This implies that people commit or refrain from corrupt acts for purely material reasons and that they are not culturally predisposed to bribery, favors, or fraud (Kostadinova, 2012).

According to principal-agent theories, corruption is often initiated by the interactions between citizens (or voters) acting as principals and politicians (or public officials) who emerge as agents. Citizens have bounded rationality²⁷ and face high transaction costs in acquiring and processing more information. They choose politicians who, in turn, rule the citizens. In general, it is assumed that both parties – citizens and public officials – have conflicting interests or that their interests are not ideally aligned, so that the authority given to politicians creates scope for actions that voters usually dislike (e.g. Rose-Ackerman, 1978; Andvig *et al.*, 2001; Groenendijk, 1997; Lui, 1986). Compared to citizens, politicians have usually an informational advantage and may allow themselves to behave opportunistically: “[...] that goes unchecked because of the high transaction costs faced by principals and the lack of adequate countervailing institutions to enforce accountable governance” (Shah, 2007, p. 241).²⁸

Klitgaard (1988) puts such situations in a succinct nut shell. From his public management perspective, corruption is a problem of information and incentives. To understand the conditions under which corruption flourishes, he offers a largely heuristic model consisting of a principal, a corrupt agent and a client and suggests the following equation: “Corruption = Monopoly + Discretion – Accountability” (Klitgaard, 1988, p. 75). This means that illegal behavior is fostered when agents have monopoly power on clients and display great discretion, as well as when accountability of agents to the principal is weak. Consequently, reducing official discretion, increasing control over officials, and limiting state power would lead to a decline of corruption. Nevertheless, Klitgaard emphasizes that individual behavior is also affected by moral scruples (Klitgaard, 1988).

In a similar vein, Della Porta and Vannucci (1999, p. 20) describe corruption as a structure of corruption exchanges that involve “a simple exchange between two actors, a corrupter and a

²⁷ The concept of bounded rationality implies that individuals’ decision-making is limited by the information they have, cognitive capacities and inadequate time Simon (1991).

²⁸ For further literature see Becker (1968); Banfield (1975); Harris-White and White (1996); Eskeland and Thiele (1999); Andvig *et al.* (2001) and Khan (2009).

corrupt agent (or “the corrupted”), who derives some discretionary power from his (implicit or explicit) contractual agreement with a principal.” Thus, corruptive actions often involve groups of public administrators and cartels of businessmen. She argues that corruptive transactions are arranged more easily and faster by the intervention of so-called middlemen who establish contacts between the two parties, conduct negotiations, and finally transfer the bribes. Generally, middlemen favor the formations of bonds of trust between the involved actors and allow the corrupt exchange to be brought to a conclusion (for details see Della Porta and Vannucci, 1999, pp. 20–24).

At the macro level, rational-choice approaches may help to detect institutional structures that are prone to corruption. They implicitly assume that “systems corrupt people more than people corrupt systems” (Shihata, 2000, p. 206, quoted in Xin and Rudel, 2004, p. 297). Focusing on economic and political markets that attribute the emergence of corruption to a lack of competition in these areas, they assume that the ability to intervene in markets provides public officials with incentives and opportunities to nurture bribes. In this context, one of the first published articles on corruption and economy that has received wide attention in the academic world was Rose-Ackerman’s “The economics of corruption” (1975), who considered the relationship between market structures and the frequency of acts of corruption in the government contracting process.²⁹ According to this, corruptive behavior does not arise due to low morale, but because of a bad arrangement of rules and institutions that cannot prevent unusual and harmful human actions. Thus, it is often argued that competitive democracies as well as markets are necessary conditions for honest governments because its institutions facilitate accountability, transparency and checks and balances (e.g. Rose-Ackerman, 1997; Doig and Theobald, 2000; Paldam, 2002).

Summing up, economic approaches present one of many theoretical considerations of explaining corruption. However, they can consider only certain aspects of this multifaceted phenomenon. Thus, the underlying assumption of the concept of methodological individualism, which presumes that people always behave goal-oriented, is often questioned by certain scholars (e.g. Wüthrich *et al.*, 2001). Moreover, it is often criticized that rational-choice theories disregard the cultural context in their explanations and particularly neglect social relationships that play an important role in corruptive transactions as well as the reciprocal relationship between structures and actors. Thus, social norms such as interpersonal trust and reciprocity also remain unconsidered (e.g. Elster, 1989; Green and Shapiro, 1994). Additionally, rational-choice approaches cannot explain why actors behave altruistically under certain conditions and why moral and ethical standards sometimes become more important than people’s particular interests (e.g. Green and Shapiro, 1994; Hindmoor, 2010). In addition, economic approaches are based on a simplistic view of the

²⁹ Rose-Ackerman (1999) gives also a very comprehensive survey of the public choice literature on corruption.

state that assumes “that state organisations and public officials are solely motivated by self-interest, and leaves little room for active and conscious intervention by state actors in combating corruption, or for uneven patterns of corruption both within and between institutions” (Robinson, 1998, p. 4). Finally, rational-choice assumptions are primarily theory-based and therefore difficult to examine empirically (e.g. Green and Shapiro, 1994; Hindmoor, 2010).³⁰ Yet, economic approaches constitute an important analytical instrument to study corruption and cannot be excluded in this research. They are complement for other approaches to analyze the causes of corruption from a comparative perspective.

Sociological Perspectives: The Role of Culture on Corruption

In addition to economic perspectives, sociology offers a variety of approaches to analyze and explain corruption. Generally, sociological approaches strengthen the focus on actors' social behavior as well as their operations in communities, institutions and societies. At the same time, they also highlight cultural norms and values. That way, corruption is often conceived as a way of life, as a kind of tradition and as a set of values that belong to a society's culture and its institutions. While economists, in particular, neglect informal institutions such as cultural norms in their considerations and rather use the term as a somehow residual explanation (e.g. Banuri and Eckel, 2012), sociological approaches strongly focus on it. In fact, they allow researchers to identify and explain differences in behavior among groups and societies and enable them to get beyond explanations of social processes that are the mere aggregate of individuals' actions (e.g. Keating, 2008).³¹ In general, sociological approaches do not deny that individuals attempt to calculate their interests, but argue that outcomes are the product of the interaction among various groups, interests, ideas, and institutional structures (homo sociologicus) (e.g. Dahrendorf and Abels, 2010; Thelen, 1999). Thereby sociological approaches, namely cultural theories, have a great potential to elicit the factors that determine the extent of corruption.

In the literature, culture is often described as property of whole societies that consists of attitudes and behaviors. It is essentially observed as a collective concept, applicable to social

³⁰ In particular, Green and Shapiro (1994, p. 6) argue that the empirical record produced by rational choice approaches is quite poor: “To date, a large proportion of the theoretical conjectures of rational choice theorists have not been tested empirically. Those tests that have been undertaken have either failed on their own terms or garnered theoretical support for propositions that, on reflection, can only be characterised as banal: they do little more than restate existing knowledge in rational choice terminology.”

³¹ Among sociological perspectives, a range of additional approaches exist that are often used in the research of corruption. These usually encompass social learning theory (e.g. Bandura (1977); Vaughan *et al.* (2005)), anomie theory (e.g. Durkheim (1983); Merton (1968)), the theory of structuration (e.g. Gieger (2005), Giddens (1984)), or social exchange theory (e.g. Emerson (1976); Molm (1994)). Based on the research focus, each theory is applied differently when analysing corruption. However, these approaches either examine corruption in the private sector or strongly focus on the micro level and neglect the analysis of the macro level.

groups, composed of shared meanings and interpretations (e.g. Geertz, 1973; Hofstede, 1997). For instance, Hofstede (2001, p. 9) defines culture as "collective programming of the mind which distinguishes the members of one category of people from another."³² Welzel (2013, p. 64) even claims that "Like its biological basis, culture is a system of inheritance – programmed to accumulate, to store, and to transmit tried-and-tested knowledge of how to manage reality."

Generally, it is assumed that culture interacts with corruption through two channels, formal institutions and informal institutions such as values and social norms, and that both can differ across and within countries (e.g. Elster, 1989; Banuri and Eckel, 2012). Formal institutions are usually observed as formal rules that govern individual behavior and that are also influenced by values and attitudes (e.g. Harrison and Huntington, 2000). They are particularly considered by new institutional approaches³³ that are often used by sociologists to analyze corruption by particularly stressing the role of institutions actors operate in. Thus, it is assumed that the relationship between institutions and actors are reciprocal and cyclical (Groenendijk, 1997; Scharpf, 2006). Previous institutional theories such as rational-choice institutionalism³⁴ or historical institutionalism hold that institutions cause individuals within institutions to maximize benefits (regulative institutions) or to act out of duty or an awareness of what one is ought to behave (normative institutions) (e.g. Ikenberry, 1994; Thelen, 1999). Contrary to this, proponents of sociological institutionalism consider institutions more widely as social constructs and focus on the way they create meanings for and affect individuals and society within a given context (e.g. DiMaggio and Powell, 1983; March and Olsen, 1989; Hall and Taylor, 1996). Sociological institutionalism has particularly emerged in the early 1980s as a variant of new institutionalism and as a reaction to the "undersocialized" character of dominant approaches such as the rational-choice theory or behaviorism that had dismissed institutions as no more than an aggregation of individual preferences (Lowndes, 2010). In contrast to older institutional theories, not only formal but also informal institutions

³² Additionally, Kroeber and Kluckhohn (1952, p. 357) give a broader definition of the term: "Culture consists of pattern, explicit and implicit, of and for behavior acquired and transmitted by symbols, constituting the distinctive achievements of human groups, including their embodiments in artifacts; the essential core of culture consists of traditional (i.e. historically derived and selected) ideas and especially their attached values; culture systems may, on the one hand, be considered as products of action, and on the other as conditioning elements of further action."

³³ On the variety of institutional approaches see Lowndes (2010).

³⁴ Although rational choice institutionalism refers to rational choice theory, it is not identical to it. Generally, rational choice institutionalists observe institutions as systems of rules and incentives that influence individual behavior by affecting the context in which individuals select strategies to maximize their goals Lowndes (2010). They generally deny that institutional factors 'produce behavior' or shape individuals' preferences, which they view as endogenously determined and relatively stable (e.g. North (1990a); Weingast (1995); Weingast (1996)).

such as socially and culturally influenced norms and values and conventions are also taken into analytical considerations. Thus, institutions explicitly affect the preferences and actions of individuals through rules, norms or other social frameworks (e.g. March and Olsen, 1989; Hall and Taylor, 1996). Therefore, the development of institutions also depends of “larger 'macro level' variables such as society and culture” (Koelble, 1995, p. 232) and not in the institutions or organizations themselves (see also Lowndes, 2010). The link between formal institutions and culture is discussed in particular by (Harrison and Huntington, 2000) and by (North, 1990b) who claim that in the long term, culture influences the evolution of institutions. Moreover, assuming that institutional evolution is path-dependent, historical institutionalists suggest that the historical development of institutions can affect the extent of corruption in a society. In fact, to historical institutionalists, institutions play a determinant role since they shape the actions of individuals but are at times affected by collective and individual choices. In this way, they look at how choices made about the institutional design of government systems influence the future decision-making of individuals. This approach does not deny that individuals attempt to calculate their interests, but argues that outcomes are the product of the interaction among various groups, interests, ideas, and institutional structures. Preferences are formed by the institutional context within which they emerge and ought not be treated as fixed and in-institutional arrangements cannot be understood in isolation from the political and social setting in which they are embedded. Historical institutionalism explains continuity over time through path dependence, whereby decisions taken at one time affect those taken at a later stage (e.g. Thelen, 1999). Therefore, historical institutionalism provides, in addition to the sociological institutionalism, a further perspective for the analysis of the causes of corruption.

Furthermore, the review of the theoretical literature suggests that the relationship between culture and corruption can be examined by the analysis of informal institutions such as social norms³⁵ that are usually defined as informal rules, driven by values and beliefs that are constitutive elements of personal identities and govern interaction, and are both shared and sustained by group members (e.g. Posner, 2002).³⁶ As a result, people’s actions are partly intentional and values constitute a central element in people’s intentions. They are a powerful motivator of action and can be a moral resource from societies can profit (Welzel, 2013). People exhibit and signal their norms and values through communication and other forms of social interaction (e.g. Rose-Ackerman, 1999; Banuri and Eckel, 2012). In this context, it is claimed that corruption norms are a specific form of social norms and dictate the extent to

³⁵ Social norms can include forms of trust such as interpersonal trust, reputation and reciprocity.

³⁶ In a similar vein, Welzel (2013, p. 186) claims that “To assume an impact of values on actions is plausible when one acknowledges that human actions are at least partly intentional and that values shape intentions.”

which individuals engage in, and expect others to engage in corruption (e.g. Sandholtz and Taagepera, 2005; Banuri and Eckel, 2012).

However, while formal institutions are directly observable, informal institutions are more difficult to capture empirically and to isolate from other influences. Nevertheless, they play a central role in explaining corruption and require particular considerations in the following analyses.

In a summary, sociological perspectives, especially those which include institutional and culture approaches, provide a connection between individual decisions and the behavior of society as a whole. Thereby, they offer an appropriate theoretical complement to economic explanations and an important instrument to analyze and explain causes of corruptive behavior.

Evaluation of Theoretical Corruption Research

The review of theoretical approaches demonstrates that an overall theory of corruption does still not exist. Therefore, it is essential to combine certain theoretical perspectives from different disciplines to build a solid foundation for analyzing the causes of corruption on different levels and across and within certain countries. Considering corruption as multilevel phenomenon, that takes place between individuals at the micro level, but is usually measured at the macro level, the economic and in particular sociological approaches offer solid theoretical frameworks for further empirical analyses. Due to weaknesses in their theoretical assumptions and empirical evidences, they are not mutually exclusive but complement each other.

In sum, economic approaches, such as principal-agent theory, consider human beings as self-interested actors who attempt to maximize their benefits and minimize their costs (e.g. (Downs, 1957); (Olson, 1971)). Thus, corruption is regarded as individual misbehavior, motivated by material interests, that arises where and when the costs of behaving corruptly do not exceed the gains that are expected from it. Assuming that corruption does primarily arise due to a bad arrangement of rules and institutions that cannot prevent unusual and harmful human actions, rational-choice approaches can assist to detect the structures that are prone to corruption. However, as suggested, economic approaches can consider only certain aspects of corruption. They disregard the cultural context in their explanations and particularly neglect social norms and relationships that play an important role in corruptive transactions as well as the reciprocal relationship between structures and actors (e.g. Elster, 1989; Green and Shapiro, 1994). Moreover, they are primarily based on theory and are difficult to examine empirically (e.g. Green and Shapiro, 1994; Hindmoor, 2010). Therefore, rational-choice approaches can only be used as one of several approaches to explain corruption. They should necessary be complemented by sociological approaches, such as

institutional and cultural approaches, that focus on individual's social behavior and highlighting social norms and values. That way, corruption is often conceived as a way of life, as a kind of tradition and as a set of values that belong to a society's culture and its institutions. In fact, they allow researchers to identify and explain differences in behavior among groups and societies and enable them to get beyond explanations of social processes that are the mere aggregate of individuals' actions (e.g. Keating, 2008). Thereby sociological approaches, namely institutional and cultural approaches, have a great potential to elicit the factors that determine corruption. Referring to historical institutionalism that particularly assumes that institutional evolution is path-dependent, it is also assumed that corruption evolves over time and has its roots in the past determined by certain traditions and values. Therefore, corruptive behavior is not only caused by rational interests and lacks of competition and transparency in economic and political areas but also by certain contexts such as culture, traditions, informal conventions and historical developments that, in turn, influence institutions and organizations people operate in (e.g. March and Olsen, 1989; March and Olsen, 2006).

However, neither economic nor sociological approaches by themselves can completely analyze the complex phenomenon of corruption and its causes. They can explain some aspects of the extent of corruptive behavior, but cannot cover the entire width of possible explanations. Overall, it is assumed in this project that different motives such as rational interests or certain norms and values can lead to individual actions of corruption in the public sector. According to the corruptive behavior of civil servants, for instance Tanzi (1998, p. 572) notes that "some public officials will be corrupt perhaps because of their own psychological or moral makeup [...] realistically not all officials respond the same way to the same incentives [...] agents are heterogeneous." For these reasons, both, economic-rational considerations based on private profit and sociological considerations referring to social motives, cultural and history, play a fundamental role and cannot be regarded separately in the explanation of the extent of corruption.

2.4 Empirical Studies of the Causes of Corruption

The empirical search for the causes of corruption has led researchers from different disciplines to consider a broad spectrum of variables based on various methodological avenues. Overall, the literature review indicates that the majority of the empirical studies of corruption have either consisted of qualitative case studies that particularly investigate individual cases of corruption, or of quantitative studies that focus on aggregated large-n analyses.

By using case studies, Médard (2009), for instance, examines corruption in Sub-Saharan Africa, Lodge (2009) in South Africa, Kpundeh (2009) analyze the institutional framework for corruption control in Uganda, and Sindzingre (2009) compares African and East Asian corruption. Khan (2009), Hutchcroft (2009), Quah (2009), and Hao and Johnston (2009) focus on corruption in Asian societies, while Schlesinger and Meier (2009), Burke (2009), and Anechiarico and Jacobs (2009) study corruption in American states. Furthermore, Whitehead (2009) examines corruption levels in Latin America.

However, in the European context, only a few scholars have concentrated on the research of corruption (e.g. Tänzler *et al.*, 2012). For instance, Della Porta and Vannucci (2009) focus in their article on corruption in the Italian party system and describe explicitly the involvement of certain political parties in the organization of corrupt practices, while Pujas and Rohdes (2009) compares party finance and political scandals in Italy, Spain and France. They particularly conclude that the emergence and expansion of corrupt forms of political finance are primarily related to “political opportunity structures’ rather than a ‘cultural’ predisposition towards corruption” (Pujas and Rohdes, 2009, pp. 739–749). Additionally, Angermund (2009) undertakes a historical study of corruption under German National Socialism and depicts corruption as a structural and propping element of the Nazi Regime and its politics. Furthermore, Miller *et al.* (2009) deal with corruption in post-communist Eastern Europe. Via focus group discussions they investigate the interaction between post-communist officials and citizens from the Ukraine, Czech Republic, Slovakia and Bulgaria. They particularly conclude that: “There is no [...] deep cultural attachment to corruption as a systematic virtue in postcommunist circumstances as it arguably may have been under communism” (Miller *et al.*, 2009, p. 578).

In sum, these primarily qualitative studies are less focused on the causes of corruption and cannot provide generalizable results. They are strongly case-related and less comparative, so that eligible indicators for an overall analysis model that explains the extent of corruption cannot systematically be classified and generalized. For these reasons and in order to identify the factors that influence the extent of corruption, I additionally draw on the existing quantitative empirical literature from a comparative perspective and present the most

important analyses in this realm of research chronologically. To avoid redundancy, I briefly summarize and evaluate the most important studies and provide a systematic overview of the reviewed studies on corruption, including its dependent and independent variables, levels of analysis, major findings and limitations (see Appendix A). I also attempt to highlight research gaps in the field of explaining corruption. Additionally, I will discuss these studies in greater details when I describe the development of the hypotheses in chapter 3.4.

Evaluation of Empirical Corruption Research

The review of the quantitative empirical literature particularly indicates that the majority of these studies concentrate on the analysis of the macro level (country level) by almost exclusively using macro level indices as dependent variables such as the Corruption Perception Index. Just a few authors attempt to analyze corruption on the micro level (individual level) as they use alternative sources for measuring corruption (see for example Alt and Lassen (2003); Atkinson and Seiferling (2006); Glaeser and Saks (2006) and Mocan (2008)).

However, all of these studies show that certain economic, political-institutional, historical, cultural and socio-demographic factors might matter as causal explanation of the extent of corruption (see figure 2). However, they produce contradictory results. These imply, for instance, controversies referring to the direction of causality and the weighting of causal relationships between certain variables. All in all, most studies refer to these variables as indicators of corruption: the level of economic development (e.g. Husted, 1999; Shabbir and Anwar, 2007; Littvay and Donica, 2011), a country's rate of inflation (e.g. Paldam, 2002), level of income (e.g. Sandholtz and Koetzle, 2000; Montinola and Jackman, 2002), unemployment rate (e.g. Mocan, 2008), economic freedom (e.g. Sandholtz and Koetzle, 2000; Shen and Williamson, 2005), a country's integration in the world economy (e.g. Sandholtz and Koetzle, 2000; Montinola and Jackman, 2002), size of government (e.g. Alt and Lassen, 2003; O'Connor and Fischer, 2012), the degree of democracy (e.g. Treisman, 2000; Sandholtz and Koetzle, 2000; Alt and Lassen, 2003), federalism (e.g. Treisman, 2000), the level of education (e.g. Glaeser and Saks, 2006; Mocan, 2008), a society's religion (e.g. Seldadyo and Haan, 2006), historical experiences (e.g. Xin and Rudel, 2004; Littvay and Donica, 2011), individual values (e.g. Husted, 1999; O'Connor and Fischer, 2012), a country's degree of ethno-linguistic fractionalization (e.g. Shen and Williamson, 2005; Glaeser and Saks, 2006) or the sex of actors (e.g. Seldadyo and Haan, 2006).

However, the analysis also clarifies that almost all studies struggle with similar problems, especially from theoretical as well as methodological deficiencies. In sum, there are five areas almost all of these studies suffer from. Firstly, they provide, to some extent, a weak theoretical framework. This implies that the variables used in the empirical analyses have

scarcely theoretical background or underlying models to explain the extent of corruption from a comparative perspective. It is striking that empirical explanations of corruption seem to have generally developed separately from theoretical approaches, respectively there are only little theoretical references and backgrounds.

Yet, if approaches or theories are used, then scholars usually apply to rational-choice approaches (e.g. Alt and Lassen, 2003), but neglect sociological explanations. This means that corruption is often conceived as rational behavior of individuals who attempt to maximize their benefits and minimize their costs, but a society's culture, its norms and values are particularly not included in the analysis of corruptive behavior. However, studies that only focus on economic explanations of corruption are too biased and cannot analyze this multifaceted phenomenon entirely. Thereby, the review of empirical studies again confirms that an overall theory offering a guideline for the analysis of corruption does not exist yet and is still needed.

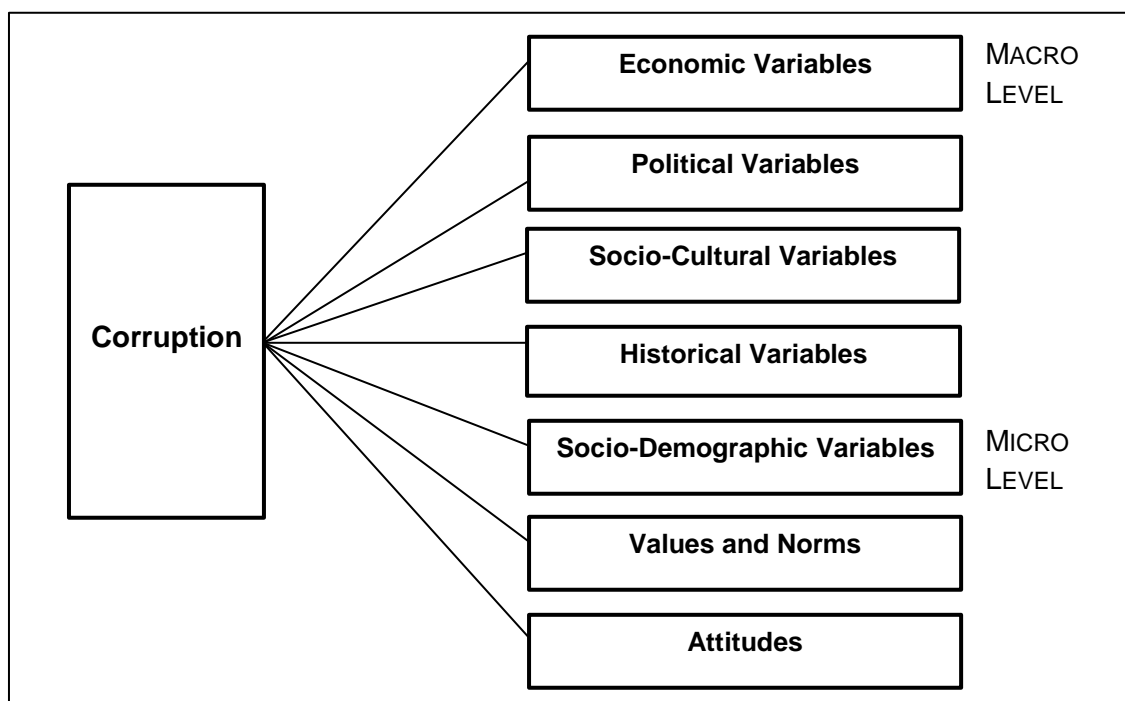
In addition, all of the analyses, except for two recent studies of Littvay and Donica (2011) and O'Connor and Fischer (2012), suffer from methodological deficiencies that are often generated a result of bad corruption data availability. For instance, most of them have examined corruption only by cross-national analyses and often struggle with missing data. Actually, the results produced by cross-section analyses are sensitive to the particular time of observation. They can describe and make inferences about possible relationships between certain variables, but they cannot provide any information to the dynamic development of corruption. In this context, panel analyses can accomplish that by taking multiple measures over an extended period of time. Furthermore, the studies often use small-n-sample such as of the analyses of Shabbir and Anwar (2007) or of Mocan (2008).

Moreover, scholars concentrate only either on the individual or the country level to examine the causes of corruption. Studies that attempt to combine both levels are still rare (e.g. Atkinson and Seiferling, 2006; Mocan, 2008; Littvay and Donica, 2011; O'Connor and Fischer, 2012). However, these studies also do not measure corruption at the micro and macro level simultaneously. For instance, O'Connor and Fischer (2012) measure corruption at the macro level by the Corruption Perception Index and use independent variables of the micro level such as self-expression and rational values. Atkinson and Seiferling (2006) measure corruption at the micro level by an item of the World Values Survey³⁷ and examine the influence of variables of the macro level such as national economic variables or religion. Finally, the reviewed studies tend to concentrate on countries world-wide and neglect relevant cross-regional differences and variations within specific areas and regions that are extremely important for the explanation of corruption. The perception of corruption varies

³⁷ They use the item: "How widespread do you think bribe taking and corruption is in this country?" from the third wave of World Values Survey (1995-1998) for 38.063 observations within 33 countries.

from society to society and depends on several factors such as historical developments of countries. For instance, Zim (2005) argues that even in the most established democracies of the world people are still faced with problems of campaign financing, lobbies and conflict of interest, which in some cultural contexts would be considered corrupt but in others are legalized avenues of influence. Therefore, it is necessary to find a middle ground between case-studies and highly aggregated analyses that often gloss over significant differences and variations within and between countries and bring a greater focus on individual regions than on world-wide samples. In this context, studies examining only European states comparatively are still not on hand.³⁸ Overall, these certain objections again underlines that an all-embracing model that concentrates on certain levels of analysis and based on data of European countries from a comparative perspective is still needed. Moreover, the analysis of the empirical studies results in the summary of variables that I categorized into economic, political, socio-cultural, and historical variables that are examined at the macro level, and socio-demographic factors, values, norms, and attitudes that are studied at the micro level and my analysis is primarily based on (figure 1). Furthermore, these variables are integrated in the analysis model of this project (“bathtub model of corruption”) that is introduced in chapter 3.1.

Figure 1: Dependent and Independent Variables



³⁸ This point is taken up again in chapter 3.2 (Corruption in European states).

3 Conceptual Framework and Research Hypotheses

3.1 Panel and Multilevel Analysis: A New Framework

Corruption is a multilevel phenomenon that has to be examined at various levels of analysis. Initially, it takes place between certain individuals who behave corruptively at the micro level (individual level). In addition, the aggregation of corruptive individual actions leads to certain levels of corruption at the macro level (country level) where corruption is usually measured by certain macro indices (e.g. Corruption Perception Index). The review of theoretical approaches and empirical studies demonstrates that it is essential to combine certain theoretical perspectives and empirical findings from different disciplines to build a solid foundation for analyzing the causes of corruption on different levels and across and within certain countries.

It has been indicated, that neither economic nor sociological approaches by themselves can completely capture the complex phenomenon of corruption and its causes. While economists usually tend to “under-socialize” actors and their decisions, assuming that individuals are always acting in pursuit of their own profit, sociologists in contrast “over-socialize” decision-making, suggesting that they essentially act on behalf of social norms and traditions (e.g. Klein, 2013). In sum, they can explain only some aspects of the emergence of corrupt behavior but cannot cover the entire width of possible explanations. In this study, therefore, economic and sociological approaches are considered and used as theoretical approximation rather than extensive explanation models. Moreover, a review of the literature has shown that theoretical approaches on the one hand and empirical analyses on the other hand have developed independently from each other in corruption research. In fact, a range of literature concentrates on the theoretical and conceptual analysis of corruption while other articles explain corruption empirically, but with less theoretical background.

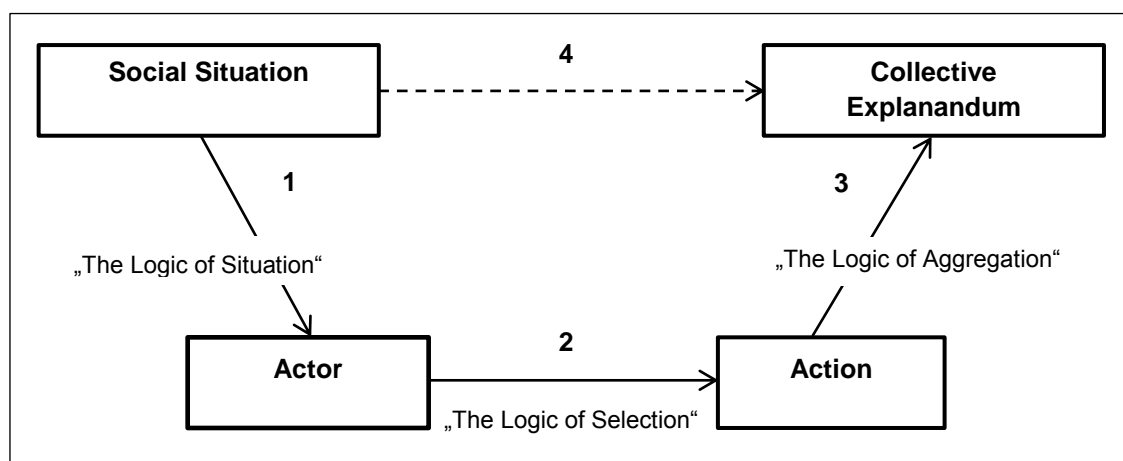
In this regard, Coleman’s and Esser’s bathtub model (1990 / 1993) is a model that allows a combination of certain approaches to explain the causes of corruption. It integrates certain theoretical perspectives and enables scholars to focus on country and individual characteristics when studying corruption. The above mentioned theoretical approaches, namely economic and sociological such as rational-choice, sociological and historical institutionalism, and cultural approaches, and empirical studies and, thus, corresponding variables can be included in this model of corruption and fill with empirical data.

Bathtub Model of Corruption

Coleman's bathtub model was originally developed to reconstruct and illustrate Weber's analysis of the relationship between Protestant ethic and the development of capitalism (Weber, 2005). It is also known as the "Coleman boat" and offers an analytical framework for the analysis of what causes corruption. It includes the potential to analyze the complexity of corruption at a micro level, considering individual's social behavior and social norms, as well as at a macro level, taking country characteristics and institutional settings into account. Therefore, the Coleman bathtub serves as an explanatory model for social phenomena by detailing macro-micro-macro cycles and allows integrating both, economic-rational and sociological considerations.

More precisely, Coleman distinguishes between the level of action (micro level) and the system level (macro level). He links these two levels of analysis by illustrating the causal relationships that leads from the macro to the micro level and back to the macro level. While the macro level refers to the respective social situation, the micro level describes actors and their subjective perceptions, motivations and actions that, in turn, aggregate on the macro level (Coleman, 1990). In this context, Coleman (1990, p. 28) states that "the only action takes place at the level of individual actor, and the 'system level' exists solely as emergent properties characterizing the system of action as a whole. It is only in this sense that there is behavior of the system. Nevertheless, system-level properties will result, so propositions may be generated at the level of system." Thereby, the "bathtub floor" represents the level of individual behavior that helps to explain macro level processes at the "water surface". This includes that phenomena of the macro level influence system outcomes such as corruption (collective explanandum) through their effect on individuals' orientations and behavior at the micro level (actor's action). According to this, causal influence for macro factors can only work through disaggregated effects at the micro level.

Figure 2: The Basic Model of Sociological Explanation



Source: (Coleman, 1990) and (Esser, 1993a)

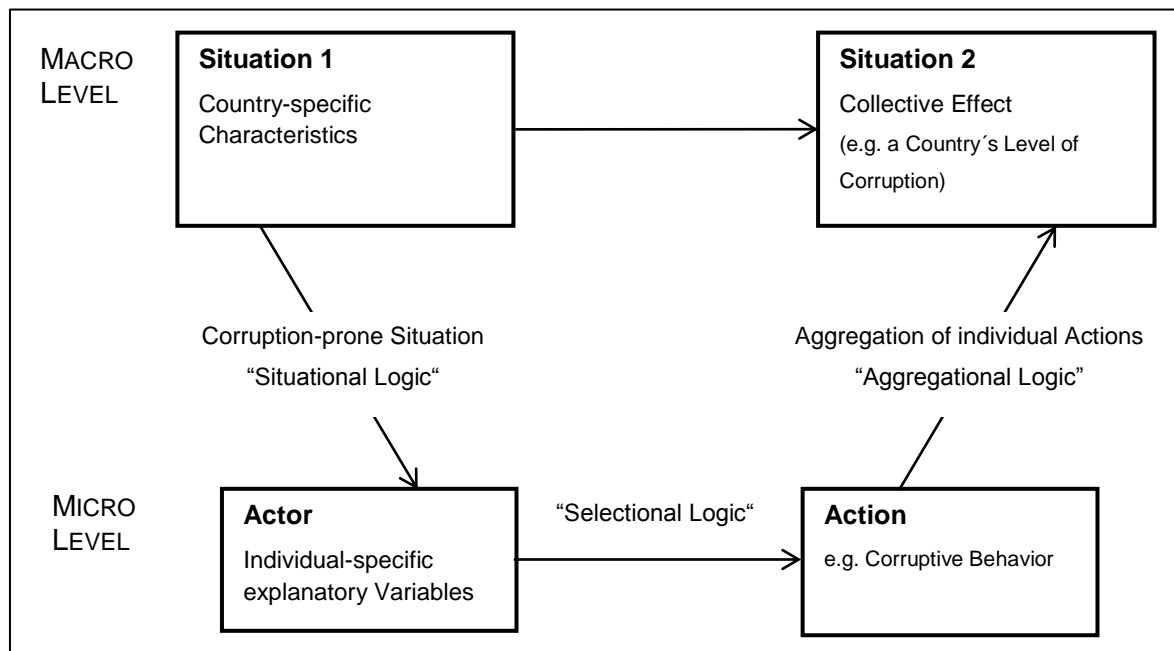
Coleman's bathtub model builds on the basic model of sociological explanation of social processes. The starting point of this model which is based on rational-choice approaches is the assumption that the explanation itself requires three different analytical steps (Esser, 1993b, pp. 8–10).

First, the researcher has to reconstruct the "*logic of situation*" (Esser, 1993b, p. 8) for typical actors in typical situations (see figure 2). Following Esser, actors are restricted, resourceful, evaluating, expecting, maximizing individuals. This implies a synthesis of the homo economicus and homo sociologicus and refers to the concept of bounded rationality that assumes that perfectly rational decisions are often not feasible in practice because of the finite computational resources available for making them (e.g. Simon, 1991). In this context, the structural conditions are descriptively connected with the actors of a bounded system of interaction (arrow 1). At this point, scholars usually formulate hypotheses that bridge the actor's situation and the variables of applied theoretical approaches.

Secondly, starting from this description, a theory of action is used to explain human behavior. Thus, an individual's action is a consequence of a particular "*logic of selection*" (Esser, 1993b, p. 8) that is specified by the assumptions of the used theory (arrow 2). According to (Esser, 1993b, p. 9), human behavior is, in this way, conceptualized as an "intentional choice between options, one that is oriented to the respective situation. It therefore takes into account the human capacity for creativity, reflection and empathy, as well as the significance of scarcity and opportunity costs of action." The selection process itself can be decomposed into three steps: cognition of the situation, evaluation of the consequences of certain actions, and selection of a particular action on the basis of a specific rule (Esser, 1993b; Lindenberg, 1989).

The third and last step involves the "*logic of aggregation*" (Esser, 1993b, p. 8). Individual actions are aggregated so that a social explanandum follows, for example, through formal derivations or partial definitions (arrow 3). Thereby, macro-sociological phenomena are reconstructed as unintended consequences of individual behavior in respective situations (see also Hernes, 1976; Coleman, 1990).

Based on Coleman's and Esser's model, I designed a model that combines the macro and micro level and considers corruption as individual behavior, taking particularly country and personal characteristics into account (see also Klein, 2013). Thus, the model resolves the duality between "under- and over-socialization" of both economic and sociological approaches and allows not only rational-economic but also social-value-based interpretations and explanations of corruption. Figure 3 portrays the bathtub model of Coleman and Esser and illustrates its application for the following analyses of corruption.

Figure 3: The Bathtub Model of Corruption

Source: Coleman (1990); Esser (1993); Klein (2013)

As visualized in figure 3, situation 1 at the macro-level presents the starting point of the model and illustrates characteristics of certain countries and its societies such as the economic, political, socio-cultural or historical context. According to the theoretical approaches introduced and the empirical studies reviewed, I assume that economic variables, for instance, a country's rate of inflation or the level of income, political indicators such as the degree of democracy or of government centralization, socio-cultural variables such as a society's dominant religion, and historical variables such as a country's communist past, affect the country-level. These variables describe the characteristics of certain countries and its societies at the macro level and, in turn, may influence individual behavior at the micro-level and vice versa. Therefore, certain characteristics of countries and societies can shape a certain "situational logic" (Esser, 1993a) by creating specific social frameworks for actions of individuals. Individuals, in turn, act under these particular social structural and institutional conditions and behave according to a specific social logic at the micro level. In fact, decisions of actors can be analyzed at the micro-level based on rational-choice theory (corruption as rational behavior), but can also be conceived as individual behavior that is influenced by certain socio-demographic factors, cultural norms, values, attitudes or social relationships within countries and its institutions as well, according to sociological approaches.

Based on these considerations, corruption can be interpreted as rational behavior but also as a way of life or a set of values and social norms that belong to a society's culture. Therefore,

individuals follow a certain logic of selection and decide to engage in corruptive activities either by virtue of rationally- or socially-based motives.

At this point, it is worth stressing again that rational-choice assumptions in particular are primarily theoretical and are difficult to examine empirically. Experiments, for example, could support the exploration of rational behaviour of individuals. This work, however, pursues a quantitative approach from a comparative perspective, that struggles with an inadequate data situation in the field of individual rational behaviour. In this study, rational-choice assumptions are especially examined by contextual conditions of the country and individual level referring particularly to various resources. For this purpose, especially economic and socio-demographic factors are included in the analyses to explain the extent of corruption at both levels. Depending on economic factors such as a country's economic development and specific socio-demographic factors such as age, gender, individual's financial situation or education level and cultural variables rational-choices assumptions are taken into account.

Finally, the aggregation of the individual actors' (corrupt) actions leads to situation 2 on the macro-level, where corruption can be expressed, for example by criminal statistics or survey-based indices such as the Corruption Perception Index or Control of Corruption Index. The aggregation of the individual actors' actions can either reproduce social structures and behavioral patterns or modify them; in any case, it institutionalizes a social situation 2, which Esser (1993b, p. 8) calls the "collective explanandum". Thus, levels of corruption are explained at the macro level via the aggregated individual actions at the micro level.

In sum, this model combines economic and sociological approaches into an interdisciplinary framework and offers an integration and analysis of certain variables at different levels that may influence the extent of corruption. For the purpose of identifying the determinants of corruption, specific situations at each level of the model can be filled by empirical data. Moreover, it allows to elicit and analyze the causes of corruption in European states over time as well as across and within countries. In the following chapters, this model serves as framework for analyzing the extent of corruption.

3.2 Corruption in European Countries

The analysis of the causes of corruption in European states is essential for several reasons. At first, descriptive analyses reveal that European states exhibit a wide spectrum of corrupt activity and are marked by large differences in terms of the extent of corruption. A closer investigation of patterns of how corruption has developed in recent years, clearly demonstrates that both new and established democracies in Western and Central and Eastern Europe show varying levels of corruption. For instance, countries such as Sweden (9.3) or the Netherlands (8.9) received very low degrees of corruption by Transparency International in 2011, ranking countries on a scale from zero (high corruption) to ten (low corruption), while states such as Romania (3.6) or the Ukraine (2.3) have received high scores of corruptive activities. Similar to countries in Central and Eastern Europe, states in Southern Europe such as Spain, Portugal, Greece or Italy have struggled with a number of corruption scandals. An initial examination of corruption development in Southern Europe also clearly demonstrates a continuous deterioration of corruptions scores in these countries. Since the beginning of the economic crises in 2007, corruption values have continuously increased in these countries. While in 2005, Spain received 7.0 points by Transparency International, its corruption score amounted to 6.2 in 2011, with a further declining tendency. The other Southern European countries show very similar developments. For instance, Portugal received 6.5 points in 2005 and 6.1 points in 2011, while Greece corruption score amounted to 4.3 points in 2005 and 3.4 points in 2011 (Corruption Perception Index, 2011). The reasons for this development still remain undiscovered. Due to this pronounced intra- and inter-European variation and continuously increasing corruption values in certain countries, the determinants for corruption in European countries need to be analysed.

Secondly, there is no other region in the world but wider Europe where young democracies (e.g. Slovenia, Estonia) and well-established old democracies (e.g. Greece, United Kingdom, France) as well as authoritarian systems (e.g. Belarus, Ukraine) are located so closely to each other. After the end of the Cold War and the transformation of communist countries to young democracies, the political, economic and socio-cultural situation in Europe has changed considerably, notably in the manifestation of corruption (e.g. Holmes, 2006). These countries in Central and Eastern Europe have experienced a long way of political transition that have possibly strongly affected the extent of corruption in Europe as a whole. In this context, Kostadinova (2012, p. 26) describes that "Simultaneous political, economic, and social reforms take place in the absence of structures, knowledge, and experience to maintain and solidify the efforts [...]. The complex transformations, along with disputes over borders and land and interethnic conflict, made the postcommunist systems vulnerable to the

spread of organized crime and improper enrichment” (similar Xin and Rudel, 2004; Holmes, 2009).

Moreover, Europe is a special case for analysing the causes of corruption because it presents the continent with the longest history of nation-states, and rule of law as one of the oldest traditional European constitutional principles. When studying corruption in Europe, this has to be taken into consideration.

Fourthly, the review of the empirical literature on corruption illustrates that previous research has often concentrated on countries in a global context and that in most of these studies, European countries were included in large samples with, for example, African states (e.g. Billger and Goel, 2009; Littvay and Donica, 2011). Yet, African states, for instance, are characterized by different regional indicators such as the economic development, traditions and norms than countries in Europe. For example, in the African context, corruption is socially embedded in so-called “logics’ of negotiations, solidarity, gift-giving, predatory authority and redistributive accumulation“, as Sardan (1999, p. 25) illustrates (similar Egbue (2006); Mbaku (2007)). This example should demonstrate that using large samples including countries in a global context could lead to a biased analysis of corruption from a comparative perspective (selection bias). In fact, in this way, region-specific characteristics that might be important for the explanation of the extent of corruption are neglected. Moreover, it must be taken into account that the perception of corruption varies from society to society and depends on several factors such as historical developments or culture and traditions of countries. As a result, global samples are not qualified to find out the specific determinants of corruption among European states. Therefore, to find out area-specific determinants of corruption it is necessary to focus on individual regions such as Europe rather than on global samples.

Finally, the existing research on corruption in European states shows an obvious research gap, especially from a quantitative point of view. Currently, the primary focus is concentrated on qualitative studies such as the book by Heidenheimer and Johnston (2009) that includes some case-analyses on Europe. These qualitative studies are indispensable and play a central role in the research of the manifold phenomenon corruption. However, these qualitative studies are strongly case-related and less comparative, so that eligible indicators of corruption in Europe cannot systematically be classified and generalised. Moreover, the causes of corruption in European states have never been sufficiently studied from a comparative perspective. As a result, there is still no overall explanatory model of the causes of corruption – neither by cross-sectional nor by panel or multilevel analyses.

3.3 Measuring Corruption: The Dependent Variable Reconsidered

Corruption cannot be measured directly. It is secretive by nature and frequently takes place in hidden and unofficial settings because all participants are highly interested in keeping their corrupt actions secret. Even the victims of corruption are often unaware that they have indirectly participated. However, corruption is not always illegal, but it is often a matter of ethics and perceptions that primarily depend on certain area-specific social norms and traditions (e.g. Sandholtz and Koetzle, 2000).

The traditional approach of directly measuring corruption through self-reporting is unlikely to be reliable. Such an approach under-measures corruption due to socially desirable responses and it is still difficult to identify the actors involved as well as the frequency of corrupt actions. In general, people do not want to admit that they behave corruptly, and it can be assumed that this will always be the case. Nevertheless, while it is difficult to capture corruption, it is not impossible. Several ways of measuring corruption exist which allow some generalizations and can produce quantifiable results. The most common strategy – and so far probably the only way forward – for measuring corruption is in an indirect way. Here, data on corruption usually consist of subjective assessments of the corruption levels in different countries. (Tanzi, 1998) suggests the following sources:

- Questionnaire-based surveys (such as the Corruption Perception Index developed by Transparency International or the Control of Corruption Index offered by the World Bank).
- Reports on corruption that are available from published sources such as newspapers.
- Case studies of corrupt agencies such as tax administrations, customs, and the police.

At the country and individual level, the most frequently applied way of measuring corruption is the use of questionnaire-based surveys that are also based in reports from published sources. These approaches include certain macro level indices such as the Control of Corruption Index, the Corruption Perception Index or the International Country Risk Guide. At the individual level, the most widespread method is the use of national survey data which obtain corruption experience data. Contrary to these approaches, case-studies of certain corrupt actors such as police officers are often used to investigate individual cases. However, to measure corruption in general and for comparative reasons they are not ineligible.

3.3.1 The Aggregate Level: Macro Level Indices

Fortunately, in recent years, several organizations such as Transparency International and the World Bank have developed corruption perception-based indices based on expert reports across a wide range of countries to quantify the extent of corruption.³⁹ These different quantitative indices have enabled scholars to study corruption in an empirical way and offer a wealth of information facilitating them to show a number of important results. They present statistical aggregation of secondary data and have been developed to raise awareness about the problem of corruption. In the following section, the best known and most frequently used are presented:

Control of Corruption Index

The Control of Corruption Index (CoC) is developed by the World Bank. It is part of the Governance Index and includes six dimensions: 1. voice and accountability, 2. political stability and no violence, 3. government effectiveness, 4. regulatory quality, 5. rule of law and 6. control of corruption. From 1996 to 2002, the index was published biannually. It covers almost 220 countries and is now published every year.

The World Bank's definition of corruption is basically the same as the one used by Transparency International: "Corruption is the misuse of power entrusted in public officials for private gain." The CoC Index is based on over 100 individual variables that measure perceptions of governance drawn from 25 data sources and constructed by 18 different organisations. It "captures perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as 'capture' of the state by elites and private interests" (World Bank, 2012). The World Bank Group compiles and summarizes this data from 30 sources and reports the views and experiences of citizens, commercial business information providers, experts in the public and private as well as NGO sectors from around the world. Based on these survey results, every nation is assigned a corruption control score ranging from -2.50 to 2.50, where lower scores (closer to -2.50) indicate low control of corruption, and higher scores (closer to 2.50) indicate high corruption control (Worldwide Governance Indicators, 2012).

Corruption Perception Index

The Corruption Perception Index compiled by Transparency International has become one of the most reliable and widely used indicators of corruption around the world. The meta-index

³⁹ Before the development of certain perception-based indices, there were no statistics and quantifications of corruption. Measuring the degrees of corruption had to be based on anecdotes and intuition (e.g. Scott (1972)).

was first launched in 1995 and ranks almost 200 countries based on the degree to which corruption is perceived among public officials and politicians. The CPI is a composite index drawing on 14 different polls and surveys from seven independent institutions and is carried out among business people and country experts. It also includes surveys of local residents and expatriates who rank countries on a scale from zero (high corruption) to ten (low corruption), according to the level of perceived corruption. One of the main advantages of this index is its reliability. Johnston (2001b, p. 161) claims: "Reliability is the strongest point of the CPI. Rather than employing just one or a few indicators, the data reflect the views of thousands of individuals who encounter corruption in differing ways in range of countries, and are gathered in a variety of ways." In addition, the index allows for comparisons across different countries. Lancaster and Montinola (2001) also evaluate the CPI in great detail and conclude that while no measure is perfect, the Corruption Perception Index appears to be a rather robust one.

International Country Risk Guide

Since the early 1980s, the International Country Risk Guide dataset (ICRG) has covered almost 150 countries on a monthly basis. It includes 22 variables of political, economic and financial risk ratings. For each subcategory, a separate index is created. The used sources also include CoC- and CPI-data and are based on perceived corruption by a large number of country experts.

The variable corruption within the political system is part of the political risk rating⁴⁰ that aims to provide a means of assessing political stability on the basis of subjective analysis of available, comparable information, while the economic and financial risk assessments are made on the basis of objective data. The measurement of corruption refers to "actual or potential corruption in the form of excessive patronage, nepotism, job reservations, 'favor-for-favors', secret party funding, and suspiciously close ties between politics and business" (International Country Risk Guide, 2012). This is done by assigning risk points to a pre-set group of factors that are termed political risk components. The minimum number of points that can be assigned to each component is zero, while the maximum number of points depends on the fixed weight that component is given in the overall political risk assessment. In each case, the lower the risk point total, the higher the risk, and the higher the risk point total, the lower the risk. In fact, the ICRG assesses the risk of firms to invest in a country

⁴⁰ The political risk rating further includes government stability, socioeconomic conditions, investment profile, internal conflict, external conflict, military in politics, religious tensions, law and order, ethnic tensions, democratic accountability and bureaucracy quality.

rather than the level of public sector corruption. That is why this index is not used in the following analysis to measure corruption.⁴¹

As illustrated in table 1, the CoC-, CPI- and the ICRG-data are highly correlated with each other. That means they can be regarded as valid instruments measuring corruption in similar ways. Thus, it does not matter which index is used to analyze corruption. However, the highest correlations can be observed between the CoC and the CPI ($r=0.97$). Overall, the correlation coefficients can be observed in the following table.

In the following analysis the CPI is primarily used to measure corruption at the macro level. In contrast to the Control of Corruption Index that has been published biannually from 1996 to 2002, the CPI has been collected every year since 1995 and has become one of the most reliable and widely used indicators of corruption around the world (e.g. Rose-Ackerman, 1999; Treisman, 2000; Sandholtz and Koetzle, 2000). A detailed description of the sources of the CPI (2010) is included in Appendix B.

⁴¹ The Bribe Payers Index (BPI), developed by Transparency International, is another macro indices used to measure corruption. In fact, it “evaluates the supply side of corruption – the likelihood of firms from the world’s industrialised countries to bribe abroad” (Bribe Payers Index, 2013). First launched in 1999, it is based on the views of more than 3000 business executives worldwide and measures to what extent companies engage in bribery when doing foreign business. In 2011, the BPI scored almost 30 countries and territories of the world’s leading economies selected by four criteria: trade openness, measured by the values of their foreign direct investment outflows; G20 membership, the value of their exports; and their regional significance (Bribe Payers Index, 2013). The results based on using this index, however, are primarily focused on analyzing corruption in the private, and not the public sector, that I concentrate on in the following considerations. Furthermore, the BPI provides data only for a few countries. For these reasons, the BPI is not included in this analysis. As expected, my analysis has indicated that the BPI does not correlate with the other corruption macro indices.

Table 1: Correlation Matrix of certain Corruption Scores (1995-2010)

		Control of Corruption	Corruption Perceptions Index	ICRG Indicator of Quality of Government
Control of Corruption	Pearson's correlation	1	.97 ^{***}	.90 ^{***}
	Significance (two-tailed)		.000	.000
	N	2037	1452	1370
Corruption Perceptions Index	Pearson's correlation	.97 ^{***}	1	.89 ^{***}
	Significance (two-tailed)	.000		.000
	N	1452	1906	1382
ICRG Indicator of Quality of Government	Pearson's correlation	.90 ^{***}	.89 ^{***}	1
	Significance (two-tailed)	.000	.000	
	N	1370	1382	3272

3.3.2 Critical Evaluation of Using Macro Corruption-Indices

Although, macro corruption indices present a useful instrument to measure corruption, they are flawed and limited in a number of ways. Working with these data, these limitations have to be accounted for and results have to be interpreted cautiously.

First, the macro corruption indices do not reflect the actual level in a country because they only measure the perception of corruption rather than actual occurrence of corrupt activities. They consist of highly subjective evaluations that, in turn, can be influenced by a wide range of different factors such as delays and incompetence. For instance, it is assumed that actual experiences with corruption are not always truthfully and reported in their entirety. Often, respondents may not feel comfortable admitting openly that they have bribed a public official such as a judge or a court staff. Moreover, they may be reluctant to criticize their own institution or profession by indicating corruption among colleagues. For these reasons, it is advised to consider both 'experience' and 'perception' (Langseth, 2006, p. 35). Golden and Picci (2005, p. 39) suggest that "Respondents directly involved in corruption may have incentives to underreport such involvement, and those not involved typically lack accurate information. This is an intrinsic weakness to measuring corruption with survey information, especially when the surveys do not ask about firsthand experiences with corruption, but merely 'perceptions' of it."

Second, the indices use aggregate information on corruption from different surveys. For countries where information from as many as 14 surveys is available, the scoring is likely to be more reliable for countries whose score based on a smaller number of available surveys.

For the CPI index, for example, at least three primary surveys or sources for corruption need to be available for each country to be included in the index. This is likely to generate systematic biases in the different datasets, possibly making the indices more reliable for developed nations than for less developed ones (Golden and Picci, 2005).

Moreover, due to the aggregate nature of the macro data researchers can make only a few conclusions about the relationship between corruption and individual actors. More precisely, corrupt actions take place between individuals. However, these indices present statistical aggregation of secondary data to measure the extent of corruption. Therefore, most importantly, macro indices cannot satisfactorily explain within-country variations in corruption on a conceptual level. Consequently, the indices cannot reflect variation in different sectors or regions of each country. Montinola and Jackman (2002, p. 12) point out that “Researchers should thus bear in mind that a country’s score on the CPI indicates the average level of corruption among the institutions within a country explicitly or implicitly considered by respondents of each of the different surveys. Since each survey may be measuring corruption in a different sector of a country, TI’s use of varying numbers of surveys for different countries in any given year presents a potential methodological weakness. Researchers engaged in cross-country analyses using the CPI might consider replicating their work with other corruption indices to ensure robust findings.”

Further criticisms refer to the cross-cultural portability of the concept of corruption. In fact, the perception of corruption varies from country to country, implying that an action that is perceived as corrupt in European states might be considered as ordinary practice in developing nations. Different cultures and various perceptions lead to different understandings of corruption and may distort the survey data (problem of functional equivalence). For example, Moroff and Blechinger (2009) illustrate that comparisons of corruption using notions of culture only to equivocate about the normative status of particular actions often underestimate the complexity and subtlety of corruption and culture alike. They use a comparative dataset describing the ways corruption events are covered in the news media of several democracies and demonstrate that different countries’ journalistic reports on corruption place significantly different amounts of emphasis on various aspects of corruption.

In addition, most of the macro corruption-indices do not reflect the activity of individuals who abstain from corrupt activities in their home country, but engage in them abroad. A large number of examples exist illustrating that public officials act correctly in their own system, but pay bribes abroad to achieve particular goals (e.g. Barrett, 2012; Salbu, 2001).

Additionally, the reliability of these indices may diminish over time (Golden and Picci, 2005). Respondents who participate in corrupt actions might tend to disguise their involvements,

whereas people who are not involved are not able to give accurate information.⁴² As a result, it is difficult to use them in time series and pooled analyses. In Lambsdorff's words: "year-to-year changes may not only result from a changing performance of a country [...] changes can result from the different methodologies [...] not necessarily from actual changes" (Lambsdorff, 2005, p. 1). For instance, a country's scores on the Control of Corruption Index change because of three factors that compound interpreting the scores: changes in the underlying data, the addition of new data sources, and changes in the weights that are used to aggregate the micro-data. Therefore, by using macro level indices such as the Corruption Perception Index or the Control of Corruption Index, researchers have to carefully take into account that these indices provide an "annual snapshot" of different viewpoints, "[...] with less of a focus on year-to year trends" (Lambsdorff, 2005, p. 1).

Lastly, the indices do not distinguish between various forms and typologies of corruption, such as fraud or embezzlement. For instance, the survey-based data are often limited to passive corruption and are not dealing with active corruption. Moreover, Galtung (2006) argues that the definition of corruption used by Transparency International does not differentiate between corruption in different branches of civil services or in political party financing. In his article "Measuring the Immeasurable: Boundaries and Functions of (Macro) Corruption Indices" (Galtung, 2006) illustrates the limitations of the CPI grouped under seven headings, briefly summarizing the critique:

1. Only Punishing the Takers, not the Givers or Abettors
2. Irregular and Uncontrolled Country Coverage
3. Biased Sample: more than 90% of the world is missing
4. Imprecise and Sometimes Ignorant Sources
5. Far Too Narrow and Imprecise a Definition of Corruption
6. Does not Measure Trends: Cannot Reward Genuine Reformers
7. Guilty by Association – Aid Conditionality

Galtung (2006, p. 17) concludes that "In particular, the CPI needs to be complemented by other indicators to address vital aspects of the subject that a single index can never hope to capture." Nonetheless, despite their limitations, the indices have produced a challenging new generation of quantitative research that is successfully used and recommended by a lot of

⁴² Moreover Treisman attributes that "Ratings by international business people and experts, disproportionately drawn from developed Western countries, might be influenced by Western preconceptions or by the raters' greater familiarity with certain cultures. Some of the organizations that prepare corruption ratings might also have ideological axes to grind. For all these reasons, 'perceived corruption' may reflect many other things besides the phenomenon itself" Treisman (2007, p. 215).

researchers (e.g. Treisman, 2000; Lancaster and Montinola, 2001⁴³; Møller and Skaaning, 2009).

In sum, even though the macro level indices are flawed and limited in a number of ways, they present one of the most accessible and valid methods to analyze corruption. The data is available for a long period of time and includes a large country sample. Furthermore, it has the best construct validity and cross-country comparability and while no measure of corruption will ever be free of problems, and while the current scales have enriched the literature and research in major ways, there are ways to further improve their quality (e.g. Littvay and Donica, 2011).

In the following analysis I use the Corruption Perception Index of Transparency International as the prime data source for measuring corruption at the macro level. Comparatively, the CPI offers most data on corruption. Additionally, to check the robustness of measurement the Control of Corruption Index of the World Bank is applied as an additional control variable. This means that all calculations are also conducted with the CoC as dependent variable.

3.3.3 The Individual Level: Micro Level Indices

Similar to macro level indices, scholars have attempted to find some indirect ways to identify corruption level at the individual level. These investigative approaches are manifold and very creative. They generally include the use of national survey data which obtain corruption experience data at the micro level, convictions from the judiciary, and public expenditure tracking surveys such as data on infrastructure projects. The most widespread method is, however, the use of survey data of individuals.

Concentrating on survey observations, Boylan and Long (2003) and Alt and Lassen (2003) studied state house reporters' perceptions of corruption in the United States. State house reporters who are members of the press and cover state government activities were asked to assess their state in terms of corruption levels of all government employees. Boylan and Long (2003) have demonstrated that these corruption measures are reliable and valid by illustrating that federal corruption prosecutions are positively correlated with both corruption and prosecutorial effort. In a similar vein, Seligson (2002) used national survey data of over 9.000 individuals that are conducted in four Latin American countries. They measured corruption by asking eight questions about participants' experience with corruption over the year prior to the survey. These included: "(1) being stopped by a police officer for a trumped-up infraction of the law; (2) being asked to pay a bribe to a police officer; (3) observing a

⁴³ Lancaster and Montinola (2001)'s article "Comparative Political Corruption: Issues of Operationalization and Measurement" gives a great overview of the advantages and disadvantages of using corruption indices. See also: Johnston (2009) who gives in his article "Measuring the New Corruption Rankings: Implications for Analysis and Reform" a critical analysis of the different corruption indices. He especially focuses upon the CPI.

bribe being paid to a police officer; (4) observing a bribe being paid to a public official; (5) being asked to pay a bribe to a public official; (6) being asked to pay an illegal fee to expedite a transaction at the municipal government; (7) being asked to pay a bribe at work; and (8) being asked to pay a bribe in the court system” (Seligson, 2002, p. 388). Likewise, Mocan (2008) use survey data from more than 55.000 individuals from 30 countries that provide information about direct experiences with bribery. Individuals were asked whether any government official such as a government workers, police officers, or inspectors in that country have asked or expected them to pay a bribe for their services during the previous year. Subsequently, Mocan (2008) created an aggregate corruption index at the macro level using information provided by more than 90.000 individuals in the data set. Likewise, Atkinson and Seiferling (2006) measured corruption by using the item “How widespread do you think bribe taking and corruption is in this country?” of the World Values Survey from a representative sample of over 30.000 respondents in 33 countries. By adding national economic and cultural variables they created a data set of both micro and macro level information. Overall, they found that public perceptions of corruption highly correlate with expert reviews such as the CPI of Transparency International. The correlation between their created index and the Kaufmann, Kray Zoido-Lobaton Governance indicators 1998 was $r = -.816$ (Atkinson and Seiferling, 2006).

As an alternative way to survey data, Glaeser and Saks (2006) focus on convictions from the U.S. Justice Department Report to Congress on the Activities and Operations of the Public Integrity Section for the period of 1976-2002. They assume that the number of public officials convicted for misuse of public office might be an indicator for the objective level of corruption in a country. Similarly, Meier and Holbrook (1992) illustrate the effect of education and urban concentration on corruption in American states. They gathered data by the U.S. Department of Justice's (1988) Public Integrity Section and used the number of public officials in each state who are convicted for violating laws involving corruption per one hundred elected officials in that state. “To eliminate the random yearly variations that occur because a single investigation might produce several convictions, the measure is based on the total number of convictions from 1977 to 1987. Similarly, Goel and Nelson (1998), claiming that state intervention and public spending foster rent-seeking activities and consequently corruption, also use state-level observations of convictions for public office abuse. Public office abuse includes offenses such as accepting bribes to accelerate the duties of officials or to grant preferential treatment in awarding government contracts. The data set consists of annual observations for the 50 U.S. states from the U.S. Department of Justice over the period from 1983 to 1987 (similar Fisman and Gatti, 2002). Finally, Goel and Nelson (1998) relate this corruption variable to the total real per capita expenditures of local governments and show a significant, positive relationship between the variables. However, Lambsdorff (1999, p. 1)

argues that “the correlation might be explained differently. As governments increase their spending, the judiciary branch may also be allocated more funding, resulting in higher conviction rates. In this case, conviction rates are not an adequate indicator for the actual incidence of corruption, but rather, reflect the quality of the judiciary.”

Another alternative of measuring corruption at the micro level has been conducted by Golden and Picci (2005) who suggest a proxy for corruption including “the difference between the amounts of physically existing public infrastructure (roads, schools, hospitals, etc.) and the amounts of money cumulatively allocated by government to create these public works. Where the difference between the two is larger, more money is being lost to fraud, embezzlement, waste, and mismanagement; in other words, corruption is greater” (Golden and Picci, 2005, p. 37). They created this index with subnational data from 95 provinces and 20 regions in Italy. However, this approach is virtually impossible when determining an accurate pricing of actual infrastructure costs, especially in a comparative perspective.

3.3.4 Critical Evaluation of Using Micro Corruption-Indices

Overall, scholars have been able to find some creative ways to identify corruption levels at the individual level. Yet, as the described studies and their certain approaches illustrate, there is still no adequate instrument to measure corruption at the micro level in a direct way. Consequently, these indices have to deal with some restrictions that relate particularly to their predications. It reveals that measuring corruption at the micro level deals with similar problems as capturing corruption at the macro level. These limitations particularly refer to socially desirable responses and subjective evaluations of corruption.

For instance, due to socially desirable responses, survey or self-reporting data are not necessarily reliable. Such data also measure only the perception and not the actual level of corruption and include, therefore, highly subjective evaluations. Moreover, they cannot exactly identify the actors who are involved in corruption as well as the frequency of corrupt actions. Mainly, they are limited to capture passive corruption and are not dealing with active corruption. For instance, it is difficult to find out through asking direct questions, who has taken the role of a principal, agent or client, in other words, who is the provider of bribery, who receives the money or who is the middleman. Almost nobody admits that in a transparent and honest way. Moreover, these micro indices can often not distinguish between various forms and types of corruption such as petty or grand corruption. In addition, criticisms also include cross-culturally diverse corruption, implying that various perceptions of corrupt activities based on different cultural background lead to different understandings of corruption. This may distort the survey data and decrease the reliability of these indices over time. Apart from the fact that different people are regularly asked for their corruptive behavior or its perception, it is difficult to use micro data in time series and pooled analyses. That

would require the availability of comparable cross-cultural micro level data of certain countries where data are regularly collected. As a result, for comparative purposes at the individual level, conducting cross-section analyses are more recommendable.

Another way to measure corruption at the micro level is the use of so called objective measures such as criminal indictments or public expenditure tracking surveys (e.g. Boylan and Long, 2003). However, by using these objective measures problems of validity often arise. For instance, criminal indictments only tend to indicate the effectiveness of the judicial system rather than the actual level of the corruption in a country. Boylan and Long (2003) also state that, while data of federal prosecution offer information about the level of corruption, the number of prosecutions also illustrate the priority or amount of effort devoted to prosecution of public officials, which also varies by state. Additionally, the number of public officials convicted also includes convictions that are not specifically related to corruption. Nevertheless, this investigative approach should not be underestimated, implying that it is one possible strategy or an additional instrument to narrow down the measurement of corruption.

However, contrary to macro indices, data from the micro level can reflect the activity of corrupt individuals and variation of corruption in different sectors or regions of each country. Nonetheless, despite their limitations, the use of corruption micro data is justified because the actual level of corruption in a country is difficult to investigate. In sum, all micro-level approaches to measure corruption are accessible and valid methods to explore corruption. The data is easily available and often includes large country samples, such as the World Values Survey. Although embryonic, corruption surveys appear to be promising tools to measure corrupt activities. Therefore, combining macro and micro data presents an appropriate strategy to find out the causes of corruption in a comprehensive way.

3.4 Variables and Research Hypotheses: Aggregate and Individual Levels Combined

3.4.1 The Macro Level: Economic, Political, Socio-Cultural and Historical Factors

Following the bathtub model of corruption for explaining the causes of corruption and its theoretical and empirical arguments, the emergence of corruption can be explained by a number of country characteristics. The indicators for explaining the causes and variations of corruption are categorized into economic, political, socio-cultural and historical factors. It has to be stressed that these variables have still not been examined for the European context. Moreover, there are several variables that have never been included in certain empirical studies and contribute to the explaining of corruption from a comparative perspective. Even though, previous studies have analysed and discussed some of these variables and their effects on corruption, the current research has not taken all of these variables into account, when analysing the extent of corruption. These variables particularly include the role of anti-corruption strategies, a country's public spending ratio, degree of urbanization or a society's history of the past in certain European states. In the following section, I describe and justify, how I derive these variables and hypotheses from the theoretical and empirical corruption literature that I will use in the subsequent analyses.

Economic Factors

Economic factors include a number of different parameters. Following a rational-choice logic, Basu (2006) even asserts that economic benefits are the root of most forms of corruption in modern societies and that this strong incentive of controlling economic resources or power motivates corruption. In the following section, I will discuss certain economic indicators and its relationships more closely and point out possible correlations with corruption scores. They especially include the rate of inflation, unemployment rate, civil service wages and a country's level of international integration.

- **Rate of Inflation**

Referring to the relationship between a country's rate of inflation and corruption, controversies exist in the literature. Several authors assert that the inflation rate of a country determines the level of corruption. For instance, in a sample of 75 countries, Braun and Di Tella (2004) demonstrate a significant positive relationship between corruption and inflation variability from 1982-1994. Controlling for variables used as proxies for other theoretically

plausible determinants of corruption and country fixed effects, they show that higher inflation is associated with higher levels of corruption. Panel estimates also show that a one-standard deviation increase in inflation variability would increase corruption by 12-percent of a standard deviation.

Furthermore, Paldam (2002) argues that the relationship between corruption levels and inflation is strong, but not fully stable. Inflation that might be partly a consequence of the economic system, especially of the monetary system, increases the extent of corruption for a relatively short duration for 5-10 years. Since countries within the same cultural area often have similar economic systems, the effect of inflation interacts in turn with cultural areas such as West Europe, Old Communist and Latin America. In a similar vein, the regression results of Sung (2004) and Gerring and Thacker (2005) also show that high rates of long-term inflation are associated with higher levels of corruption. "In particular, high rates of inflation shorten actors' time horizons and increase their discount rate, potentially increasing the expected utility of corruption for politicians. [...] It is also possible that the policies that generate inflation themselves promote corruption." (Gerring and Thacker, 2005, p. 235). Treisman (2007) also concludes that countries seem to be more corrupt, if they suffer from unpredictable inflation.

Hypothesis: Given these arguments, the following hypothesis (1a) needs to be tested: "*The extent of corruption will be higher, the higher the level of inflation.*"

(Alternative hypothesis: "*The extent of corruption will be lower, the higher the level of inflation.*").⁴⁴

- **Unemployment Rate**

So far, only a few studies have examined the relationship between the degree of corruption and a country's unemployment rate. However, researchers generally agree that increased unemployment is associated with higher levels of corruption. For instance, Goel and Rich (1989) and Mocan (2008) show a positive relationship between these variables. Using data from different annual observations at the US-federal, state and local levels for the years 1970-1983, they found that high unemployment leads to increased bribe taking (Goel and Rich, 1989). Similarly, Mocan (2008) uses micro level data from 49 countries and shows that a rise in unemployment rates increases the counts of bribery. He demonstrates that an increase of 1 percentage point in the male unemployment rate in the country leads to a rise of bribery by 0.06 percentage points. Sung (2004) also illustrates that economic factors such as the rate of unemployment, measured by the percentage of unemployed work force,

⁴⁴ Due to the fact, that the relationships between corruption and certain variables are often unclear, related to previous research, I always assume an alternative hypothesis, according to the basis assumption.

influences the extent of corruption and confirms the assumption that economic hardships foster dishonest among government officials.

Hypothesis: On the basis of these findings one can assume that “*The extent of corruption will be higher, the higher the rate of unemployment*” (hypothesis 1b).

(Alternative hypothesis: “*The extent of corruption will be lower, the higher the rate of unemployment.*”)

- **Civil Service Wages**

Another commonly used variable considered as a determinant of corruption is civil service income (e.g. Goel and Rich, 1989; Xin and Rudel, 2004). Generally, it is assumed that government wage levels influence the relative attractiveness of corruption for bureaucrats. Low civil service income creates strong economic incentives for public officers to take some extra-money. From a sample of 31 developing countries and lower-income OECD countries van Rijckeghem and Weder (2001), using the International Country Risk Guide, indicate a negative relationship between low wages for civil servants and corruption, in regression based on country averages. Doubling the civil service wage was shown to improve the corruption index by 2 points on the TI index. Thus, low civil service income seems to cause bureaucrats to seek to improve their income by means of corruption, and the expected cost of being caught and fired is relatively low. However, these authors emphasize that the negative relationship does not mean that higher wages lead to lower corruption in the short-run and that the cross-country correlation need not reflect a causal link between government wages and corruption.

Similarly, Haque and Sahay Ratna (1996), Montinola and Jackman (2002), Alt and Lassen (2003) and Gerring and Thacker (2005), who all use cross-section data from the mid- to late 1990s, suggest that countries with higher incomes tend to exhibit lower levels of corruption. Herzfeld and Weiss (2003) and Pellegrini and Gerlagh (2008) furthermore show that an increase in wages significantly lowers corruption. Using laboratory experiments to identify causes of corruption Azfar and Nelson, JR. (2007) and van Veldhuizen (2012) present similar results.

However, studies by Husted (1999), Treisman (2000)⁴⁵, Gurgur and Shah (2005) did not show a statistically significant relationship between civil service income and the degree of corruption. In addition, Hall and Jones (1999) show that the income-corruption-nexus is causally ambiguous. Frechette (2006) even illustrates that an increase in income may lead to

⁴⁵ Treisman (2000, p. 436) points out that “regressions found no clear evidence that higher government wages reduce government corruption (on this see also La Porta *et al.* (1999), though this might be because of the endogeneity: while high wages may reduce corruption, corrupt politicians may allocate themselves high wages. For what it is worth, the coefficients did have the expected negative sign (suggesting that higher wages are associated with lower corruption).”

a higher degree of corruption, implying that corruption is procyclical. Similarly, (Gong and Wu, 2012), who concentrate their analysis on China indicate that despite a considerable increase in civil service pay and numerous anticorruption campaigns, “corrupt officials have continued to risk their career, and even their life, for the gains made possible by corrupt activities.” They conclude that “raising public sector remuneration is not a solution to corruption. The utility function of civil servant pay in curbing corruption is more nuanced than it has been suggested, as improvement in formal salaries cannot effectively reduce corruption in a country where plenty of corruption opportunities exist” (Gong and Wu, 2012, p. 201). However, in the case of Gong’s study on China, the results are strongly case-related and cannot be generalized.

Hypothesis: Given these arguments, I expect to confirm the following hypothesis: “*The extent of corruption will be higher, the lower the level of civil service wages*” (hypothesis 1c).

(Alternative hypothesis: “*The extent of corruption will be higher, the higher the level of civil service wages.*”)

- **International Integration**

Using data from approximately 150 countries (Sandholtz and Gray, 2003) empirically demonstrate that greater degrees of international integration lead to lower levels of corruption. They measured international integration primarily by the total number of years of membership in several Western international organizations such as the International Monetary Fund (IMF), the United Nations (UN), the General Agreement on Trade and Tariffs, the World Trade Organization (WTO) or the Organization for Economic Co-operation and Development (OECD).⁴⁶ They theorize that such international involvements affect the degree of corruption in a country by offering economic incentives, altering the costs and benefits of engaging in corrupt acts for various actors, on the one hand, on the other hand, in a normative way, by creating norms and values in international society that stigmatize corruption. In other words, by considering countries as rational actors that follow economic incentives, these assumptions either refer to rational-choice approaches, or apply to cultural explanations by observing the prevailing norms and values in international societies. In particular, countries that are more integrated into Western international networks are more exposed to both economic and normative pressures against corruption. The authors assume that the more a country is tied into international networks of exchange, communication, and organization, the lower its extent of corruption is likely to be, because participation in international organizations creates channels for the diffusion and absorption of international

⁴⁶ Further indicators that are used to measure international integration are the gross foreign direct investment per capita, international telephone minutes per capita, international air freight per capita, international air passengers per capita and trade openness (e.g. Sandholtz and Gray (2003)).

anti-corruption norms. The analysis by Sandholtz and Gray (2003) strongly confirms this expectation.

In a previous study using a multivariate model, Sandholtz and Koetzle (2000) found that the lower the degree of integration in the international economy, the higher the extent of corruption. They measure the degree of international integration, particularly by the involvement in trade and illustrate that greater trade, involvement influences both the political-economic structure of opportunities and the cultural norms of a country. Kostadinova (2012) confirms these results by providing evidence that integration in the European Union has had a significant influence on reducing a country's extent of corruption. Using data from Eastern Europe, she demonstrates that countries, especially in Eastern Europe, that had not signed agreements for integration with the EU until 1996 have higher degrees of corruption values than countries that have signed the agreements. Thus, her data confirms that "the mobilizing effect of association and probable EU membership is independent from domestic political and economic factors" (Kostadinova, 2012, p. 56).

Hypothesis: The assumed relationship is reflected in the following hypothesis (1d): *"The extent of corruption will be higher, the lower the degree of integration in the world economy."* (Alternative hypothesis: *"The extent of corruption will be lower, the lower the degree of integration in the world economy."*)

"The extent of corruption will be lower, if the country is a member state of the European Union." (1d1)

(Alternative hypothesis: *"The extent of corruption will be higher, if the country is a member state of the European Union."*)

"The extent of corruption will be lower, if the country is a member state of the WTO." (1d2)

(Alternative hypothesis: *"The extent of corruption will be higher, if the country is a member state of the WTO."*)

"The extent of corruption will be lower, if the country is a member state of the OECD." (1d3)

(Alternative hypothesis: *"The extent of corruption will be higher, if the country is a member state of the OECD."*)

- **Further Economic Factors**

Moreover, other variables, such as country's economic development and economic growth, were originally included in the analysis. In particular, they had to be excluded because of multicollinearity with other indicators such as the degree of democracy. In this context, the most important variable is a country's economic development, traditionally measured by the

Gross Domestic Product (GDP) per capita or growth of GDP. Several articles argued that the GDP is an important determinant of corruption (e.g. (Husted, 1999); (Gerring and Thacker, 2005). For instance, Gerring and Thacker (2005, p. 242) assert that “Wealthier countries are likelier to be less corrupt, and less corrupt nations are also more apt to perform well economically.” It is even claimed that the degree of a country’s economic development holds most of the explanatory power of the various corruption indicators (e.g. Treisman, 2000; Paldam, 2002). In my analysis the rate of inflation in a country seems to be an adequate proxy for a country’s economic development.

Another variable, that could not be included, is social inequality, usually measured by the gini-index. Previous research indicates a positive relationship between the extent of corruption and inequality. Uslaner (2010, pp. 48–49), for instance, claims that “Inequality leads to corruption because it leads to resentment of out-groups and enhanced in-group identity. Economic equality, in turn, promotes both optimism and the belief that we all have a shared fate across races, ethnic groups, and classes.” However, in this case, sufficient data on social inequality is not provided for all included European states and the respective investigation period.

Political Factors

Even if economic variables of corruption have been the most cited and probably the most influential explanations, the literature indicates that political factors, such as the degree of democracy and other related variables, have to be considered. As already mentioned, especially economic approaches view the causes of corruption as deficiencies in the political system and its institutions. Thus, corruption is to be determined by political systems which are deficient in democratic power-sharing formulas, checks and balances, accountable and transparent institutions and procedures of the formal and ideal system of democratic governance. Therefore, corruption is conceived as a symptom of poorly functioning systems and as the failure of democracy, ethical leadership and good governance (e.g. Doig and Theobald, 2000; Paldam, 2002; Shah, 2007).

The political factors that are presumed to have an influence on the extent of corruption include the degree of democracy, a country's anti-corruption policy, degree of government centralization, political competition, public spending ratio and the percentage of women in parliaments.

- **Degree of Democracy**

In the context of political factors, the degree of democracy and the quality of governmental institutions might be the most important contributors to corruption. The degree of democracy is one of the most complex variables because it includes several sets of institutions, procedures, and values that may significantly reduce the extent of corruption. Overall, there is plenty of literature on the democracy-corruption-nexus. In a nutshell, most researchers argue that more advanced democratic structures lead to a lower degree of corruption.

Hill (2003), for instance, provides evidence for a strong relationship between higher democratization and lower levels of corruption in the U.S. American political system. He also demonstrates that specific components of democratization may enhance transparency in government and that probity among public officials is a good predictor of lower corruption levels. Shah (2007, p. 242), who refers to case studies of the World Bank, asserts that corruption is high where the rule of law is weakly embedded: "Public sector corruption thrives where laws apply to some but not others and where enforcement of the law is often used as a device for furthering private interests rather protecting the public interest." Moreover, he points out that "societies in which the level of public sector corruption is relatively low usually have strong institutions of participation and accountability that control abuses of power by public officials. These institutions are either created by the state itself (for example, electoral process, citizens' charter, bill of rights, auditors general, the judiciary, the legislature) or arise outside of formal state structures (for example, the news media and organized civic groups)"

(Shah, 2007, pp. 242–243). Examining different states within the U.S., Alt and Lassen (2008) show that institutional separation of power may hinder the extent of corruption. They illustrate that divided government institutions provide a system of checks and balances between the executive and legislative branches and that elected, rather than appointed, state supreme court judges show lower degrees of corruption. The authors conclude that the effect of an accountable judiciary is stronger under a unified government, where the government cannot control itself.

Similarly, Ales and Di Tella (2003) and Shah (2007) find that corruption is higher in countries where judicial institutions are not well developed, or are not independent of political influence. Using cross-country data, the analysis of Damania *et al.* (2004) tests the hypothesis that the institutions necessary to monitor and enforce compliance are weak in politically unstable regimes (see also Serra, 2006). In such countries, corruption is therefore more pervasive, and the compliance with regulations is low. They conclude that political instability decreases judicial efficiency and in turn fosters corruption. Thus, the effect of political instability on corruption is not direct, but occurs indirectly via its effect on the degree of judicial efficiency (similar Ali and Isse, 2003).

However, democracy does not guarantee honest and transparent governments (e.g. Uslaner, 2002; Shen and Williamson, 2005). Treisman (2000) does not find a significant correlation between levels of corruption and democracy, but he shows that a long period of exposure to democracy appears necessary to reduce levels of corruption. Montinola and Jackman (2002) and Sung (2004), for example, illustrate that in general corruption seems to be typically lower in dictatorships than in partially democratized countries. However, with more complete democratization, usually reflected in the nature of elections and the effective power of elected legislators, countries show lower levels of corruption. In fact, the prospects for corruption are more likely to be lower in consolidated democracies than in non-democracies as well as in unstable or young democracies. The political process can most easily become corrupt at the early stages of transition to democracy. When democratic institutions are weak, public officials often use their entrusted power to obtain private gains for themselves and their business partners. Nur-tegin and Czap (2012) present similar results and find strong empirical evidence that democracies, even if they are politically unstable, have public officials who are less corrupt than their counterparts in countries with authoritarian regimes. In this context, Uslaner (2002, p. 18) summarizes that “making countries more democratic does not seem to make them less corrupt”, while Kreuzer (1996, p. 110) mentions that “Democratisation does not reach a final destination of full democracy, but constitutes an ongoing process of shielding and weaning democracy from political corruption.” In a similar vein, Rose-Ackerman (1997, p. 40) states that “Democracy gives citizens a role in choosing their political leaders. Thus corrupt elected officials can be voted out of office. But democracy

is not necessarily a cure for corruption.” Larmour (2007) even believes that democratic systems create new strains for corruption such as in election campaigns, party funding and pressure from constituents.

Hypothesis: Based on this information, I assume the following about the corruption-democracy-nexus: *“The extent of corruption will be higher, the lower the degree of democracy”* (hypothesis 2a).

(Alternative hypothesis: *“The extent of corruption will be lower, the lower the degree of democracy.”*)

- **Anti-Corruption Policy**

In the fight against corruption, anti-corruption policy plays an important role that should be taken into account when analyzing the causes of corruption. However, the effectiveness of a country's anti-corruption efforts is disputable (e.g. Persson *et al.*, 2012; Mungiu-Pippidi, 2013). On the hand, a number of studies illustrate a negative relationship between the extent of corruptive actions and preventive and control measures (such as Ades and Di Tella, 2003; Shah, 2007; Hanna *et al.*, 2011). That implies that anti-corruption policy often leads to a decrease in a country's extent of corruption. On the other hand, authors claim that anti-corruption strategies can cause just the opposite effect, as new regulations might, paradoxically, create new opportunities for corruption. In this respect, Larmour (2007, pp. 11–12) points out that, installing new anti-corruption rules and a new layer of supervision can also “create loopholes, and provide guidelines for avoidance (for example, multiple small gifts to avoid campaign finance legislation; holding assets in spouse's name; and so on). The police, the courts and the legal profession charged with enforcing rules against corruption are particularly vulnerable to corruption themselves.” The study by Anechiarico and Jacobs (1996) shows similar results. The authors demonstrate that anti-corruption controls in New York reduced the efficiency of the government. Each corruption scandal that occurred in the city led to the creation of a new layer of supervision. As a result, effective contractors were permanently excluded from contracts. New forms of corruption control, including attaching inspectors to particular firms for particular projects that combined regulation with reform, were being tried. In a similar vein, researchers in Eastern Europe find that donor-sponsored anti-corruption campaigns undermine new democracies, by encouraging politicians to accuse each other of corruption, rather than debate this policy (Krastev, 2004). Recently, in several countries, including Nepal (in 2005), Thailand (2006), Fiji (2006) and Bangladesh (2007) anti-corruption has been used by monarchs and military leaders to justify the replacement of democratically elected governments (similar Gong and Wu, 2012).

In the European context, anti-corruption strategies are primarily enforced by the European Union that established several legal instruments to prevent corruption. In the following

analysis these instruments are reflected because the European Union has a major influence on the level of national governments and its legislation and thereby again on the extent of corruption in certain European countries (e.g. Olteanu, 2012). Besides having issued some published guidelines and official policies on fighting corruption⁴⁷, the EU has several anti-corruption institutions and conventions: GRECO (the Group of States against Corruption), the Criminal Law Convention on Corruption, the Civil Law Convention on Corruption, OLAF (European Anti-Fraud Office), and the Copenhagen Criteria. However, GRECO and the two conventions of the Council of Europe are in the center of this analysis, because OLAF⁴⁸ and the Copenhagen Criteria⁴⁹ have only little influence on national anti-corruption policies and are difficult to measure.

GRECO is an important institution within the European Union that takes a central role in the fight of corruption in Europe. It is an enlarged agreement and was founded in 1999 by the Council of Europe to improve the capacity of its member states to prevent corruption. The organization regularly examines and evaluates if each state is compliant with the organization's anti-corruption standards. This monitoring process especially includes a mutual evaluation and helps to elicit deficits in national anti-corruption policies in an advisory role by referring to necessary legislative, institutional and practical reforms. Subsequently, the implementation of their recommendations is reviewed again (follow-up evaluation). Currently, GRECO consists of 49 member states (48 European states and the United States

⁴⁷ For example, article 29 of the Treaty on European Union mentions the prevention of and battle against corruption as one way to create and maintain freedom, security and justice in Europe. Additionally, the 1997 action programme on organized crime calls for an anti-corruption policy based on preventive measures; the Council's 1998 Vienna Action Plan. The Tampere European Council in 1999 also identified corruption as a problem that has to be focused on. The Millennium Strategy on the Prevention and Control of Organised Crime also stresses the need for approximation of national legislation and to develop multidisciplinary EU policy and requested Member States to ratify the EU and Council of Europe anti-corruption instruments (Europa.EU 2013).

⁴⁸ OLAF is an Anti-Fraud Office within the European Union that investigates corruption and any other illegal activities within European institutions. It primarily supports the European Commission by developing and implementing anti-fraud and detection policies for the European Commission. The Office receives a lot of information on possible corruptive acts and irregularities, mostly from those responsible for and in control of managing EU funds within the institutions or in the member states. However, the possibilities of sanctions outlined in OLAF, in cases of illegal activities, are very weak. Moreover, OLAF depends on a close cooperation with the member states and third-country authorities (European Commission 2013b).

⁴⁹ The Copenhagen Criteria that are set in 1993 at the Copenhagen European Council include rules that define whether a country is eligible to join the European Union. The criteria are divided into three categories: political, economic, and the criteria of adoption of the aquis. In sum, it is required that a state has stable institutions guaranteeing democratic governance, the rule of law and human rights; has a functioning market economy, and accepts the obligations and intent of the EU. In this context, especially the establishment of the rule of law in a country is not compatible with widespread levels of corruption and countries have to minimize corrupt activities as far as possible Europa.EU .

of America) (2013). The membership in GRECO is not limited to member states of the Council of Europe. In fact, every country that participated in the recent elaboration of the enlarged agreement can join by notifying the Secretary General of the Council of Europe. Moreover, any state that joins the party to the Criminal or Civil Law Conventions on Corruption is automatically included in GRECO and its evaluation procedures (Council of Europe, 2013).

The Criminal Law Convention on Corruption and the Civil Law Convention on Corruption are, aside from GRECO, two binding policies against corruption of the Council of Europe. They are wide-ranging in scope and complement the existing legal instruments.

The Criminal Law Convention on Corruption was adopted in 1998 and represents a regional consensus on what countries should do in the areas of criminalization and international cooperation. It constitutes an ambitious instrument aiming at the co-ordinated criminalization of a large number of corrupt practices. It also provides complementary criminal law measures and improved international co-operation in the investigation and prosecution of corruption offences. The Convention is open to member states of the Council of Europe, to the accession of non-member States as well as to the European Union. Its implementation is monitored by GRECO (Council of Europe, 2013).

The Civil Law Convention on Corruption was adopted in 1998 and became law in 2003. It presents the first attempt to define common international rules in the field of civil law and corruption. It requires contracting parties to provide in their domestic law "for effective remedies for persons who have suffered damage as a result of acts of corruption, to enable them to defend their rights and interests, including the possibility of obtaining compensation for damage" (art.1). The Convention is divided into three chapters: they cover measures to be taken at national level, international co-operation and monitoring of implementation, and final clauses. In ratifying the Convention, the countries commit to incorporating its principles and rules into their domestic law, taking into account their own particular circumstances. In particular, the Convention deals with the compensation for damages such as the protection of employees who report corruption. The Convention is open to member states of the Council of Europe, to non-member States which took part in drawing it up as well as to the European Union. GRECO monitors commitments entered into under the Convention by the states party (European Commission, 2013a).

Based on the literature and following institutional approaches (e.g. Hall and Taylor, 1996; March and Olsen, 1989), it is assumed that institutions and organizations such as the European Union affect individual behavior in terms of corruption through rules, norms or other social frameworks. More precisely, assuming that the integration and implementation of certain laws and rules regulating or monitoring individual's corruptive behaviors in certain

countries and its institutions affect the extent of corruption, I derive the following hypothesis (2b): *“The extent of corruption will be higher, if the country has no anti-corruption policy.”*

(Alternative hypothesis: *“The extent of corruption will be higher, if the country has an anti-corruption policy.”*)

- **Degree of Government Centralization**

Another variable that is assumed as an explaining factor of corruption concerns a country's degree of political decentralization. The empirical evidence is again mixed and shows contradictory results. On the one hand, Shleifer and Vishny (1993) assert that decentralization of power may create competition in the provision of public goods that may, in turn, reduce the degree of corruption: “If different agencies compete in the provision of the same services, corruption will be driven down provided that agents cannot simply steal. Similarly, political competition opens up the government, reduces secrecy, and so can reduce corruption provided that decentralization of power does not lead to agency fiefdom and anarchy” (Shleifer and Vishny, 1993, p. 616). In a similar vein, Paldam (2002) suggests that the federal structure of the government system tends to reduce the extent of corruption. Examining the relationship between fiscal decentralization, measured by the proportion of state spending that occurred at regional and local levels, and corruption, Fisman and Gatti (2002) also find a strong negative relationship. Likewise, Strøm *et al.* (2003) provide empirical evidence in favor of federalism and fiscal decentralization. Measuring decentralization as transfers from central government to other levels of national government as a percentage of GDP, Lederman *et al.* (2005) illustrate that this variable significantly reduces corruption. Accordingly, Ali and Isse (2003) also conclude that decentralized government and vertical separation of power reduces the extent of corruption by creating multiple veto powers along vertically competing jurisdictions. In a sample of 30 industrial and non-industrial countries, Gurgur and Shah (2005) also illustrate that decentralization has a negative impact on corruption, with the effect being stronger in unitary than in federal countries. They conclude that decentralization is confirmed to support greater accountability in the public sector and reduce corruption.

On the other hand, Weingast (1995), Goldsmith (1999), and Kunicová and Rose-Ackerman (2005) demonstrate that federal or decentralized states tend to be more corrupt than unitary countries. Similarly, Goldsmith (1999) uses the CPI-score for 1996 regression models and indicate that unitary states – administrative centralization – are more likely to have lower degrees of corruption. He uses a sample of 34 observations to show that government centralization correlates negatively with corruption and concludes that federal or decentralized systems make it easier to hide corrupt actions and daunt whistleblowers. However, in their statistical analysis, Pellegrini and Gerlagh (2008) have not found a

significant relationship between corruption and decentralization. They measured decentralization by a proxy as the share of expenses that are delegated to local authorities as compared to the central government just for a small sample of countries (n= 42).

Hypothesis: Given these arguments, I derive the following hypothesis (2c): *“The extent of corruption will be higher, the higher the degree of government centralization.”*

(Alternative hypothesis: *“The extent of corruption will be lower, the higher the degree of government centralization.”*)

- **Degree of Political Competition**

Referring to rational-choice approaches, analyses of Rose-Ackerman (1999), Shleifer and Vishny (1993), Persson *et al.* (2003) and Montinola and Jackman (2002) illustrate that competition between politicians and bureaucrats may reduce corruption. The number of veto players and opposition parties in a political system seem to decrease the appearance of corruption by fostering political competition. However, the effect is nonlinear. Rose-Ackerman (1999) shows that competition between public officials may reduce corruption and suggests that if public officials are well paid, they will value their positions more and will have fewer incentives to behave corruptly.⁵⁰ In a similar vein, Montinola and Jackman (2002, p. 151) assert that political competition may minimize corruption in two additional ways: “First, the freedom of information and association characteristic of democracies helps monitoring of public officials, thereby limiting their opportunities for corrupt behaviour. Secondly, the possible turnover of power in democracies implies that politicians cannot always credibly promise that particular laws and regulations will continue in the future. This minimizes the size of bribes that rent-seekers are willing to pay.” Moreover, they claim that the extent of corruption is usually higher in countries with intermediate levels of political competition than in less democratic societies. However, they suggest that where political competition is thus limited, substantial corruption is likely even with relatively free and fair elections. Likewise, Della Porta and Vannucci (1999, p. 115), claim that “in a democratic system, political competition – in particular between the governmental party and the opposition – should in fact help deter ‘bad behaviour’ by politicians in power.” Applying Gastil’s index of political rights as a proxy for the intensity of political competition, Braun and Di Tella (2004) also find evidence that it reduces the degree of corruption. Likewise, Damania and Yalçin (2008) investigate the interaction between the lobbying activities of special interest groups and the emergence of corruption. Similar to Montinola and Jackman (2002), they also conclude that electoral competition serves to change the form of corruption, but cannot eliminate it: “More

⁵⁰ Rose-Ackerman (1996, p. 51) even concludes that “In general, any reform that increases the economy’s competitiveness will help reduce incentives for corruption. Thus policies that lower controls on foreign trade, remove entry barriers for private industry, and private state firms in a way that assures competition will all contribute to the fight of corruption” (similar Ades and Di Tella (1999)).

intense electoral competition limits the ability of a party to distort policies in favor of special interest groups and thus creates an incentive to divert campaign funds for other uses. With greater electoral competition the lobby group is required to pay higher contributions to the parties and the parties divert a greater proportion of these contributions for personal use.” (Damania and Yalçin, 2008, p. 12)

Hypothesis: Based on the these reflections, I expect to confirm the following hypothesis (2d): *“The extent of corruption will be higher, the lower the political competition in a political system.”*

(Alternative hypothesis: *“The extent of corruption will be higher, the higher the political competition in a political system.”*)

- **Degree of Public Spending Ratio**

Only a few scholars have sought to investigate the relationship between the degree of a country’s public spending ratio and corruption. Some authors assume that a large government sector may create opportunities for corruption. Seldadyo and Haan (2006, pp. 14–15) claim that “If countries exploit economies of scale in the provision of public services – thus have a low ratio of public service outlets per capita – those who demand the services might be tempted to bribe, e.g., ‘to get ahead of the queue’.”

It has been shown that the overall size of the government’s budget relative to the GDP is positively correlated with corruption (e.g. (Buchanan, 1980); (Tanzi, 1994/1999); (La Porta *et al.*, 1999); (Ali and Isse, 2003). Treisman (2000, p. 6) suggests that “the greater the share of GDP redistributed by government, the greater the spoils for corrupt allocation. Similarly, the more officials there are in public office, the more potential bribees available.” Likewise, Goel and Nelson (1998), using annual state-level data from 1983-1987, indicate that government size, and in particular spending by state governments, have a strong positive influence on corruption. Also, Ali and Isse (2003) and Alt and Lassen (2003) find that larger governments are associated with higher degrees of corruption. However, the direction of causality remains unexplained. Thus, it may be assumed that a high public spending ratio can be a result as well as a cause of corrupt behavior. For example, LaPalombara (1994, p. 338) concludes that “a rough positive correlation does exist between how much of GDP a government gets its hands on and how much corruption exists.” However, he excludes Scandinavian countries from his analysis that may imply a potential selection bias.

Overall, there is no consensus in the literature on the theoretical and empirical relationship between degrees of corruption and country’s public spending ratio. Rose-Ackerman (1999, p. 41) argues that this simple correlation between these two variables might be misleading and

Elliott (1997)⁵¹, Fisman and Gatti (2002) and Bonaglia *et al.* (2001) report a negative impact of government spending on corruption. Husted (1999) and Montinola and Jackman (2002) do not find a relationship between government size and corruption. For instance, Husted (1999) criticizes the LaPalomabara hypothesis while arguing that governments are larger in societies that are characterized by a greater acceptance of authority.⁵²

Referring to these arguments, I proceed by assuming that a large government sector creates incentives for corrupt action, which means that the larger the relative size of the public sector, the greater the likelihood of corrupt behaviour.

Hypothesis: So, the assumed relationship is: *“The extent of corruption will be higher, the larger the degree of public spending ratio.”* (hypothesis 2e)

(Alternative hypothesis: *“The extent of corruption will be lower, the larger the degree of public spending ratio.”*)

- **Women in Parliaments**

The impact of gender on corruption has long been neglected in corruption research. Swamy *et al.* (2001) and Dollar *et al.* (2001) were one of the first scholars who have analyzed the relationship between the percentage of women in the labor force as well as in parliaments and the extent of corruption. Using cross-country data Swamy *et al.* (2001) show that women are less involved in corrupt transactions and are less likely to condone bribe-taking than men. Moreover, they illustrate that a higher female labour participation leads to less corruption in general. Following Gottfredson and Hirschi (1990) and Paternoster and Simpson Sally (1996), Swamy *et al.* (2001) provide four arguments to explain this finding. First, women seem to be more honest or more risk-averse than men by nature, which may be because they feel that there is a greater probability of being caught. Second, they are typically more involved in raising children, an activity in which they practice honesty in order to teach their children appropriate values. Third, it is assumed that “women may feel more than men- the physically stronger sex, that laws exist to protect them and therefore be more willing to follow rules.” Fourth, “girls may be brought up to have higher levels of self-control than boys which affects their propensity to indulge in criminal behaviour” (Gottfredson and Hirschi, 1990, p. 149). Dollar *et al.* (2001), who reviews behavioral studies, show similar

⁵¹ With a sample of 83 countries, Elliott (1997) reports that the size of a government’s budget relative to the GDP decreases the level of corruption. She argues that the types of activities may be more important than the size of government in causing corruption.

⁵² “It may be, as LaPalombara suggests, that a relation between government size and corruption exists within a certain limited range of cases. Unfortunately, he does not provide any rule as to which cases should be excluded other than to cite the Scandinavian countries as possible exceptions. Most of the correlation between government size and corruption appears to be accounted for by the power distance variable” (Husted 1999, p. 354).

results and also conclude that women are more trustworthy and public-spirited than men. Using data on female involvement in government from the inter-parliamentary union's survey (1945-1995), these authors have been able to show that greater representation of women in parliament may lead to lower levels of corruption.

However, both Treisman (2007) and Sung (2003) doubt the conclusions of Swamy *et al.* (2001) and Dollar *et al.* (2001), claiming that "The logic is somewhat unclear and seems to run into problems of ecological inference. [...] those women who get elected to parliament or appointed ministers are unlikely to be typical of those surveyed. In any case, politicians of either gender are likely to act in office in ways not fully consistent with their answers to abstract questions about professional ethics; and even if most female politicians preferred lower corruption, how a marginal increase in the female share in either the legislature or government could be expected to produce lower corruption at ground level is unclear" (Treisman, 2007, p. 238). Sung (2003) also argues that the correlation is spurious, caused by other aspects of liberal democracy going along with the protection of women's political rights. She claims that it is 'fairer systems', not women's greater integrity that explains why corruption is lower where more women are in government. Alatas *et al.* (2009) also suggest that the gender differences found in the previous studies may not be nearly as universal as claimed and may be more culture-specific. They conducted experiments in Australia, India, Indonesia and Singapore and did not find any significant differences between the attitudes of men and women towards corruption. However, larger variations were found in women's attitudes towards corruption across different countries compared to men in general, indicating a stronger cultural rather than gender-based explanation (similar Alhassan-Alolo 2007).

Other reasons might explain why women seem to be averse towards corruption, such as work seniority and positions. For example, Lambsdorff and Fink Hady (2006) find that female transit police officers seem to be more difficult to bribe than their male colleagues. It is assumed that they are afraid of accepting bribes because they have only been admitted to the police force recently and therefore have less seniority than their male colleagues. Moral aversion to illegally accepting bribes may be another explanation. Rivas (2013) shows similar results by using experimental methodology. Experiments were conducted in Spain with undergraduate students of the University in Barcelona. He has found that the percentage of male that decided to offer a bribe to public officers at least once was 80%, while the percentage of women that did so was 65%. Moreover, the experiments have demonstrated that men offered bribes more frequently to female than to male officials, although they

offered them lower bribes.⁵³ In a similar vein, Frank *et al.* (2011) show in their corruption experiments that women who are involved in potentially corrupt transactions are more likely to fail. They claim that “The reason is not that women are intrinsically more honest, but that they are more opportunistic when they have the chance to break an implicitly corrupt contract and less engaged in retaliating non-performance” (Frank *et al.*, 2011, p. 59). Therefore, women are not more averse to corruption than men, but comparatively tend to react more strongly to a given risk of detection.

Hypothesis: Based on these findings, I derive the following hypothesis (2f): *“The extent of corruption will be lower, the higher the percentage of women in parliaments.”*

(Alternative hypothesis: *“The extent of corruption will be higher, the higher the percentage of women in parliaments.”*)

- **Further Political Factors**

Further variables that were initially included in the analysis include the rule of law in a country and freedom of the press. However, these variables are strongly related to a country’s degree of democracy. For instance, Lederman *et al.* (2005) report that variables such as parliamentary systems, political stability and freedom of the press are associated with lower levels of corruption. Besley *et al.* (2002) and Brunetti and Weder (2003) also find a strong negative relationships between corruption and free press or unbribable media.⁵⁴ They suggest that a free press might expose corrupt activities and serve as a restraint on public officials such as politicians (similar Mungiu-Pippidi, 2013). However, with regard to the appearance of multicollinearity, these variables could not be included in the analysis.

⁵³ However, Mocan (2008) using data from almost 50 countries illustrates that males are more frequent targets of bribery than women, possibly because in most countries, males are still more active than females in the labour market for several reasons, and therefore, in turn, more often work as governmental officials.

⁵⁴ For instance, using three different sources of corruption, Besley *et al.* (2002) find a robust negative correlation of corruption with foreign ownership of the media. They interpret their results as evidence that foreign ownership may be correlated with indicators that make the media a more effective information-generating instrument. Brunetti and Weder (2003) also indicate that freedom of the press might control corruption. They find a significant relationship between more press freedom and less corruption in cross-section of countries and present results suggesting that the direction of causation runs from higher press freedom to lower corruption (similar Ahrend (2002) and Chowdhury (2004)).

Socio-Cultural Factors

Socio-cultural factors have increased in importance in the research field of corruption. Already in the 1960s and 1970s, the impact of socio-cultural factors on corruption was stressed. For instance, in the 1970s, Huntington (1968) claimed that corruption is to a large degree a cultural phenomenon.⁵⁵ According to sociological approaches, it is now often assumed that mainly social structures and cultural values determine the extent of corruption (e.g. Paldam, 2002). For instance, a number of case studies have found that societies with strong family or clan-based loyalties show high levels of corruption (e.g. Theobald, 1990). At the macro level, this group of factors captures the social and cultural characteristics of a country that may have impact on the level of corruption such as the dominant religion of a society (Catholicism, Orthodox, Protestantism, Islam), the degree of ethno-linguistic fractionalization, the degree of urbanization and a society's level of education.

- **Religion**

Religiosity is an important indicator for explaining the emergence of corruption. Dreher *et al.* (2007, p. 448) theorizes that "religion may shape social attitudes towards social hierarchy and family values and thus determine the acceptability, or otherwise, of corrupt practices. In more hierarchical systems (for example, Catholicism, Orthodoxy and Islam), challenges to the status quo are less frequent than in more egalitarian or individualistic religions." The relationship between religion and corrupt behavior is notably explored by Treisman (2000). He regresses corruption on the percentage of Protestants in the total population and concludes that a Protestant tradition appears to have a negative (though small) effect on corruption, by controlling for variables such as a country's economic development. Similar results are presented by Bonaglia *et al.* (2001); Paldam (2001)⁵⁶, Gerring and Thacker (2005) or Serra (2006).

For instance, La Porta *et al.* (1999) illustrate that countries with a high proportion of Catholics or Muslims reduces a country's quality of government and, by extension, may reduce the extent of corruption. Chang and Golden (2004) also demonstrate that countries with larger proportions of Protestants tend to be less corrupt than traditionally Catholic countries.

⁵⁵ Huntington (1968, p. 492) argues that "Corruption may be more prevalent in some cultures than in others but in most cultures it seems to be most prevalent during the most intense phases of modernization." He understands modernization as "a change in the basic values of the society."

⁵⁶ A more in-depth analysis of the impact of religion is provided by Paldam (2001), who identifies eleven different groups of religions and tests their impact on corruption. While in countries with a large fraction of Reform Christianity and Tribal religion, corruption is lower, higher levels of corruption can be found in countries with a large influence of Pre- Reform Christianity, Islam, Buddhism and Hinduism. However, the impact is only significant for Reform Christians (Protestants and Anglicans).

Theoretically, this association is often ascribed to egalitarian and individualistic features of Protestantism that facilitate the extent to which office-holders are held accountable for their actions. Thus, compared to other religions such as the Orthodox and Catholic churches as well as Islam, Protestant societies show less hierarchy and are less prone to tolerance towards power abuses and corrupt behavior. Additionally, the Protestant church has traditionally been separated from the state and played a role of opposition to the abuses of the government (Treisman, 2000). The Puritan aspects related to this religious tradition could also have a corruption-preventing effect on both providers and receivers of bribery (Skaaning, 2009). Moreover, Protestants are less embedded in social networks that seem to be a breeding ground for corruption in other religions (Lambsdorff, 2002). Likewise, "Corruption belongs to a sinister informal network of giving and taking, demanding a basic form of trust. There are no contracts or actionable agreements. Corruption flourishes in well-established networks, whether it is a matter of having long-standing connections to building authorities or long-term supply contracts with large corporations. Since both parties may be guilty of a punishable offense, there is trust on both sides" (Alemann, 2004, p. 33). However, the direction of causality remains unexplored.

Hypotheses: Based on the literature I derive the following hypotheses that refer to particular religious affiliations:

3a1: *"The extent of corruption will be higher, the larger the proportion of Catholics in a country's population."*

(Alternative hypothesis: *"The extent of corruption will be lower, the larger the proportion of Catholics in a country's population."*)

3a2: *"The extent of corruption will be higher, the larger the proportion of Orthodox in a country's population."*

(Alternative hypothesis: *"The extent of corruption will be lower, the larger the proportion of Orthodox in a country's population."*)

3a3: *"The extent of corruption will be higher, the smaller the proportion of Protestants in a country's population."*

(Alternative hypothesis: *"The extent of corruption will be lower, the smaller the proportion of Protestants in a country's population."*)

3a4: *"The extent of corruption will be higher, the larger the proportion of Muslims in a country's population."*

(Alternative hypothesis: *"The extent of corruption will be lower, the larger the proportion of Muslims in a country's population."*)

- **Degree of Ethno-linguistic Fractionalization**

The ethnic and linguistic fractionalization of a society may also contribute to the emergence of corruption. A lot of scholars assume a negative relationship between the variables. For instance, in a cross-section analysis of (up to) 152 countries, La Porta *et al.* (1999) provide evidence that ethno-linguistic homogeneity leads to more efficient government performance and hence to lower corruption. Similarly, La Porta *et al.* (1999) and Lederman *et al.* (2005) suggest that in societies that are more ethno-linguistically diverse societies, governments show low-grade performance in terms of efficiency. This finding is explained in terms of the increased difficulties that bureaucrats encounter in extracting bribes from ethnic groups to which they do not belong. Alesina *et al.* (2002) have provided new measures of ethnic, linguistic and religious fractionalization for about 190 countries, also presenting evidence that the variable has a statistically significant impact on corruption. Countries that are ethno-linguistically diverse are associated with higher perceived levels of corruption than homogenous societies. Similarly, Shen and Williamson (2005) assert that ethno-linguistic fractionalization⁵⁷, measured by ethnicity, linguistics and religions, has both direct and indirect negative effects on corruption control, because it increases the risk of certain forms of corruption such as favouritism towards one's relatives, clan members or ethnic group. The results of Ali and Isse (2003) are also consistent with the argument that in an ethnically diverse society, a bureaucrat is likely to consider the interests of his close kin, next his ethnic group, and then perhaps his country. They claim that "The domination of an ethnic group in a country generates an unequal access to power. Minorities with less political access thus collude with bureaucrats for leveling the political and economic landscape" (Ali and Isse, 2003, p. 463).

The evidence, however, is mixed. Treisman (2000) shows that there is no evidence for a direct impact of linguistic fractionalization on a country's extent of corruption. This is confirmed by a cross-national study of Ali and Isse (2003) and Pellegrini and Gerlagh (2008) who find that the relationship between ethno-linguistic fractionalization and corruption decreases and becomes insignificant when income is included in their regression models.

Hypothesis: From these arguments, I derive the following hypothesis (3b): "*The extent of corruption will be higher, the higher the degree of ethno-linguistic fractionalization in a country.*"

(Alternative hypothesis: "*The extent of corruption will be lower, the higher the degree of ethno-linguistic fractionalization in a country.*")

⁵⁷ They use the measures of fractionalization developed by Alesina *et al.* (2002) that covers 650 distinct ethnic groups in 190 countries.

- **Degree of Urbanization**

The percentage of a country's urban population might also have an influence on the level of corruption. However, the studies concentrating on this relationship are very scarce. In this context, Billger and Goel (2009, p. 300) assumed that "Greater concentration of the population in urban areas increases their discount rates, making them more eager to 'jump the queue' via illegal (corrupt) means. There are also greater opportunities for interaction between potential bribe takers and bribe givers in urban areas, resulting in more frequent corrupt deals. Conversely, a highly concentrated urban population might indicate a greater chance that someone is looking over the shoulder(s) of potential bribe takers and bribe givers, acting as a deterrent." In general, their results finally show that greater urbanization decreases corruption, but not consistently throughout the conditional distribution. They claim that "The effect seems bimodal, with more negative and more significant effects in the tails—among the most and least corrupt" (Billger and Goel, 2009, p. 303).

However, Mocan (2008) reports that living in larger cities increases the risk of exposure to bribery. This could be because economic activity may be larger and more varied in scope, which may increase the contact with the government. It could also be the case that the relationship between individuals and government officials may be less personal in larger cities in comparison to smaller ones, which may make it easier to ask for a bribe.

With regard to the fact, that in recent years a growing number of European people constantly leave small villages and move to towns and cities and the assumption that this trend continues to intensify in the future, the variable urbanization has to be included in the following analysis (e.g. Siebel, 2000).

Hypothesis: Based upon these considerations, I derive the following hypothesis (3c): *"The extent of corruption will be higher, the higher the degree of urbanization."*

(Alternative hypothesis: *"The extent of corruption will be lower, the higher the degree of urbanization."*)

- **Level of Education**

Treisman (2000), Ahrend (2002), Ali and Isse (2003) and Glaeser and Saks (2006) argue that corruption will be lower in more educated and literate societies. Ahrend (2002) claims that the influence of education on corruption depends on the capacities of civil society to monitor and criticize government officials. If these capacities are well developed, education may lower the degree of corruption. Otherwise, it could lead to an increase of corruption if the capacities of the civil society are fragile. Additionally, he illustrates that only tertiary education can significantly control corruption while primary and secondary education has no significant effects. In a similar vein, Knack and Azfar (2003) and Arıkan (2008) suggest that education and literacy act as a vertical check on government. They assume that higher

educated citizens tend to monitor the government and oppose corrupt behavior. It is also assumed that better-educated politicians and bureaucrats are less likely to engage in the misuse of power and, particularly, corrupt actions and that the country's education level reflects theirs. Dreher *et al.* (2007) agree and conclude that education, measured as school enrollment rate, may reduce corruption. They argue that school enrollment can be interpreted as a proxy for a country's effectiveness of democracy, meaning that countries with weak democratic institutions will be expected to have higher levels of corruption. Similarly, Mocan (2008) shows that an improvement in the average education of the country is negatively related to the bribery risk of the individuals. Ades and Di Tella (1999) also provide evidence that education, measured as the average number of years of total schooling in a population over 25 years of age, has a negative effect on corruption, although it is only significant at the 10-percent-level.

However, Magnus *et al.* (2002) suggest that education can increase the tolerance of people in the society against corrupt behaviors based on the cultural contexts. In a comparison of the attitudes of students toward cheating in the United States, the Netherlands, Israel and Russia, their survey results and subsequent statistical analysis show that attitudes differ depending on where they live and their level of education: "One would, [...], expect that the higher the level of education, the less tolerant students were of A, the person who cheated. This was indeed the case in the United States and the Netherlands but not in Russia" (Magnus *et al.*, 2002, p. 130). Another hypothesis that was partially checked asserts a link between cheating and corruption and common cultural roots. Torgler and Valev (2006b) argue that the effect of education on corruption is not clear and that there is a lack of empirical studies. On the one hand, they assume that well-educated people might discover and know more about the government's activities. Therefore, there are in a better position to assess the extent of corruption. On the other hand, people could be more strongly involved in corruptive activities, because of a better understanding of the opportunities of corruption. Referring to this, Frechette (2006) suggests that an increase in education may lead to an increase in corruption, implying that corruption is procyclical. Similar to Torgler and Valev (2006b), she assumes that "as the population is getting more educated, and thus better at controlling its bureaucracy, bureaucrats are also becoming more educated and thus better at performing corrupt acts. If bureaucrats are getting better faster than the population is improving its monitoring capability, this could explain the positive sign. A more plausible explanation however is that changes in schooling, as measured here, is more of a proxy for changes in rent than anything else" (Frechette, 2006, p. 14).

Hypothesis: Based on these reflections, I derive the following hypothesis (3d): "*The extent of corruption will be higher, the lower the level of education.*"

(Alternative hypothesis: *“The extent of corruption will be lower, the lower the level of education.”*)

- **Further Socio-Cultural Factors**

Further variables that have been included in prior analyses encompass, for instance, a society's population size. In this context, some authors assume that in larger cities, primarily measured by the size of population, the degree of corruption is higher because the economic activity is often larger and includes a varied scope. This, in turn, leads to an increase in the number of contacts with the government and public officials. It is also assumed that the relationship between individuals and members of the public sector is less personal in larger cities, compared to smaller cities, that makes it easier to enter a corruptive transaction (Seldadyo and Haan, 2006; Hunt, 2004). Mocan (2008) also provides evidence that an increase in the country's population by one million is associated with an increase in the propensity to be asked for a bribe by 0.01 percentage points. However, the size of a country's population size is not included because it is highly correlated with the variable urbanization.

Historical Factors

Corruption has numerous historical roots. When it once reached a certain level, it has been difficult to quickly reduce it again (e.g. Kostadinova, 2012). Sociological and historical institutionalists particularly emphasize that historical developments of institutions people operate in, and certain cultural values and traditions that have developed over a number of years can affect the level of corruption (e.g. North, 1990b; Thelen, 1999). Consequently, a country's degree of corruption can be considered as path-dependent or even as cultural heritage. That implies that corruptive behavior in the past affects corruptive behavior in the present and in the future. These assumptions also refer to variables such as the degree of democratic consolidation and the duration of democracy in a country. Therefore, the historical variables that are included in the analysis encompass the durability of democracy, the communist past of a country, and a society's history of corruption.

- **Years of Democracy**

Another variable that is assumed as an explaining factor of corruption is the durability of democratic systems. However, studies concentrating on the relationship between corruption and a democratic system's durability are also very rare. Treisman (2000) was one of the first researchers who observed a significant impact of the distant past on the degree of corruption and illustrates that a long duration of democracies seems to be necessary to significantly reduce corruption. He explored that states that had been democratic systems constantly since 1950 show lower degrees of corruption. In other words and as already described, longer established democracies are less corrupt. However, the opposite has not been shown, namely that countries with high levels of corruption experience weakened democratization or democratic breakdown. Similarly Treisman (2000, p. 439) claims that "What matters is whether or not it has been democratic for decades. The regression estimates suggest a painfully slow process by which democracy undermines the foundations of corruption. Those countries with at least 40 years of consecutive democracy behind them enjoyed a significant, though small, corruption dividend, and those with 20-30 years may also have benefited slightly." Blake and Martin (2006) also show that longitudinal measures of democracy have a strong association with the level of corruption measuring by CPI data from 1996 to 2000. By examining the raw, interval data and by creating a series of threshold levels between 10 and 20 years as an empirical metric of democratic consolidation in regard to corruption control, they used the number of uninterrupted years of democracy as indicator of the presence of a democratic system. In a similar vein, Pellegrini and Gerlagh (2008) show a negative relationship between a medium-long exposure to uninterrupted democracy (30 years) and corruption, whereas political instability leads to an increase of corruption.

Hypothesis: Based on these findings, I expect to confirm the following hypothesis (4b): *“The extent of corruption will be lower, if the country has a long democratic history.”*

(Alternative hypothesis: *“The extent of corruption will be higher, if the country has a long democratic history.”*)

- **Communist Past**

Previous research indicates that the legacy of a country’s communist past has a strong impact on country’s corruption level (e.g. Rose, 2001; Miller *et al.*, 2001; Treisman, 2003; Møller and Skaaning, 2009). This factor is similar to the variable “History of corruption”, but primarily focuses on post-communist countries such as in Central and Eastern Europe. According to this regional context, Kostadinova (2012, p. 26) claims that “Because of the multifaceted character of postcommunist transition, numerous opportunities emerged for illicit payments, patronage, allocation of public contracts, black market interactions, and covert networks. These could spread and grow in the Eastern Europe societies, already suffering from endemic bribery and lack of elite integrity.”⁵⁸ Likewise, Sandholtz and Taagepera (2005, p. 114) argue that “Post-communist states are susceptible to corrupt practices both because of the heritage of economic decision-making under communist rule and because of the vulnerability of privatization schemes to corrupt influences.” Based on World Values Surveys conducted in 46 societies between 1995 and 2001, they have empirically shown that there is a positive relationship between high levels of corruption and exposure to communist regimes and the adoption of communist structures and institutions, including certain social norms and values. They suggest, that “Communism created structural incentives for engaging in corrupt behaviors, which became such a widespread fact of life that they became rooted in the culture in these societies - that is, the social norms and practices prevailing in communist societies. The transitions toward democracy and market economies have not yet erased this culture of corruption” (Sandholtz and Taagepera, 2005, p. 109). In a similar vein, Gerring and Thacker (2005) suggest that countries that do not have a history of socialist rule tend to exhibit lower levels of corruption. However, Treisman (2003) cannot confirm the communism-corruption nexus. He finds no significant difference between post-communist countries and claims that “The higher average level of corruption in postcommunist countries seems to have little to do with postcommunism per se. Although these countries may be corrupt in distinctive ways, they are not corrupt for distinctive reasons. They have bad governments,

⁵⁸ To be more specific, Kostadinova (2012, p. 26) argues that “A legacy of ‘informality’ inherited from the communist era enhanced the formation of exchange networks operating through contacts and privileges. In this volatile environment, too many public officials preferred to stay loyal to ‘their colleagues and agency than to the state and society more generally” (see also Holmes (2006) and Karklins (2005)).

largely because they are poor and lack a post-war history of democracy” (Treisman, 2003, p. 22). Moreover, opinion polls show that people do not generally blame communism for current corruption problems. The level of corruption is viewed by most either as a part of the moral crisis of transition or as a result of the country’s culture (e.g. Hutchcroft, 1997). Skaaning (2009, p. 226) even assumes that “as culture only changes slowly, the corrupt traditions have arguably survived the end of communist regimes. Communism is thus likely to have established a negative legacy. New bureaucracies were not created from scratch, large extents of the personnel carried over, and enterprises as well as private people in general had 'internalized' certain practices.” Their analysis indicates that a communist past has no significant influence on the level of corruption.

Using data from the World Values Survey from 64 societies from 1981-2001, Moreno (2002) shows a negative relationship between corruption permissiveness and support for democracy. He can also illustrate that there are important cross-national differences, suggesting that there is a cultural basis for the justification of corruption. For instance, the extent of corruption permissiveness is still higher in post-communist, Latin American and South Asian countries. He assumes that in young democracies, corruption may be observed as part of inherited practices from old authoritarian governments. Furthermore, he observes an increase in corruption permissiveness in Western societies. However, the influence on levels of corruption is difficult to determine as the measurement of communist legacies is relatively unclear.

Hypothesis: Based on these findings and reflections, I derive the following hypothesis (4c): *“The extent of corruption will be higher, if the country has a communist past.”*

(Alternative hypothesis: *“The extent of corruption will be lower, if the country has a communist past.”*)

- **History of Corruption**

As already mentioned, it can be strongly assumed that the “history” of corruption plays an important role in explaining current corruption levels and their persistence. The rationale for including this variable is the assumption that corruption is obviously path dependent. More clearly, it is supposed that the persistence of corruption as the cultural heritage of a society has obviously influence on the extent of corruption of the following years. Paldam (2002) even speaks of “cultural determinism”, although he has found “little basis for the belief that corruption is so deeply embedded in the culture of the society as to be unchangeable. Yet, corruption varies greatly within the same cultural area. This variance has been ascribed to the inherent seesaw dynamics of corruption” (Paldam, 2002, p. 328). Andvig and Moene’s model (1990), a so called frequency-dependent model equilibria, generates two stable equilibria (one with a high extent of corruption and the other with less corruption) and also

highlights the importance of the history and persistence of corruption. In a similar vein, Herzfeld and Weiss (2003, p. 629) also conclude that corruption is a persistent phenomenon and that “strong forces tend to perpetuate corruption at fairly constant level.” Moreover, it is assumed that in societies with high levels of corruption, people have greater expectations and a higher estimated probability that, for instance, a given public official will engage in corrupt acts (Fisman and Miguel, 2007). These facts also argue for a „cultural transmission of corruption“, implying that individuals from societies where corrupt transactions are quite common, are more likely to engage in, and expect others to engage in, corrupt acts (Hauk and Saez-Marti, 2002; Barr and Serra, 2010). According to Central and Eastern Europe Kostadinova (2012, p. 33) mentions that “the problem of regulatory overburdening of citizens is complex. It has roots in the past when individuals’ lives, careers, and well-being all depended on the mercy of officeholders who were loyal to the Communist Party.” (Kostadinova, 2012, p. 33). However, apart from some studies that strongly focus on Central and Eastern Europe (e.g. Skaaning, 2009; Kostadinova, 2012), the research on the path dependence of corruption is generally scarce.

Hypothesis: Based upon these considerations and reflections, I derive the following hypothesis (4a): *“The extent of corruption will be higher, the higher the degree of corruption years before.”*

(Alternative hypothesis: *“The extent of corruption will be lower, the higher the degree of corruption years before.”*)

3.4.2 The Micro Level: Socio-demographic Characteristics, Values, Norms and Attitudes

Besides a number of country characteristics, personal characteristics of individuals are also expected to impact the extent of corruption through the mechanisms discussed in the bathtub model. Overall, it is striking that only a small body of literature exists that has concentrated on the relationship between corruptive behavior and individual characteristics. At the micro level, variables for corruption that are included in the analysis are categorized into socio-demographic factors such as gender, age, employment status, income level, values and norms such as societal values and interpersonal trust, and attitudes such as an individual's satisfaction with financial situation and the justification of bribery.

Even though, previous studies have analyzed and discussed some of these variables and their effects on corruption, the current research has not taken all of these variables into account, when analyzing corruption. These variables particularly include an individual's level of income, individual's satisfaction with the financial situation or the justification of bribery. In the following section, I describe and justify, how I derive the variables and hypotheses that I will use and examine in the subsequent analysis.

Socio-Demographic Characteristics

- **Gender**

As already discussed at the macro level (variable "women in parliaments"), the impact of gender on the extent of corruption should not be underestimated. In particular, Swamy *et al.* (2001) and Dollar *et al.* (2001) show that women are less involved in corrupt transactions and are less likely to condone bribe-taking than men, implying that women are more trustworthy, public-spirited and have higher norms regarding bribery than males (similar Gottfredson and Hirschi, 1990; Paternoster and Simpson Sally, 1996; Hunt, 2004). This is confirmed by a number of articles (e.g. Hunt, 2004; Lambsdorff and Fink Hady, 2006; Rivas, 2013). In addition, Torgler and Valev (2006a, p. 17) illustrate that women are significantly less likely to agree that corruption and cheating on taxes can be justified. They claim that "Being a woman rather than a man increases the probability of stating that corruption or tax evasion is never justifiable between 5.8 and 7.1 percentage points." In their study Torgler and Valev (2010) use the World Values Survey and the European Values Survey data covering eight Western European countries for the period from 1981 to 1999. Their results also remain robust after investigating different time periods and extending their analysis by several additional factors such as education, employment status or income. However, some authors doubt these results (e.g. Treisman, 2007). For instance, Sung (2003) or Alatas *et al.* (2009) illustrate by conducting experiments that the gender differences seems to be more culture-specific than

caused by gender differences. Likewise, Alatas *et al.* (2009, p. 17) assume that “In the context of corruption, one possible explanation for the different gender effects that are observed in our data is the differing social roles of women across cultures. In relatively more patriarchal societies where women do not play as active a role in the public domain, women’s views on social issues may be influenced to a greater extent by men’s views. Hence, in such societies, one would expect to see less of a gender difference in behavior towards corruption in comparison to societies where women feel more comfortable in voicing their own opinions.”

Hypothesis: Based on this information, I assume the following corruption-gender-nexus at the micro level: “*Gender influences the extent of perceived corruption.*” (5a)⁵⁹

(Alternative hypothesis: “*Gender does not influence the extent of perceived corruption.*”)

- **Age**

So far, the variable age has been considered only in a few studies examining the extent of corruption. For instance, Torgler and Valev (2006a) find strong evidence that there is a significant relationship between corruption, which is measured by the World Values Survey item “justifiability of corruption” (1995-1997), and people’s age. In a panel analysis of 39 countries, they observe that all age groups from 30 to 65+ report a significantly lower justifiability of corruption than the reference group below 30. Referring to previous research such as Hirschi and Gottfredson (2000)⁶⁰, Torgler and Valev (2006a) indicate that an individual’s age is an important indicator of other illegal activities as well. They provide evidence that older people are less likely to view corruption as justifiable and illustrate that the age effect is robust across different social and cultural conditions. This corruption-age nexus is justified by the argument that older people tend to be more tax compliant and less likely to be involved in criminal activities. Hunt (2004) achieved similar results. Using data from 34 countries from the International Crime Victim Surveys, she finds a negative relationship between corruption and age, claiming that older people have had time to develop networks, and such networks, in turn, could lead to honesty. As a result, older people tend to bribe less than younger people. In this context, she suggests that “A higher probability of detection and a greater value of reputation within networks could lead to honesty rather than

⁵⁹ To measure corruption at the individual level I finally use data from the World Values Survey that refer to the perception of corruption by individuals from multiple countries. This is in contrast to the data from the macro level based on survey data by experts. For this reason, I call the dependent variable of the micro level “extent of perceived corruption”. As I will later demonstrate, both variables are highly correlated.

⁶⁰ Hirschi and Gottfredson (2000, p. 138) illustrate that age is negatively correlated with rule breaking. According to this result, they point out that “no fact about crime is more widely accepted by criminologist. Virtually all of them, of whatever theoretical persuasion, appear to operate with a common image of the age distribution. This distribution thus represents one of the brute factors of criminology.”

implicit quid pro quos, although there is no clear dividing line between the two. In the context of the links between crime and trust, trust should lead to honesty, rather than a network for mutually beneficial but possibly illegal exchange.” In a similar vein, Mocan (2008) illustrates that individuals who are 20 to 39 years of age are more likely to be asked for a bribe in comparison to those who are younger than 20. In contrast to that, individuals who are 60 years and older are less likely to get involved in corruptive transactions. Mocan (2008) concludes that older (possibly retired) individuals may have to deal with government rules and regulations less frequently.

Hypothesis: From the literature I derive the following hypothesis: *“Age influences the extent of perceived corruption.”* (5b)

(Alternative hypothesis: *“Age does not influence the extent of perceived corruption.”*)

- **Employment Status**

Based on rational-choice approaches, it can be strongly assumed that unemployed people tend to engage in corruptive actions, compared to individuals having a job. Implying that low or no income creates strong economic incentives to take some extra-money in form of bribery. Yet, only a few scholars have examined the relationship between corruption and individuals' employment status. In particular, Torgler and Valev (2006a) illustrate that self-employed and unemployed people have a lower tolerance for corrupt activities compared to other citizens. It lowers the probability for a self-employed person to state that accepting the bribe is never justifiable by 2.9 and for unemployed people by 5.3 percentage points. Torgler and Valev (2006a) use a dummy variable for self-employed individuals “as they might be in the best position to invest in bribing and benefit from corruption” (Torgler and Valev, 2006a, p. 16). They assume that such a position or a certain status, in turn, may influence the norms regarding bribery and state: “Being away from a job with its regular hours, restrictions, and compensations may increase the incentive to act illegally” (Torgler and Valev, 2006a, p. 16). However, in their study from 2010, which concentrates on gender and public attitudes toward corruption and tax evasion, they do not find a statistically significant effect of the employment status on individuals' justifiability of corruption. Yet, Mocan (2008) using micro level data shows that enhancing the unemployment rate increases the counts of bribery. He demonstrates that an increase of 1 percentage point in the male unemployment rate in the country leads to a rise of bribery by 0.06 percentage points. Macro level studies also show that that increased joblessness is associated with higher levels of corruption (e.g. Goel and Rich, 1989).

Hypothesis: On the basis of these findings, one can assume that *“Employment status influences the extent of perceived corruption.”* (5c)

(Alternative hypothesis: *“Employment status does not influence the extent of perceived corruption.”*)

- **Level of Income**

Similar to the variable “employment status” at the macro level, the level of an individuals’ income is likely to play a role in the extent of corruption at the micro level. However, there are only a few studies concentrating on the relationship between corruptive behavior and the individuals’ level of income at the micro level. Similar to the assumption of the variable “employment status” it can be strongly assumed that people with small incomes tend to engage in corruptive actions. With regard to rational-choice approaches, it is assumed that people with low incomes may have greater incentives to engage in corrupt activities because of corruptions’ relatively high benefits. A low income creates challenges for making ends meet and is likely to create incentives for generating supplementary income.

In addition, as already indicated at the macro level, lower income countries often have fewer financial resources for creating efficient law enforcement institutions, which make corruption less likely to be detected and punished (O’Connor and Fischer, 2012). Torgler and Valev (2006a) confirm this. They indicate that people with a higher income are more likely to be asked for a bribe, as are those with a better education. Contrary to his, individuals with a lower income have lower social “stakes” or restrictions but are “[...] less in a position to take risks because of a high marginal utility loss (wealth reduction) if they are caught and penalized” (Torgler and Valev, 2006a, p. 15). This relationship has been examined at the macro level by Haque and Sahay Ratna (1996), Montinola and Jackman (2002), Alt and Lassen (2003) or Gerring and Thacker (2005) who have demonstrated that countries with higher incomes tend to exhibit lower levels of corruption. However, the results are mixed. For instance, studies by Husted (1999), and Gurgur and Shah (2005) did not show a statistically significant relationship between civil service income and the extent of corruption.

Hypothesis: From these arguments, I derive the following hypothesis (5d): *“Individual income influences the extent of perceived corruption.”*

(Alternative hypothesis: *“Individual income does not influence the extent of perceived corruption.”*)

Values and Norms

- **Societal Values**

Scholars of sociological approaches generally argue that decisions about whether to engage in corrupt transactions are particularly influenced by social norms and cultural values. In this way, corruption is observed as a way of life, as a kind of tradition and as a set of values that is part of a society’s culture. Several researchers indicate high correlations between various

societal values and the extent of corruption (e.g. Tanzi, 1994/1999; Husted, 1999; Getz and Volkema, 2001; Banuri and Eckel, 2012). Husted (1999) and Getz and Volkema (2001) include cultural variables in their explanatory models of corruption that especially refer to Hofstede's (1997) cultural dimensions of power distance⁶¹, individualism-collectivism⁶², masculinity-femininity⁶³, uncertainty avoidance⁶⁴. Examining 36 countries across the globe, Husted (1999) demonstrates that a high degree of power distance, high masculinity and high uncertainty avoidance can lead to high degrees of corruption. Individualism, however, is not significant in his analysis. Testing a model of corruption in international business for countries worldwide, Getz and Volkema (2001) provides similar evidence, namely that uncertainty avoidance moderates the relationship between economic adversity and corruption, while power distance and uncertainty avoidance are positively associated with corruption as well. Moreover, Welzel *et al.* (2003) present a model in which value changes antecede a decrease in corruption. They indicate that societies with high self-expression values⁶⁵ which imply an emphasis on freedom of expression and equality of opportunities subsequently have lower corruption levels. For the time period 1997-2011, Sandholtz and Taagepera (2005) find a similar correlation between self-expression values and lower corruption levels. They remark that self-expression values account for more than 70% of the variance in the Perceived Corruption Index between 46 countries. However, when controlling for these cultural variables, communism and post-communism increase the levels of corruption even further. Adding to these findings, O'Connor and Fischer (2012) examine the influence of societal values on changes of corruption scores for 59 societies from 1980 to 2008. Using a multilevel framework, they provide evidence that self-expression values are significant predictors of lower corruption. O'Connor and Fischer (2012) measure societal values using data from WVS on Inglehart and Baker's (2000) self-expression values and rational values that, in turn, emphasize greater egalitarianism and tolerance. Their results

⁶¹ Husted defines power distance according to Hofstede (1997, p. 28) as the "extent to which the less powerful members of institutions and organizations within a country expect and accept that power is distributed unequally."

⁶² The individualism- collectivism dimension is defined as the extent to "which decisions about a person's life are determined by the individual or by the ingroup - a person's circle of family, friends, or peers" Husted (1999, p. 344).

⁶³ Masculinity is a dimension that refers, among other things, to a focus on 'material success' as opposed to a concern with the "quality of life" (Hofstede (1997, p. 82), cited in Husted (1999, p. 344)).

⁶⁴ Hofstede (1997, p. 114), cited in Husted (1999, p. 345) defines uncertainty avoidance as "the extent to which members of a culture feel threatened by uncertainty or unknown situations." It reflects a certain intolerance for ambiguity within culture. Husted (1999) claims that corruption can be observed as a mechanism that can reduce uncertainty.

⁶⁵ Self-expression values are described as "conglomerate of egalitarian, liberal, autonomous and expressive orientations" (Welzel and Inglehart (2010, p. 51)).

show that self-expression values are related to lower corruption across, but not within countries, thereby supporting the fact that this value dimension is linked to important differences between societies. Importantly, self-expression values were predictors of corruption levels even when controlling for country wealth. This indicates that countries that value individual autonomy, social diversity, and more egalitarian social structures are less likely to be corrupt, regardless of economic conditions. However, contrary to expectations, rational values do not predict corruption, either across or within countries.

Hypothesis: Based on these reflections, I derive the following hypothesis: *“The level of societal values influences the extent of perceived corruption.”* (5e)

(Alternative hypothesis: *“The level of societal values does not influence the extent of perceived corruption.”*).

- **Level of Interpersonal Trust**

Previous research offers different theoretical considerations and contradicting empirical findings on the relationship between trust and corruption. Uslaner (2006) thoroughly investigated both variables trust and corruption and claims that even if they represent opposing moral values, the two are very strongly related. His cross-section results show a reciprocal connection between these two variables and “that the effect of corruption on trust is greater than the opposite causal claim (trust begets an honest political system)” (Uslaner, 2006, p. 3). Moreover, trust as a central component of social capital is a value expressing the belief that others are part of your moral community. Yet, some scholars are more hesitant to inject such a strongly moralistic interpretation into trust. From a rational-choice point of view, trust is simply based on the expectation that others behave predictably (Hardin, 2002). Trust is about certainty of expectations and lays the basis for cooperation with people who are not like yourself (Putnam, 1993; Uslaner, 2006). Among other empirical studies, Paldam and Svendsen (2001), Uslaner (2006) and You (2004) conclude that a strong negative relationship between corruption and interpersonal trust exists, implying that trusting societies have less people behaving corruptly.

Even though some researchers suggest that societies with high levels of trust also tend to be more tolerant of corrupt practices. For instance, Moreno (2002) argues that high levels of interpersonal trust support corruption because trust plays an important role in the relationship between corrupt individuals who usually operate with high levels of interpersonal trust necessary to maintain their relationship (Della Porta, 2000; Rose-Ackerman, 2001). In this context, Rose-Ackerman (2001) illustrates that societies with greater levels of interpersonal trust also exhibit higher levels of corruption and donative transfers. This is attributed to the fact that interpersonal trust decreases the risk of disclosure in corrupt transactions. More precisely, individuals from societies where people commonly rely on informal contracts

(which may or may not be corrupt) are common are more likely to enter informal contracts in the future. Similarly, Della Porta, (2000, p. 223) claims that “In all illegal systems of exchange, a high degree of trust and reciprocity is necessary among participants, so the internalization of some rules of the game is therefore necessary. A good reputation for respecting the terms of the illegal exchange, which participants often call ‘honesty’, is valued by the actors involved.” However, Rothstein and Stolle (2003, p. 12) opposes this finding: “The high degree of norm conformity that Della Porta depicts among those who are involved in corruption may be plausible, but this is a specific type of trust relations, that cannot be revealed to the outside world”. They claim that people involved in corruption need not really trust one another. It is rather a situation of “mutual deterrence”.⁶⁶

Hypothesis: From these considerations I derive the following hypothesis: *“The level of trust in other people influences the extent of perceived corruption.”* (5f)

(Alternative hypothesis: *“The level of trust in other people does not influence the extent of perceived corruption.”*).

Attitudes

- **Satisfaction with Financial Situation**

Similar to the assumed relationship between corruption and the level of income at the macro level, it relates to an individual's satisfaction with the financial situation. However, in contrast to the level of income, this variable relates to the subjective perception of one's own financial situation. In this context, Torgler and Valev (2006a) assume that people who are dissatisfied with their financial situation tend to be more willing to act illegally. Such discontentment, in turn, can create “a sense of distress, especially when there is a discrepancy between the actual and the desired financial situation. Thus, there may be a higher incentive to act illegally to reduce this gap” (Torgler and Valev, 2006a, p. 7). Besides the study of Torgler and Valev (2006a), there are no other analyses that include this variable. However, following economic approaches, implying that actors follow a rational-choice logic and are often motivated by material interests and commit or refrain from corrupt acts for tangible goods, this variable should be included in the following analysis. It can be assumed that people who are unsatisfied with their own financial situation strive for higher income and are also prepared to accept illegal payments.

⁶⁶ In this analysis institutional trust is not included as independent variable because it rather appears as consequence as a cause of corruption. In this context, Kubbe (2013) presents a causal model of corruption and trust, including corruption as a mediator of interpersonal and institutional trust. For the Western and Central and Eastern countries the model illustrates that increasing interpersonal trust enhances institutional trust. This is especially the case, when the degree of corruption is minimized.

Hypothesis: Therefore, I derive the following hypothesis: *“Financial satisfaction influences the extent of perceived corruption.”* (5g)

(Alternative hypothesis: *“Financial dissatisfaction does not influence the extent of perceived corruption.”*)

- **Justification of Bribery**

In the following analysis, it is also assumed that people’s attitude towards illegal behaviour has an influence on the extent of corruption. More precisely, it is expected that people who are more tolerant towards corruption are more likely to behave corruptively as well. Research examining this relationship is, however, very scarce. For instance, Moreno (2002, p. 2) suggests that “Corruption has a cultural side, and most societies have a certain degree of corruption permissiveness, with some of them being, on average, more likely to justify corrupt practices than others.” In his article he analyses data from the World Values Survey including 64 societies in four rounds of surveys conducted between 1981 and 2001. Out of this data, he constructed an index of corruption permissiveness measuring the extent to which people tend to justify certain practices that can be considered corrupt. He demonstrates that there are significant cross-national and cross-regional variations in the permissiveness of corruption, suggesting that some societies justify corrupt acts based on cultural values.⁶⁷ For instance, the level of corruption permissiveness was very high in post-Communist countries, followed by Latin American countries, and South Asian societies. Additionally, for the time period of 1995-2000 he finds an observable increase in corruption permissiveness in Western democracies as well, the most significant being in the United States (Moreno, 2002). In his article “Everyone’s is doing it”, Green (1991) also identifies and analyses certain conditions⁶⁸ that provide people a moral justification for engaging in

⁶⁷ Moreover, he suggests that these attitudes toward corruption are strongly negatively associated with interpersonal trust and democratic attitudes such as the support for democracy that are important components of democratic political culture Moreno (2002).

⁶⁸ Green (1991) recommends the following “Conditions Permitting One to Engage in Harmful but Prevalent Behavior:

1. Refraining from this behavior will unavoidably cause you (or those you care for or for whom you are responsible) serious harm or loss.
2. Your engaging in this behavior will not also cause significantly more harm or loss to others.
3. Your engaging in this behavior will not lead others to engage in it in ways that are equally or more harmful, and this would be true if your engaging in this behavior were to become public knowledge.
4. Your refraining from this behavior will not lead others to refrain from it, and this would be true if your refraining from this behavior were to become public knowledge.
5. Your refraining from this behavior will not unavoidably lead others to engage in it in ways that are substantially more harmful than would have been the case had you chosen to engage in it yourself and

corruptive behavior. He points out that the excuse “Everyone’s is doing it” is frequently used as a morally valid reason to explain why people behave corruptly. He applies these conditions to representative cases in business ethics and provides evidence that this is particularly true in business sectors, where competitive pressures are often very high.⁶⁹

Green’s (1991) findings also suggest, that corruptive behavior is often closely related to cultural norms and traditions given in certain societies. Similarly, this is substantiated by the study of Beck and Lee (2002) which analyses the attitudes of Russian police officers as perceived by the public and the media, to be open to using their public positions to obtain some extra-money, goods and services. Conducting surveys about beliefs and values referring to corruption among students and serving officers attending a police institute, they demonstrate that young police recruits in particular believe that corruption is often justifiable and morally acceptable under particular circumstances and rules. That, in turn, might have an influence on a country’s degree of democracy because the police as state representatives are perceived to play a key role in the development of democratic states (Beck and Lee, 2002). Furthermore, on the basis of interviews conducted in Kenya and Uganda, Persson *et al.* (2012) argue that the reason why people behave corruptly, although condemning corruption, seem to be that they understand the situation as a collective action problem where it makes little sense to be “the only one” that refrains from using or accepting bribes and other kick-backs. In other words, “it appears to be a coordination problem, where the equilibrium that emerges depends on shared expectations about others’ behavior” (Persson *et al.*, 2012, p. 15).

Hypothesis: From these considerations I derive the following hypothesis: *“The level of the justification of bribery influences the extent of perceived corruption.”* (5h)

(Alternative hypothesis: *“The level the justification of bribery does not influence the extent of perceived corruption.”*).

this would be true if your refraining from this behavior were to become | public knowledge.” Green (1991, p. 77).

⁶⁹ Green (1991, p. 90) concludes that “On the one hand, these conditions must be shown to reflect and adequately express the relevant considerations governing all moral choice, what I earlier called the basic ‘logic’ of the moral reasoning process. On the other hand, a list of justifying conditions must also adequately guide judgment through both familiar and novel cases for decision and it must do so without violating some of our firmest and most settled judgments about these cases. When these two sides of the task are adequately accomplished, we can say that an exercise of this sort is successful and that we are in a position of “reflective equilibrium” before the issues at hand.”

4 Explaining Corruption in Europe

The theoretical approaches, empirical studies, variables and hypotheses described earlier are included in this dissertation's "bathtub model" of corruption that combines economic and sociological approaches into an interdisciplinary framework and integrates certain variables at the macro and micro level. For the purpose of identifying the determinants of corruption in Europe, I fill the concrete situations at each level of the model by empirical data. According to that, I assume that economic, political, socio-cultural and historical variables affect the extent of corruption at the macro level that includes the characteristics of certain countries (situation 1 in the model) whereas, at the micro level certain characteristics of individuals such as socio-demographic factors, values, norms, and attitudes are expected to impact the extent of corruption. The aggregation of all individual corrupt actions ("aggregational logic"), in turn, leads to situation 2 on the macro-level, where corruption can be measured by certain indices such as the CPI. The macro and micro level are examined by panel and multilevel analyses to explain the extent of corruption in European states across time at the macro level via the aggregated individual actions at the micro level (situation 2 in the model).

The extent of corruption at the macro level is measured by the Corruption Perception Index and additionally by the Control of Corruption Index for a period of 16 years (1995-2010). Subsequently, I conduct a cross-cultural multilevel analysis at the micro level from representative population surveys around Europe. The dependent variable at the individual level is measured by the item "Extent of political corruption" of three waves from the World Values Survey (1994-1999, 1999-2004 and 2005-2008).

Nonetheless, especially the interrelation between macro and micro level implies theoretical as well as methodological challenges. The methodological difficulties of uniting micro and macro-level data have been taken up in a series of papers (e.g. King *et al.*, 1994; King *et al.*, 2004). Particularly, problems arise where general assumptions are made about countries that are internally diverse. Western (1998, p. 1255) calls this "the fundamental problem of comparative research." More precisely, wherever contextual variables are invoked, differences in causal processes within countries are related to characteristics that vary across them. I will take these problems into account to avoid ecological fallacies, reconstructing and drawing conclusions on individual behavior from country-level data, and individualistic fallacies, occurring when observations at the individual level are generalized to the macro- or meso-level (e.g. Robinson, 1950).

4.1 Analyzing Corruption at the Macro-Level

The empirical analysis performed at the macro-level follows a panel-data research design that provides a rich and powerful study of a set of people or countries. Panel data are repeated measures on individuals or countries, observed for several time periods. In particular, panel data analyses can encompass a wide variety of certain approaches. The most common types are independently pooled panels, fixed effects and random effects models. Among these types of models, additional dynamic panel, robust, and covariance structure models exist (Wooldridge, 2007).⁷⁰

Panel data analyses offer a large number of advantages compared with other conventional quantitative methods such as cross-sectional analyses. For instance, they enable researchers to run regression analysis considering both the spatial and temporal dimension of data. While the spatial dimension refers to a set of cross-sectional units of observation, the temporal dimension pertains to periodic observations of a set of variables characterizing these cross-sectional units over a particular time period. Therefore, panel data include high informative values that are more variable, less collinear and include more degrees of freedom leading to more efficient estimates than standard regression analyses. The increased precision in estimation is particularly a result of an increase in the number of observations owing to combining or pooling several time periods of data for each individual or country. In addition, with the help of panel analyses, variance within individuals or societies can be achieved and, in contrast to cross-sectional analyses, causal effects of several independent variables on the dependent variable can be determined. Hence, with repeated observations of enough cross-sections, panel analyses facilitate learning more about dynamics with short time series than is possible from a single cross-country analysis. The combination of time series with cross-sections can achieve a quality and quantity of data that is impossible using only one of these two dimensions (e.g. Gujarati and Porter, 2009). Furthermore, to handle the problem of serial dependence, estimations can be based on panel-corrected standard errors. So, the linear regression models with panel-corrected standard errors⁷¹ take autocorrelation into account.

However, even for linear regression, standard panel analyses use a wider range of models and estimators than is the case with cross-section-data. The usual formular of panel analysis reads as follows: $y_{it} = a + bx_{it} + \epsilon_{it}$, where y is the dependent variable corruption, X is

⁷⁰ For more details on this see also Cameron and Trivedi (2005); Stock and Watson (2007) or Wooldridge (2009).

⁷¹ In Stata, pooled OLS regressions with panel-corrected standard errors can be estimated with the `xtpcse` command. As a result, OLS parameter estimates along with the panel-corrected variance estimates are received.

the independent variable, a and b are coefficients, i ($i = 1, \dots, N$) and t ($t = 1, \dots, T$) are indices for units of observations (here: countries) and time (here: 1995-2010). The error ϵ_{it} needs special attention in the analyses. For instance, assumptions about the error term determine whether we speak of fixed effects or random effects.⁷²

For the analysis of the causes of corruption in European states, the focus lies on data from a short panel which means large cross-sectional units of observations (such as countries, states, counties) for a few time periods, rather than a long panel such as a small cross section of countries for many time periods (e.g. Cameron and Trivedi, 2005; Wooldridge, 2007). In this case, it would be possible to concentrate on time-series analyses. Due to data availability, my investigation encompasses a time horizon of 16 years for 37 countries.

To detect the causes of corruption at the country level, I run several linear regression models with panel-corrected standard errors for estimating variance in these models, each including economic, political, socio-cultural and historical variables at the macro level. These variance estimates return to the assumption of many observations per panel but allow for panel-level heteroskedasticity and contemporaneous correlation of observations between the panels. For valid statistical inference it is important to control for likely correlation of regression model errors over time for the given unit of observation. Suggesting to rely on OLS coefficient estimates with panel-corrected standard errors, Beck and Katz (1995) convincingly demonstrate that their large T asymptotics based standard errors, which correct for contemporaneous correlation between the subjects, perform well in small panels.

After checking for multicollinearity⁷³ I analyze how group-variables (economic, political, socio-cultural and historical factors) are related to corruption in order to identify significant relationships. Finally, I take the significant variables and put them in an overall model presenting the determinants of corruption for European states. Furthermore, in order to uncover specific European determinants of corruption, I run all these calculations with an additional sample, including countries world-wide.

Measuring Corruption at the Country Level

To measure the dependent variable "Extent of Corruption" I use the Corruption Perception Index from Transparency International for a period of 16 years (1995-2010). The CPI-scales are rescaled to a range of 0 to 10, where 0 indicates low corruption and 10 the highest level. In particular, this allows for interpretation and comparison of findings with assessments

72 In a fixed effects model, ϵ_{it} assumed to vary non-stochastically over i or t making the fixed effects model analogous to a dummy variable model in one dimension. In a random effects model, ϵ_{it} is assumed to vary stochastically over i or t requiring special treatment of the error variance matrix.

73 Multicollinearity appears if two or more independent variables are highly correlated. This was not the case. The results can be observed in the Appendix D.

gained by the Control of Corruption Index provided by the World Bank. Obviously, I can only systematically include countries in the analysis that provide useful data. On the basis of data availability, my investigation includes 37 European countries for the period between 1995 and 2010. Excluded states are either not considered by most other data sources such as Andorra, Liechtenstein, Malta, and San Marino, or are outliers within the dataset, such as Turkey or Russia.

For some missing corruption data, I have used the average of one year and the previous year. As a result, the data set is referred to as a balanced panel, meaning that there are hardly any missing values. For comparative reasons and to filter out the specific European determinants of corruption, I ran all calculations with two samples: a European sample and a sample including countries outside Europe. The non-European sample includes the following 41 countries to the same period of 1995-2010: Algeria, Argentina, Armenia, Australia, Azerbaijan, Bangladesh, Brazil, Canada, Chile, China, Colombia, Democratic Republic of Congo, Dominican Republic, Egypt, El Salvador, Ethiopia, Ghana, Guatemala, India, Indonesia, Iran, Japan, South Korea, Kyrgyzstan, Malaysia, Mexico, Morocco, New Zealand, Pakistan, Peru, Philippines, Russia, South Africa, Thailand, Trinidad and Tobago, Uganda, United States, Uruguay, Venezuela, Vietnam and Zambia. Excluded countries such as Antigua and Barbuda, Bahrain or Mozambique are not considered by data, or are so isolated from the international community that almost no data is available. The latter refers to countries such as Afghanistan, Cuba or North Korea.

The following illustrations (figure 4 and table 2) demonstrate that corruption varies widely across different European countries. The average extent of corruption (1995-2010) in 37 European states is 3.92. The highest levels of corruption are found in Ukraine (7.6), Albania (7.2), Moldova (7.2), Georgia (7.1) and Bosnia and Herzegovina (6.8), followed by Macedonia (6.8), Romania (6.7) and Belarus (6.7), whereas the countries with the lowest extent of corruption turn out to be the Scandinavian countries: Denmark (0.4), Finland (0.5) and Sweden (0.7), followed by Iceland (0.7), the Netherlands (1.1), Switzerland (1.1), Norway (1.26), Luxembourg (1.58) and the United Kingdom (1.6). Austria, Germany, Ireland, France, Belgium, Portugal, Spain, Slovenia and Estonia score between 2.0 and 4.0 and Cyprus, Hungary, Lithuania, Italy, Czech Republic, Greece, Poland and Slovakia score between 4.0 and 6.0. The remaining countries Latvia, Bulgaria and Croatia score between 6.0 and 7.0. On the whole, Europe is characterized by widely diverging corruption values. More precisely, it is striking, that there are still significant differences between Western and Eastern European states. The average score of the Western countries⁷⁴ is 2.06. With this score, Western Europe is found at the bottom of corruption values in Europe. Contrary to

⁷⁴ The sample of West Europe includes Belgium, Germany, France, Luxembourg, Netherlands, Austria and Switzerland.

this, the average corruption level of Eastern states⁷⁵ is 6.37 and thereby considerably higher. A comparison of Northern⁷⁶ (2.28) and Southern Europe⁷⁷ (5.33) show a similar picture. Notably, levels of corruption are not exceptionally lower in Southern Europe than in post-communist societies. Countries such as Greece (5.53), Italy (5.36), Portugal (3.64) or Spain (3.65) are similarly rated by the Corruption Perception Index as post-communist countries such as Romania (6.79), Hungary (5.01), Slovenia (3.88) or Estonia (3.91) (Corruption Perception Index, 2011).

Figure 4: Corruption across Europe (Average Level: 1995-2010)

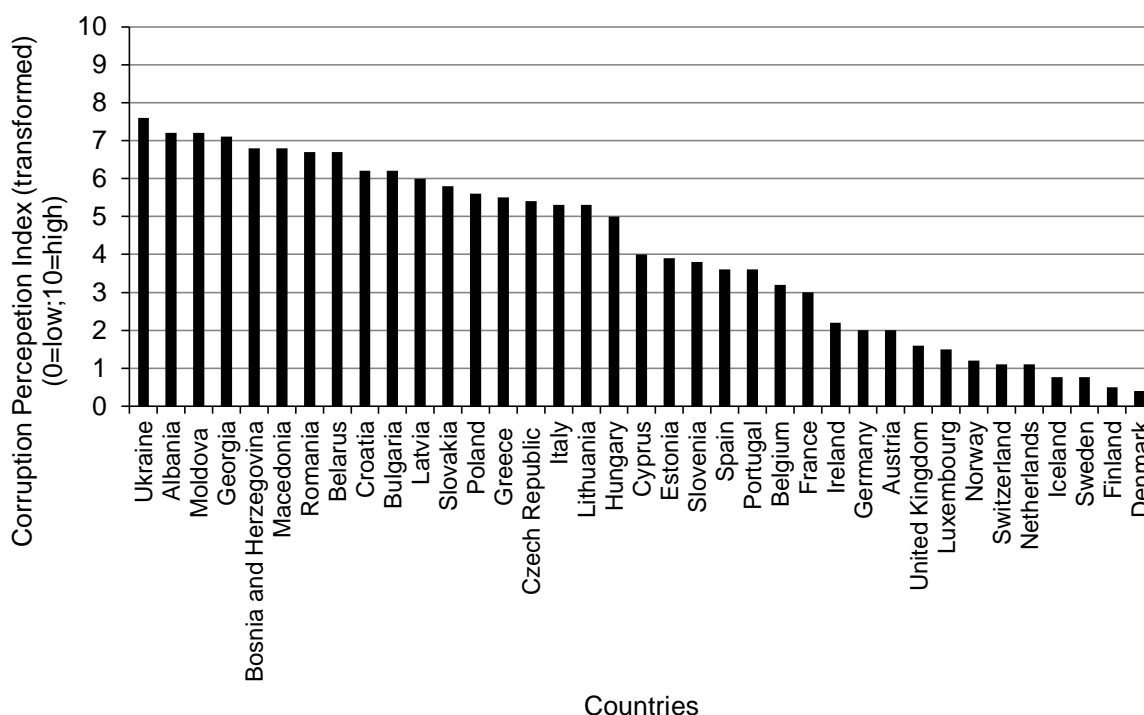


Table 2 gives an overall overview of the descriptive statistics of the dependent variable of the country level, the transformed Corruption Perception Index. It illustrates the number of observations, means, standard deviations, minimums, and maximums of the data. The table also presents data for certain area-specific samples including East-Asia, South-Asia, the Middle East, Latin America, African States and other Western countries that constitute the non-European sample (total). The coefficients of variation indicate that the variation of the

⁷⁵ Bulgaria, Moldova, Romania, Slovakia, Ukraine, Hungary, Poland, Czech Republic, Belarus and Georgia are part of the Eastern European sample.

⁷⁶ Northern Europe includes Denmark, Estonia, Finland, Iceland, Ireland, Lithuania, Latvia, Norway, Sweden and United Kingdom.

⁷⁷ Albania, Bosnia and Herzegovina, Croatia, Greece, Italy, Portugal, Cyprus, Slovenia, Spain and Macedonia are part of the Southern European sample United Nations Statistics Division (2013).

extent of corruption is especially distinctive in European states. The coefficient of the European sample is 0.59, while in the non-European sample it is 0.35. This supports again the argument that, in comparison to other regions in the world such as South-Asia (coefficient of variation=0.14) or Latin America (coefficient of variation=0.23), the extent of corruption varies widely in Europe.

Table 2: Corruption in Europe (Corruption Perception Index transformed)

Countries	Observations	Mean (1995-2010)	Standard Deviation	Min	Max	Coefficient of Variation
Ukraine	13	7.60	.35	7.20	8.50	
Albania	10	7.24	.40	6.60	7.70	
Moldova	12	7.24	.36	6.70	7.90	
Georgia	10	7.12	.84	5.90	8.20	
Bosnia and Herzegovina	8	6.88	.16	6.70	7.10	
Macedonia	9	6.83	.60	5.90	7.70	
Romania	14	6.79	.41	6.20	7.40	
Belarus	13	6.77	.99	5.20	8.00	
Croatia	12	6.26	.44	5.60	7.30	
Bulgaria	13	6.25	.35	5.90	7.10	
Latvia	13	6.00	.67	5.00	7.30	
Slovakia	13	5.85	.50	5.00	6.50	
Poland	15	5.67	.67	4.43	6.60	
Greece	16	5.53	.48	4.65	6.50	
Czech Republic	15	5.40	.53	4.63	6.30	
Italy	16	5.36	.68	4.50	7.01	
Lithuania	12	5.35	.34	5.00	6.20	
Hungary	16	5.01	.29	4.70	5.88	
Cyprus	8	4.07	.48	3.40	4.70	
Estonia	13	3.91	.46	3.30	4.50	
Slovenia	12	3.88	.45	3.30	4.80	
Spain	16	3.65	.88	2.90	5.69	
Portugal	16	3.64	.35	3.03	4.44	
Belgium	16	3.26	.79	2.40	4.75	

France	16	3.09	.31	2.50	3.70	
Ireland	16	2.26	.46	1.43	3.10	
Germany	16	2.09	.29	1.73	2.70	
Austria	16	2.09	.41	1.30	2.87	
United Kingdom	16	1.61	.38	1.30	2.40	
Luxembourg	16	1.58	.50	1.00	3.15	
Norway	16	1.26	.27	.89	2.10	
Switzerland	16	1.17	.22	.89	1.60	
Netherlands	16	1.14	.13	.97	1.40	
Iceland	13	.77	.35	.30	1.50	
Sweden	16	.76	.15	.50	1.13	
Finland	16	.51	.33	.00	1.10	
Denmark	16	.45	.25	.00	.70	
European Countries (Total)	516	3.92	2.33	0	8.50	0.59
Non-European Countries (Total) ⁷⁸	560	5.96	2.09	.39	9.6	0.35
East Asia ⁷⁹	77	5.96	1.77	2.2	7.9	0.29
South Asia ⁸⁰	106	7.04	1.04	4.68	9.6	0.14
The Middle East ⁸¹	39	7.65	.43	6.9	8.5	0.05
Latin America ⁸²	168	6.10	1.43	2.06	8.1	0.23
African States ⁸³	107	6.76	.89	4.32	8.3	0.13
Other Western Countries ⁸⁴	63	1.36	.72	.39	2.9	0.52

⁷⁸ The non-European country sample (total) consists of the particular samples of East Asia, South Asia, the Middle East, Latin America, African states and Western countries.

⁷⁹ China, Japan, Russia, South Korea and Vietnam belong to the East Asian sample.

⁸⁰ The sample of South Asia includes Bangladesh, India, Indonesia, Malaysia, Pakistan, Philippines and Thailand.

⁸¹ The Middle East sample includes Armenia, Azerbaijan, Iran and Kyrgyzstan.

⁸² Argentina, Brazil, Chile, Colombia, Dominican Republic, El Salvador, Guatemala, Mexico, Peru, Trinidad and Tobago, Uruguay and Venezuela belong to Latin America.

⁸³ Algeria, Democratic Republic of Congo, Egypt, Ethiopia, Ghana, Morocco, South Africa, Uganda and Zambia belong to the sample of African states.

⁸⁴ Australia, Canada, New Zealand and the United States belong to the other Western country sample.

Moreover, looking at the patterns of corruption development over time (1995-2010), it is striking that the extent of corruption has continuously risen in European states. While the average score degree of corruption was 2.91 in 1995, it has continuously grown to 4.14 in the year 2010. Notably, the average extent of corruption suddenly increased in Europe in 1999 to 4.19 (see figure 5). This might be due to the fact that Transparency International ranked post-communist countries such as Belarus, Bulgaria, Estonia, Latvia, Slovakia, or the Ukraine for the first time in 1998 (see also table 3). Subsequently, the extent of corruption slightly declined to 3.83 by the year 2001, until it again rose to 4.14 in 2010.

Figure 5: Extent of Corruption in Europe across Time

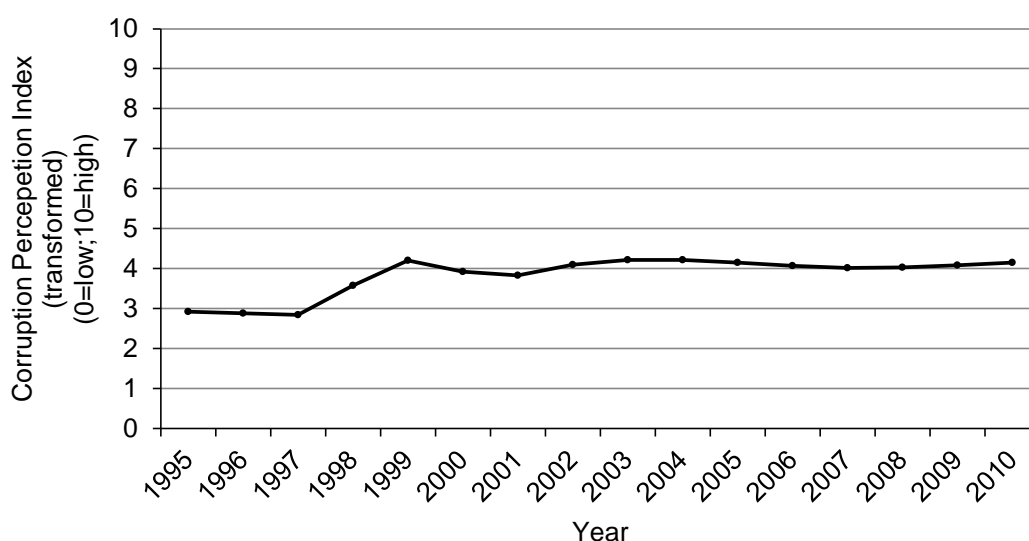


Table 3 illustrates, in particular, that countries such as Belarus, the Czech Republic, Germany, Greece, Iceland or the United Kingdom have declined in their degrees of corruption. That is an annoying progress and emphasizes the importance of examining the extent and dynamic of corruption. However, there are also countries that could improve their scores of corruption. For instance, states such as Albania, Austria Bulgaria, Estonia, Georgia, Latvia or Lithuania have decreased in the extent of corruption (Corruption Perception Index, 2011).

Table 3: Development of Corruption (Corruption Perception Index transformed)

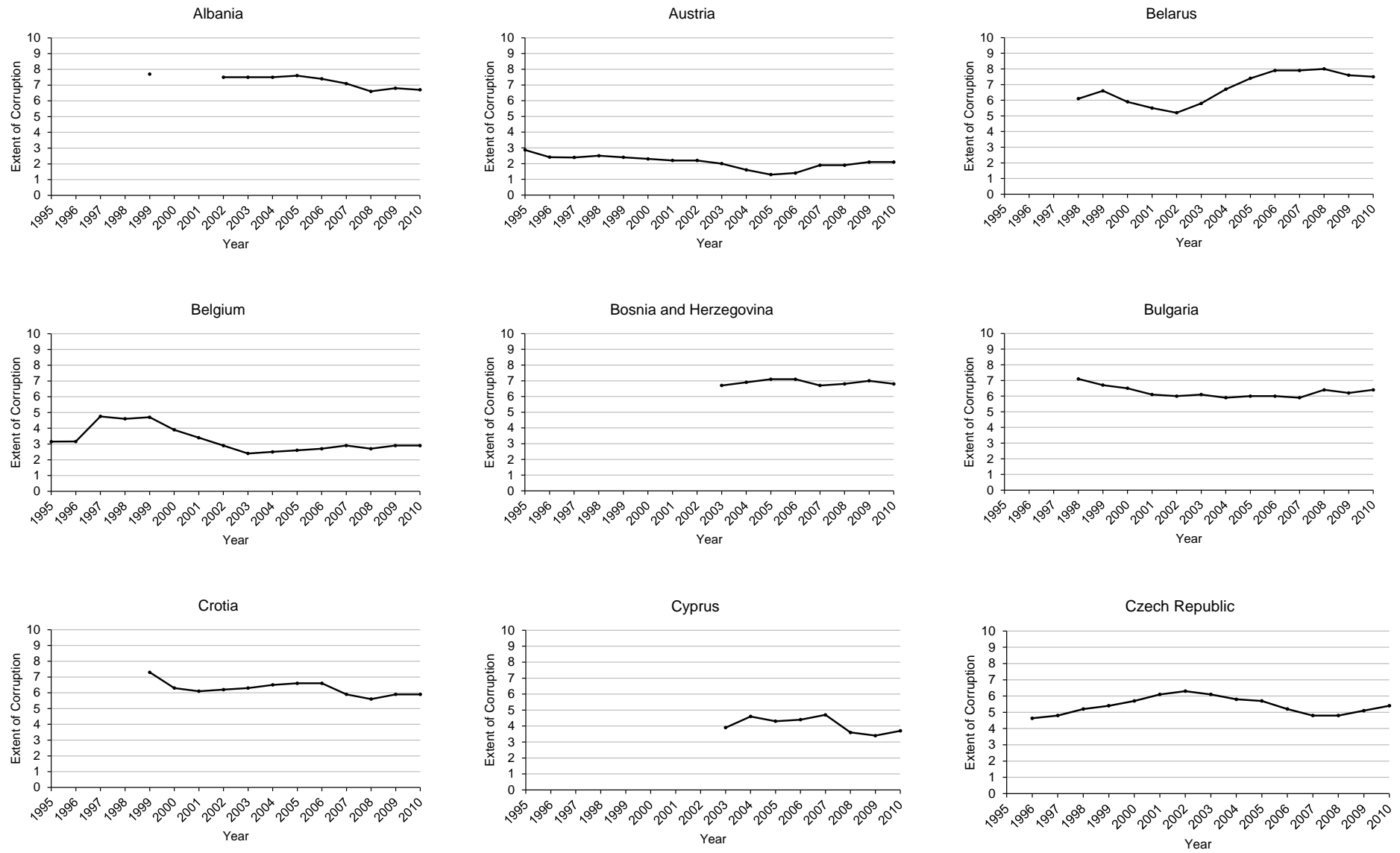
	1995 (first survey)	2000	2005	2010
Countries				
Albania	7.7 (1999)	-	7.6	6.7
Austria	2.8	2.3	1.3	2.1
Belarus	6.1 (1998)	5.9	7.4	7.5

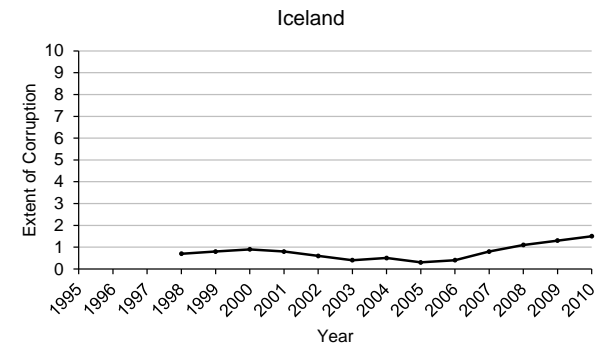
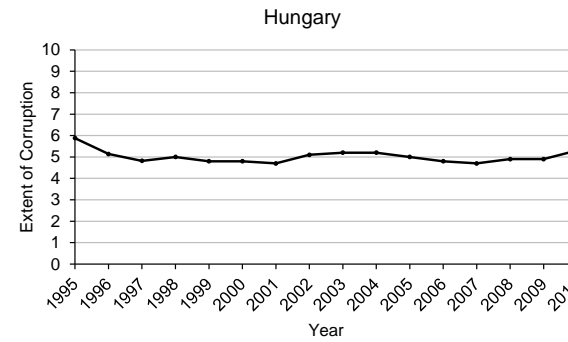
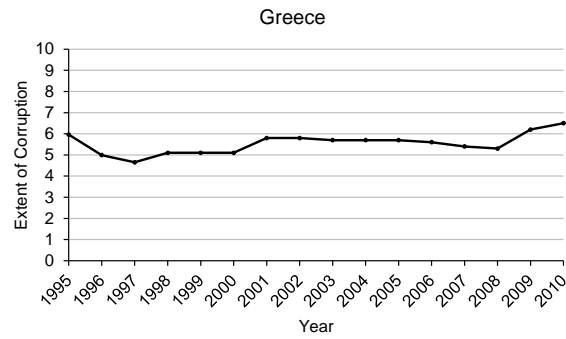
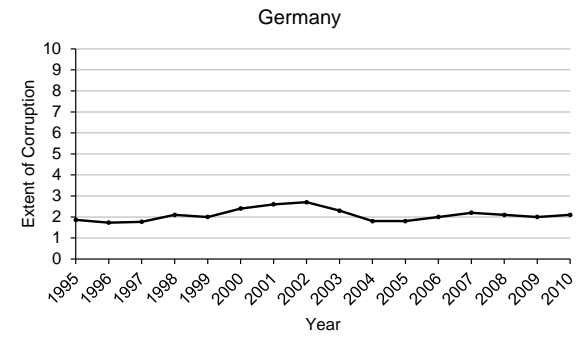
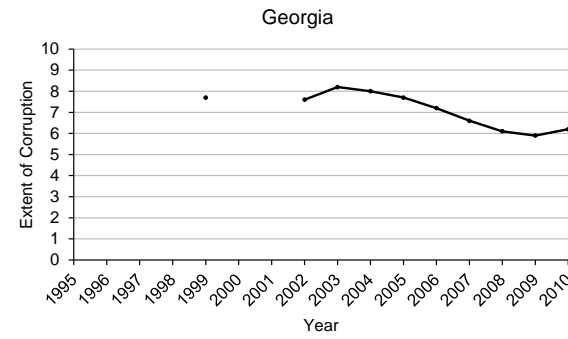
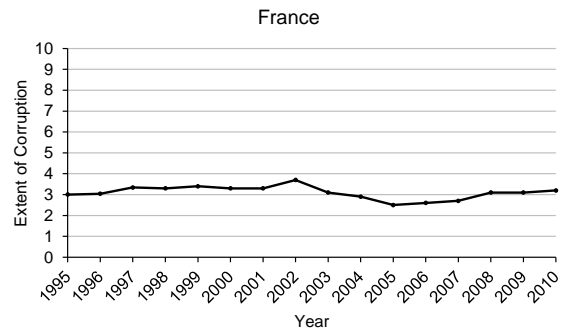
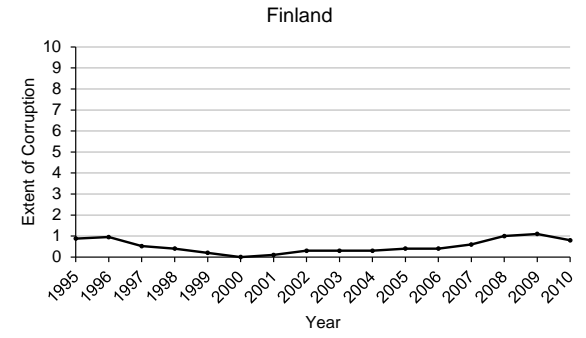
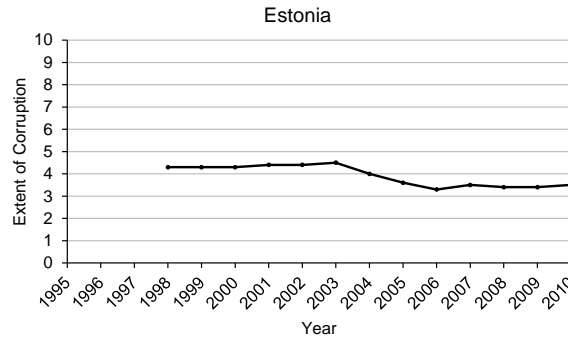
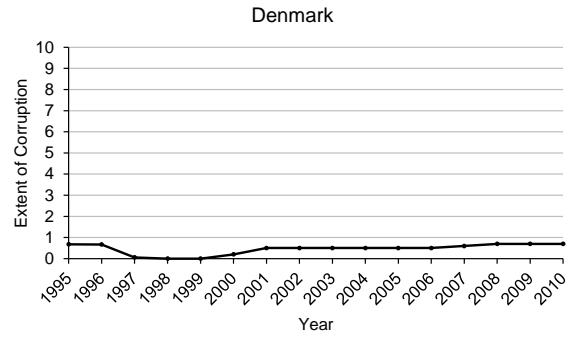
Belgium	3.1	3.9	2.6	2.9
Bosnia and Herzegovina	6.7 (2003)	-	7.1	6.8
Bulgaria	7.1 (1998)	6.5	6.0	6.5
Croatia	7.3 (1999)	6.3	6.6	5.9
Cyprus	3.9 (2003)	-	4.3	3.7
Czech Republic	4.6 (1996)	5.7	5.7	5.4
Denmark	0.6	0.1	0.5	0.7
Estonia	4.3 (1998)	4.3	3.6	3.5
Finland	0.8	0	0.3	0.8
France	3	3.3	2.5	3.2
Georgia	7.7 (1999)	-	7.7	6.2
Germany	1.8	2.4	1.8	2.1
Greece	5.9	5.1	5.7	6.5
Hungary	5.8	4.8	5	5.3
Iceland	0.6 (1998)	0.8	0.3	1.5
Ireland	1.4	2.8	2.6	2.0
Italy	7.0	5.4	5.0	6.1
Latvia	7.3 (1998)	6.6	5.8	5.7
Lithuania	6.2 (1999)	5.9	5.2	5.0
Luxembourg	3.1	1.4	1.5	1.5
Macedonia	6.7 (1999)	-	7.3	5.9
Moldova	7.4 (1999)	7.4	7.1	7.1
Netherlands	1.3	1.1	1.4	1.2
Norway	1.3	0.8	1.1	1.4
Poland	4.4 (1996)	5.9	6.6	4.7
Portugal	4.4	3.6	3.5	4.0
Romania	6.5 (1997)	7.1	7.0	6.3
Slovakia	6.1 (1998)	6.5	5.7	5.7
Slovenia	4.0 (1999)	4.5	3.9	3.6
Spain	5.6	3.0	3.0	3.9
Sweden	1.1	0.6	0.8	0.8
Switzerland	1.2	1.4	0.8	1.3
Ukraine	7.2 (1998)	8.5	7.4	7.6

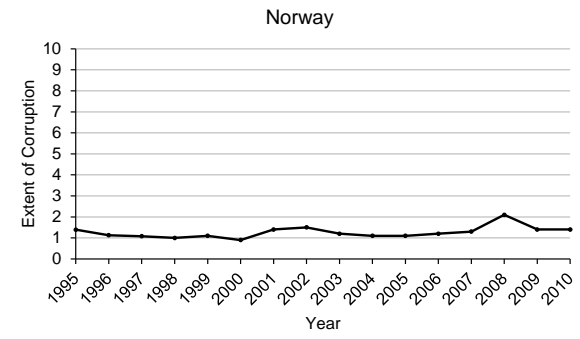
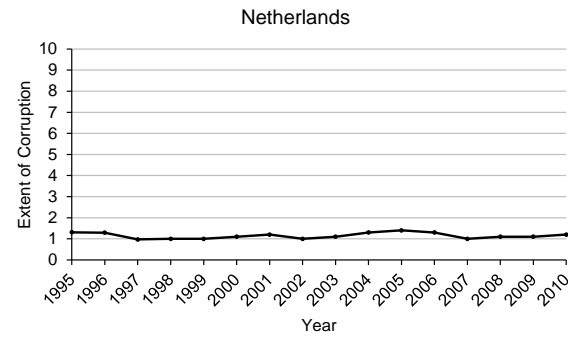
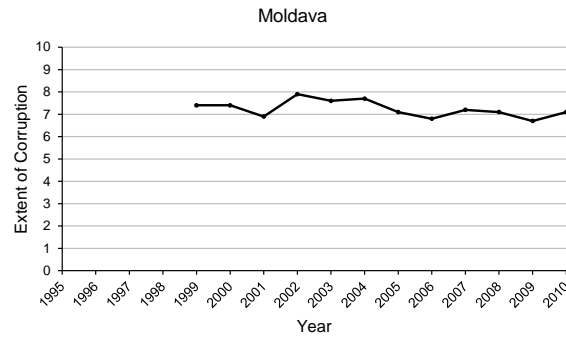
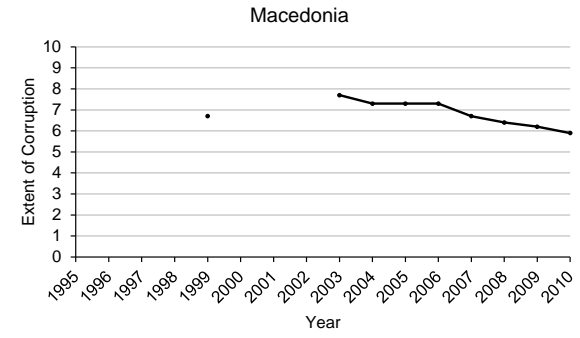
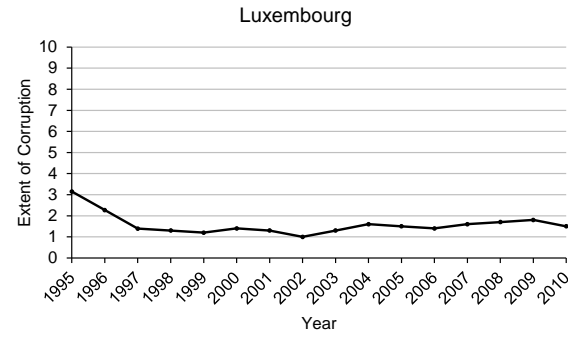
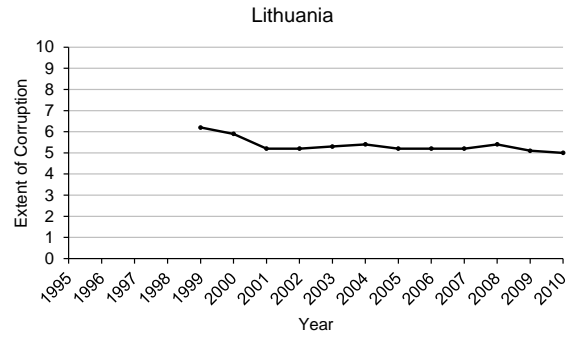
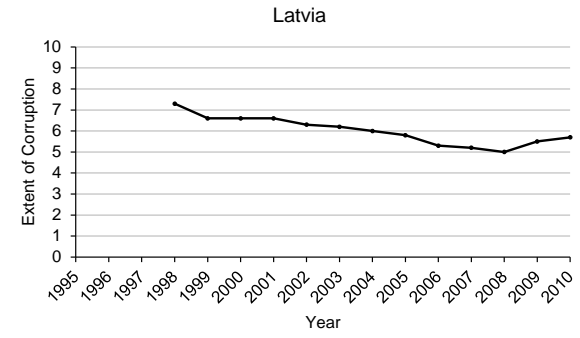
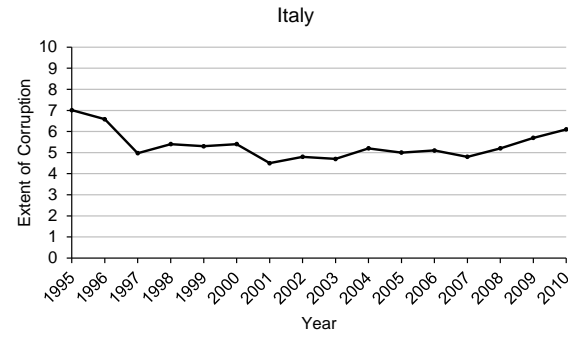
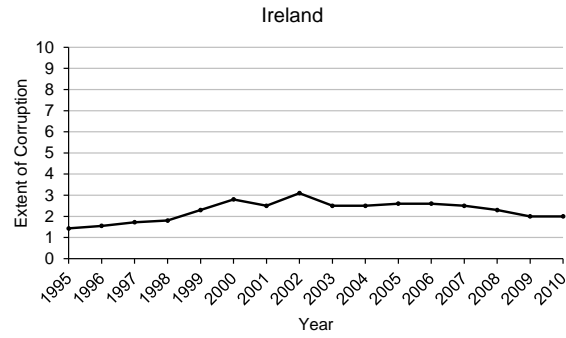
United Kingdom	1.4	1.3	1.4	2.4
Total	4.4	3.9	4.1	4.1

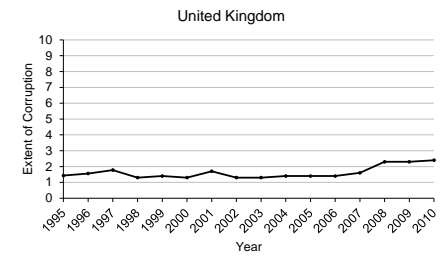
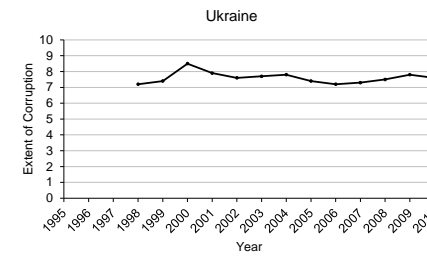
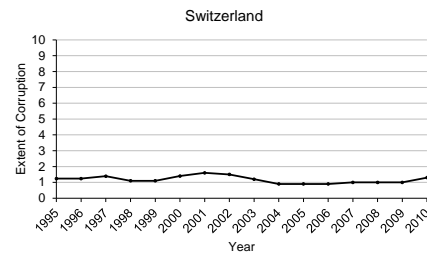
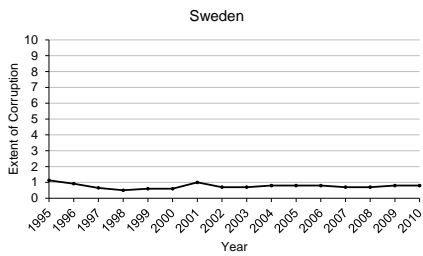
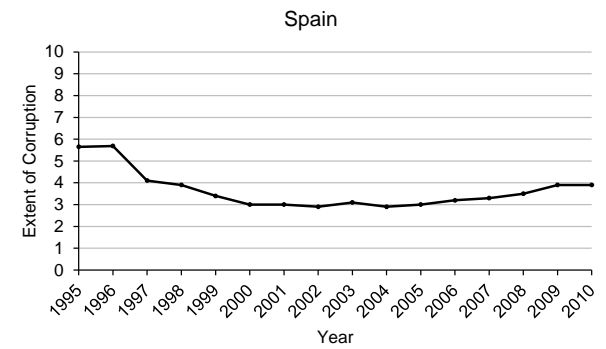
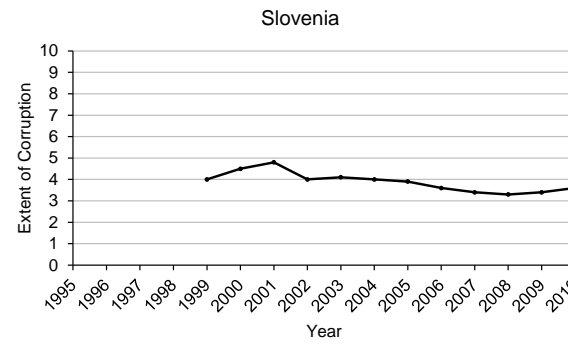
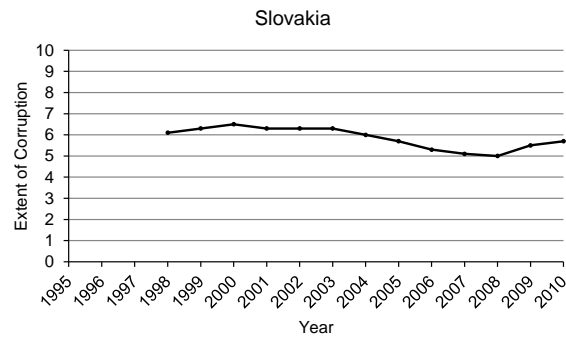
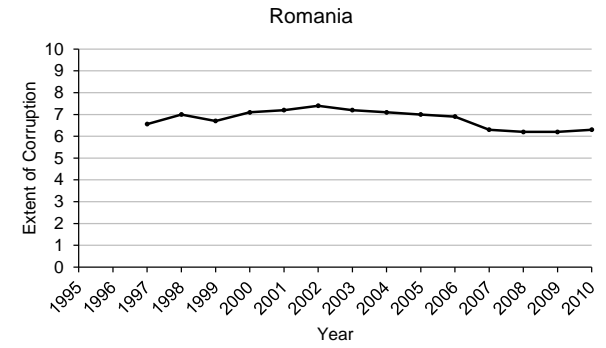
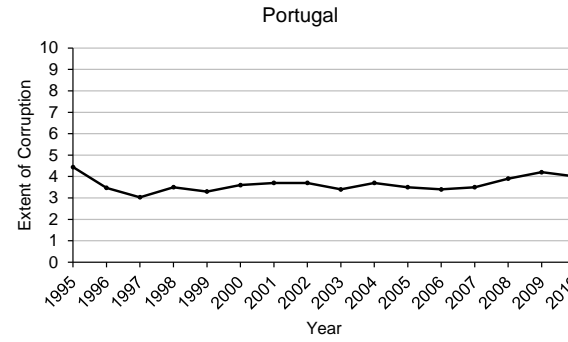
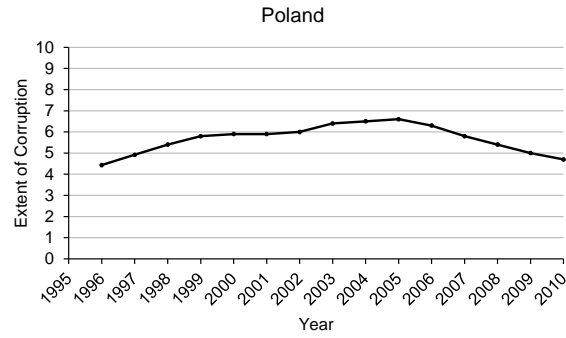
Taking a closer look at each country itself, the different developments of the extent of corruption in European states also becomes evident and illustrates various dynamics in the certain countries (figure 6). It is notable, that there are countries that have scarcely changes their degrees of corruption over time such as the Scandinavian countries (e.g. Norway, Sweden, Denmark) or the Netherlands. Otherwise, it is illustrated that nations exist that show strong dynamics in the development of corruption for the time period of 1995-2010. This involves for example Belarus, Belgium, Italy or Poland. The reasons for these various extents of corruption in Europe are still unexplained. Thus, the question remains: *“What causes corruption in European states over time and across and within countries?”*

Figure 6: Extent of Corruption in European States across Time









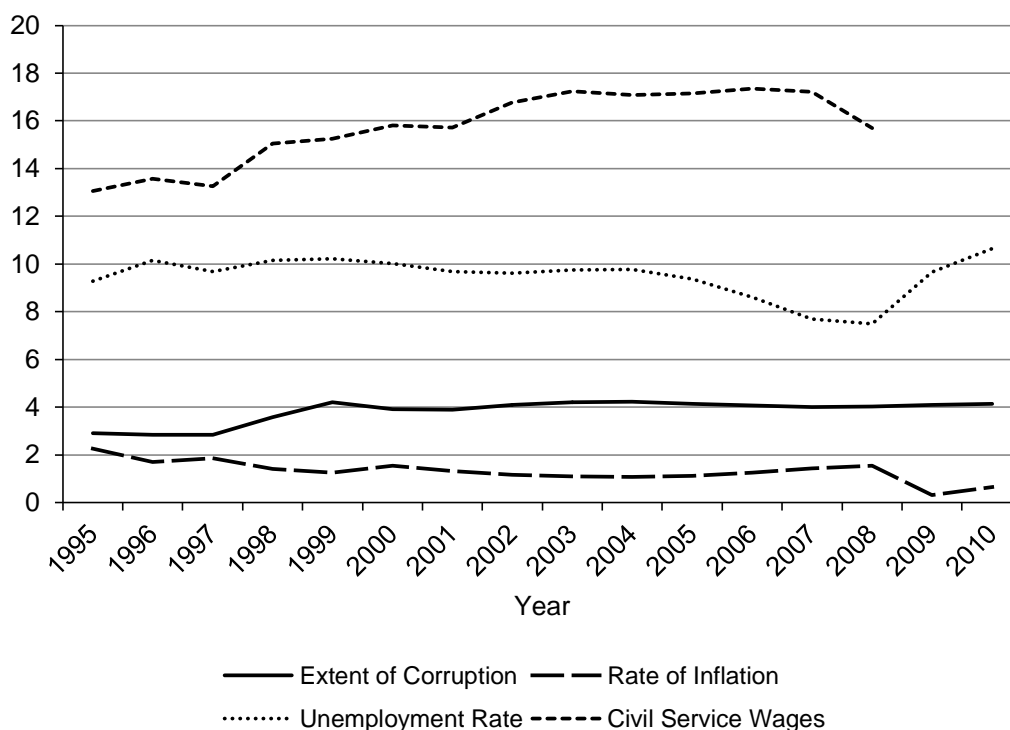
4.2 Empirical Findings: The Impact of Country Characteristics on Corruption

4.2.1 Economic Model of Corruption

The economic model of corruption includes four independent variables: a country's rate of inflation, the unemployment rate, civil service wages and country's integration in international organizations such as the membership in the European Union (EU), the World Trade Organization (WTO) and the Organization for Economic Cooperation and Development (OECD).

Figure 7 illustrates the average development of the economic variables, compared to the average score of corruption in Europe, over time. The variables EU,- WTO and OECD-membership (a country's integration in international organizations) are presented by boxplots, because they are designed as continuous variables (dummy variables).

Figure 7: Extent of Corruption and Economic Variables across Time

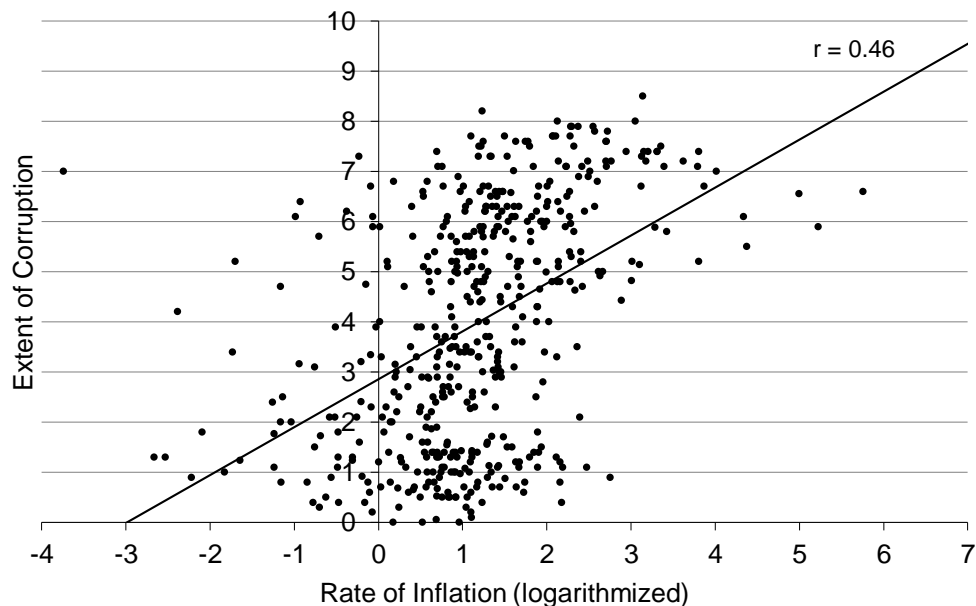


Rate of Inflation

Data on the rate of inflation are taken from the World Bank and OECD and include the increase in the price level (GDP deflator, annual %). The GDP implicit deflator is the ratio of the GDP in current local currency to the GDP in constant local currency. In contrast to the extent of corruption, a descriptive analysis reveals that the average rate of inflation (logarithmized) in European states for the period from 1995-2010 gradually decreases. While in 1995 the average inflation score was 2.27%, the level has improved to 0.64% in 2010. The worst average inflation value with 3.73% is assigned to Belarus, followed by Romania (3.10) and the Ukraine (3.09%). The lowest inflation scores have Switzerland with -0.61%, Germany (-0.26%) and Austria (0.17%) (World Bank Indicators).

The following scatterplots indicate a positive relationship between the extent of corruption and a country's rate of inflation, suggesting that a high rate of inflation leads to a high degree of corruption in certain countries. This is confirmed by a positive correlation coefficient of 0.46 and initially confirms the assumed relationship that *"The extent of corruption will be higher, the higher the level of inflation."* (hypothesis 1a).⁸⁵

Figure 8: Correlation between Extent of Corruption and Rate of Inflation (logarithmized)



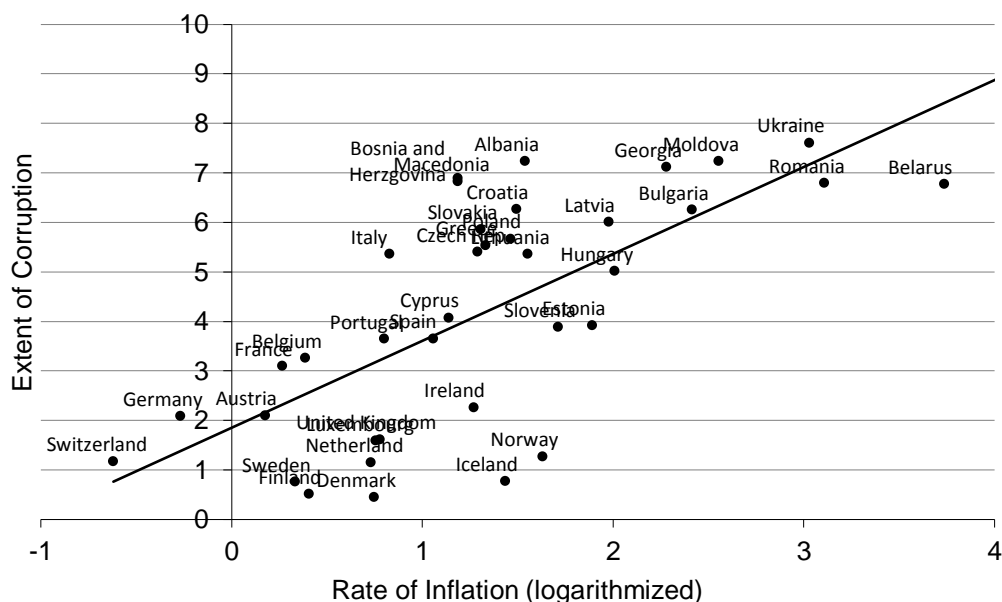
Note: Dependent Variable: Extent of Corruption: Corruption Perception Index transformed:

0= low corruption; 10=highest level of corruption.

Rate of Inflation (logarithmized) is measured by the increase in the price level (GDP deflator, annual %).

⁸⁵ These figures are also presented for the non-European countries (see appendix C).

Figure 9: Correlation between the Extent of Corruption and Rate of Inflation across European Countries (Average)



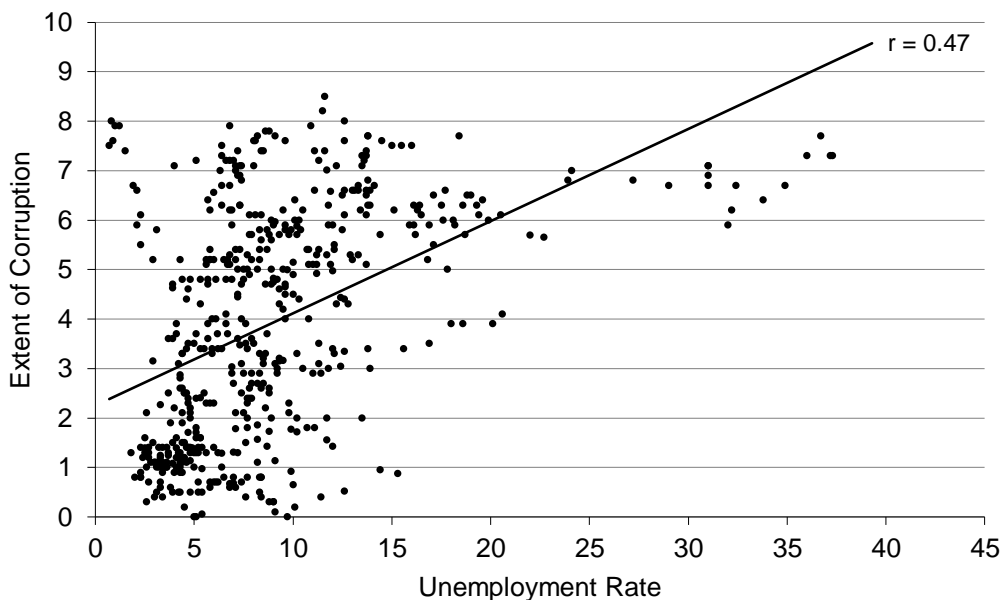
Note: Dependent Variable: Extent of Corruption: Corruption Perception Index transformed: 0= low corruption; 10=highest level of corruption.
 Rate of Inflation (logarithmized) is measured by the increase in the price level (GDP deflator, annual %).

Unemployment Rate

The data on the unemployment rate of a country is compiled by the International Labour Organisation and the International Monetary and is defined as the share of the labor force that is without work but available for and seeking employment. Similar to the extent of corruption, the unemployment rate rose slightly during the period 1995-2010. While the average percentage was 9.26% in 1995, it increases to 10.65% in 2010. The highest unemployment rates are found in Macedonia with 33.97%, Bosnia and Herzegovina (29.56%) and Albania (14.73%). The lowest score with 2.03% in Europe had Belarus, followed by Luxembourg (3.57%) and Switzerland (3.62%) (International Labour Organization).

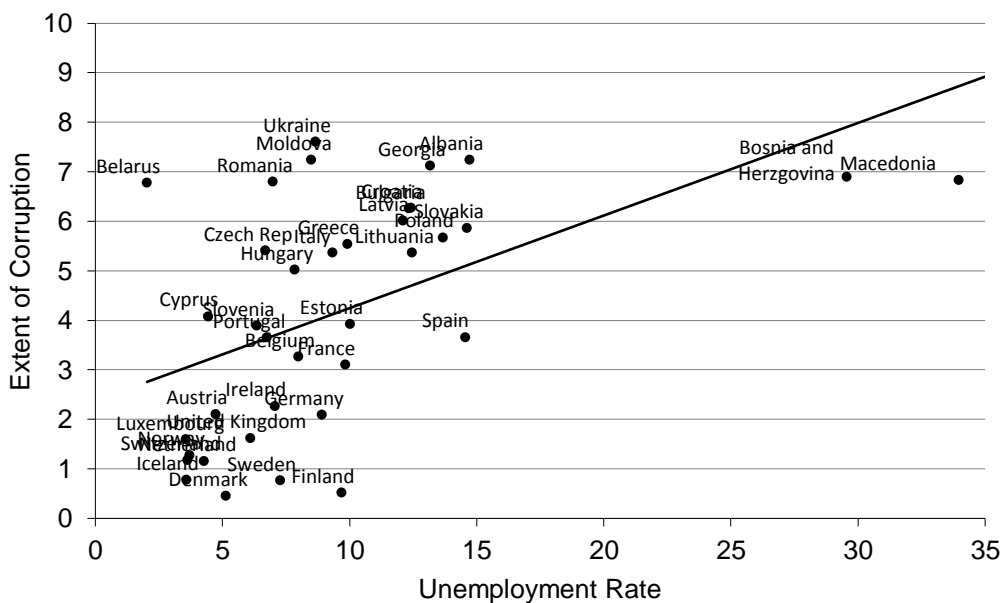
Similar to a country's inflation rate, the scatterplots of the extent of corruption and the rate of unemployment rate suggest a positive relationship between both variables. That implies that a high rate of unemployment would lead to an increase in the extent of corruption. However, a weak correlation coefficient of 0.47 does initially not confirm hypothesis 1b that *“The extent of corruption will be higher, the higher the rate of unemployment”*.

Figure 10: Correlation between the Extent of Corruption and Unemployment Rate



Note: Dependent Variable: Extent of Corruption: Corruption Perception Index transformed: 0= low corruption; 10=highest level of corruption.
 Unemployment Rate (percentage) is measured by the share of the labor force that is without work but available for and seeking employment.

Figure 11: Correlation between the Extent of Corruption and Unemployment Rate across European Countries (Average)

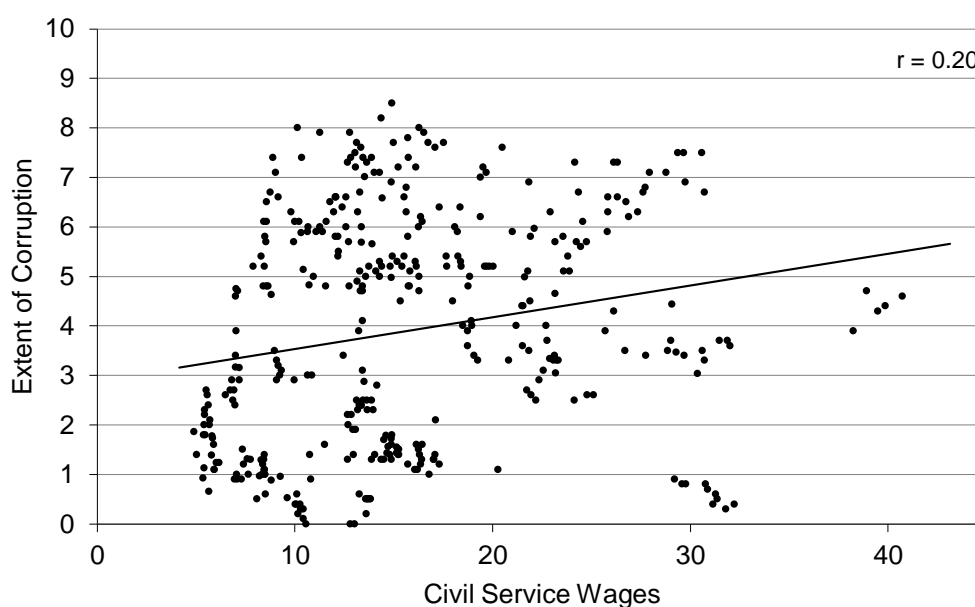


Note: Dependent Variable: Extent of Corruption: Corruption Perception Index transformed: 0= low corruption; 10=highest level of corruption.
 Unemployment Rate (percentage) is measured by the share of the labor force that is without work but available for and seeking employment.

Civil Service Wages

To measure civil service wages, I use data from the International Monetary Fund that measure government expenditure on wages and employer contributions (% of expense). Preliminary results show that, similar to the extent of corruption, a country's civil service wages constantly increases between 1995 and 2010. In 1995, the average government expenditure on wages and employer contributions were 13.06% in 1995, whereas it increased to 15.69% in 2008⁸⁶. Germany has the lowest spending on civil service wages with 5.51, followed by Switzerland (6.44%) and Sweden (6.59%). The country with the highest government expenditure on wages and employer contributions is Cyprus, with 39.54%, followed by Iceland (29.84%) and Portugal (29.50%) (International Monetary Fund). A correlation of the extent of corruption and the civil service wages of 0.20 and the illustrated scatterplots demonstrate a slightly positive relationship, suggesting that a high level of civil service wages leads to high levels of corruption. This does not confirm the assumed relationship that *"The extent of corruption will be higher, the lower the level of civil service wages"* (hypothesis 1c), but rather corresponds to the alternative hypothesis: *"The extent of corruption will be higher, the higher the level of civil service wages."*

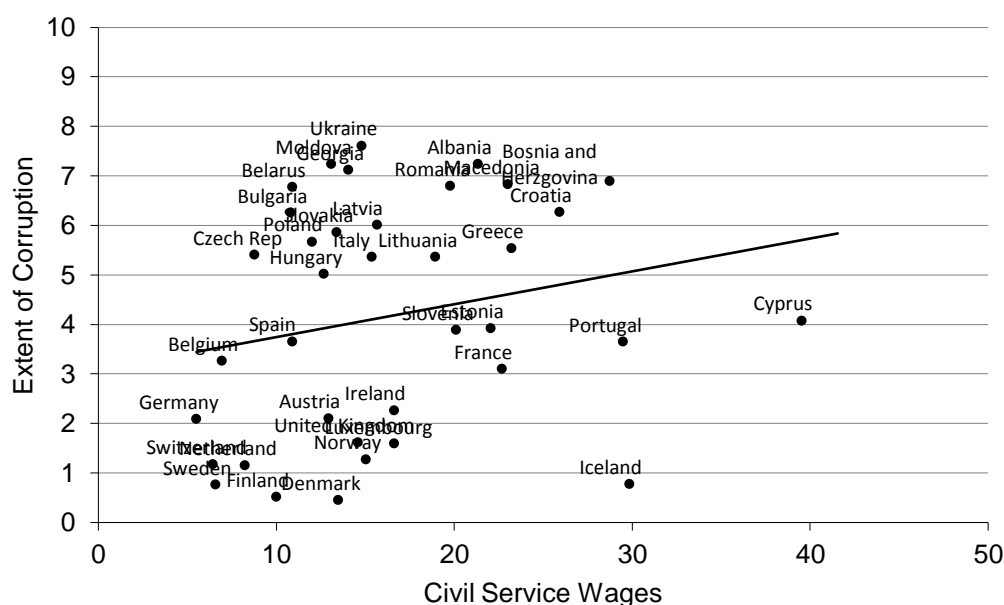
Figure 12: Correlation between the Extent of Corruption and Civil Service Wages



Note: Dependent Variable: Extent of Corruption: Corruption Perception Index transformed:
 0= low corruption; 10=highest level of corruption.
 Civil Service Wages are measured by the government expenditure on wages and employer contributions (% of expense).

⁸⁶ For the years 2009 and 2010, data is still not available (status as of April 2013).

Figure 13: Correlation between the Extent of Corruption and Civil Service Wages across European Countries (Average)



Note: Dependent Variable: Extent of Corruption: Corruption Perception Index transformed: 0= low corruption; 10=highest level of corruption.
Civil Service Wages are measured by the government expenditure on wages and employer contributions (% of expense).

International Integration

To measure international integration, I constructed dummy variables for the membership in the European Union, World Trade Organization and Organization for Economic Cooperation and Development. I take the data from the respective websites. In fact, this means that the country has the number 1) if it is a member of the respective organization; and 0) if the country is a non-member.

- **EU-Membership**

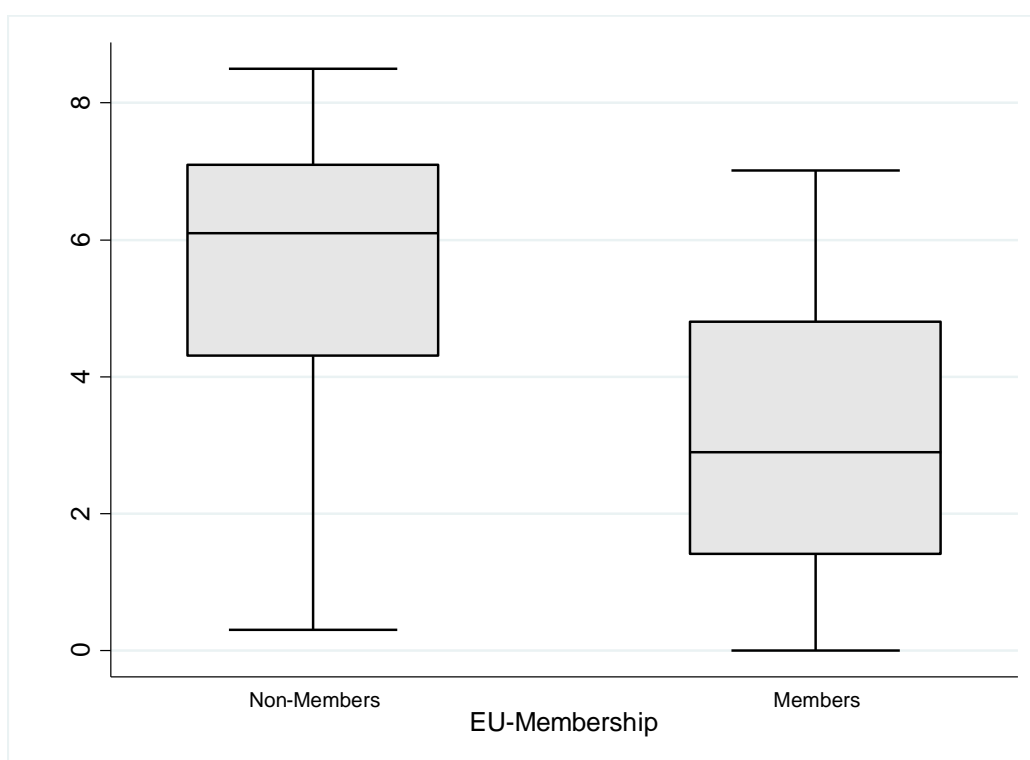
Most European countries are members of the EU. 70%, which means 26 out of 37 countries of the European sample, are members. Exceptions are Albania, Belarus, Bosnia and Herzegovina, Croatia, Georgia, Iceland, Macedonia, Moldova, Norway, Switzerland and the Ukraine, whereby Croatia, Iceland and Macedonia are already EU candidate countries (status as of March 2013). Belgium, France, Germany, Italy, Luxembourg and the Netherlands were founding members of the EU in the 1950s. Later, Denmark, Ireland and UK joined (1973), followed by Greece in 1981 and Portugal and Spain in 1986. Austria, Finland and Sweden became members in 1995. Most of the post-communist countries joined the European Union in 2004, such as Cyprus, the Czech Republic, Estonia, Hungary, Latvia,

Lithuania, Poland, Slovakia and Slovenia. In 2007, Bulgaria and Romania also became members of the European Union.

It is striking that in most countries that joined the EU during the period of this investigation (1995-2010), such as Cyprus, Czech Republic, Estonia, Latvia, Lithuania, Poland, Slovakia and Slovenia improved their corruption scores after becoming member in the EU (Corruption Perception Index, 2011). The boxplots illustrate the statistical distribution of the data, comparing the countries that are member and non-members of the European Union (figure 17).

A correlation coefficient of -0.46 suggests a negative relationship between the extent of corruption and EU-membership and corresponds to the hypothesis (1d1) that *“The extent of corruption will be lower, if the country is a member state of the European Union.”*

Figure 14: Boxplots of the Extent of Corruption and EU-Membership



Note: Dependent Variable: Extent of Corruption: Corruption Perception Index transformed:

0= low corruption; 10=highest level of corruption.

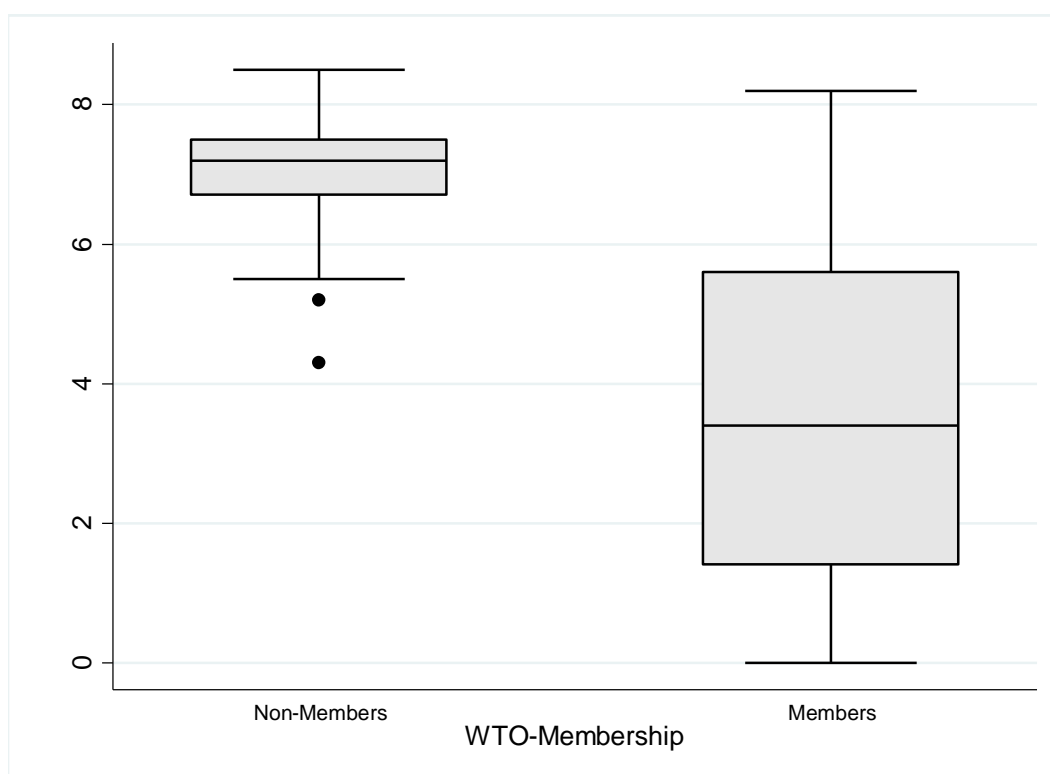
EU-Membership is measured by 1 = EU-Member and 0 = Non-EU-Member.

- **WTO-Membership**

Most European countries are also members of the WTO. Over 90%, which means 34 out of 37 countries of the European sample, are members. The post-communist countries Belarus,

Bosnia and Herzegovina and Macedonia are exceptions. However, since their admission to the WTO, countries such as Albania, Croatia, Estonia, Georgia, Latvia, Lithuania and the Ukraine show better results in their corruption levels (Corruption Perception Index, 2011). Yet, it remains unclear, which of the organizations, the EU or the WTO, is the most important contributor to the decrease of corruption after a country has joined both organizations. Similar to the result about EU-membership, a correlation coefficient of -0.42 suggests a negative relationship between the extent of corruption and WTO-membership and initially confirms the hypothesis (1d2) that *“The extent of corruption will be lower, if the country is a member state of the WTO.”*

Figure 15: Boxplots of the Extent of Corruption and WTO-Membership



Note: Dependent Variable: Extent of Corruption: Corruption Perception Index transformed:

0= low corruption; 10=highest level of corruption.

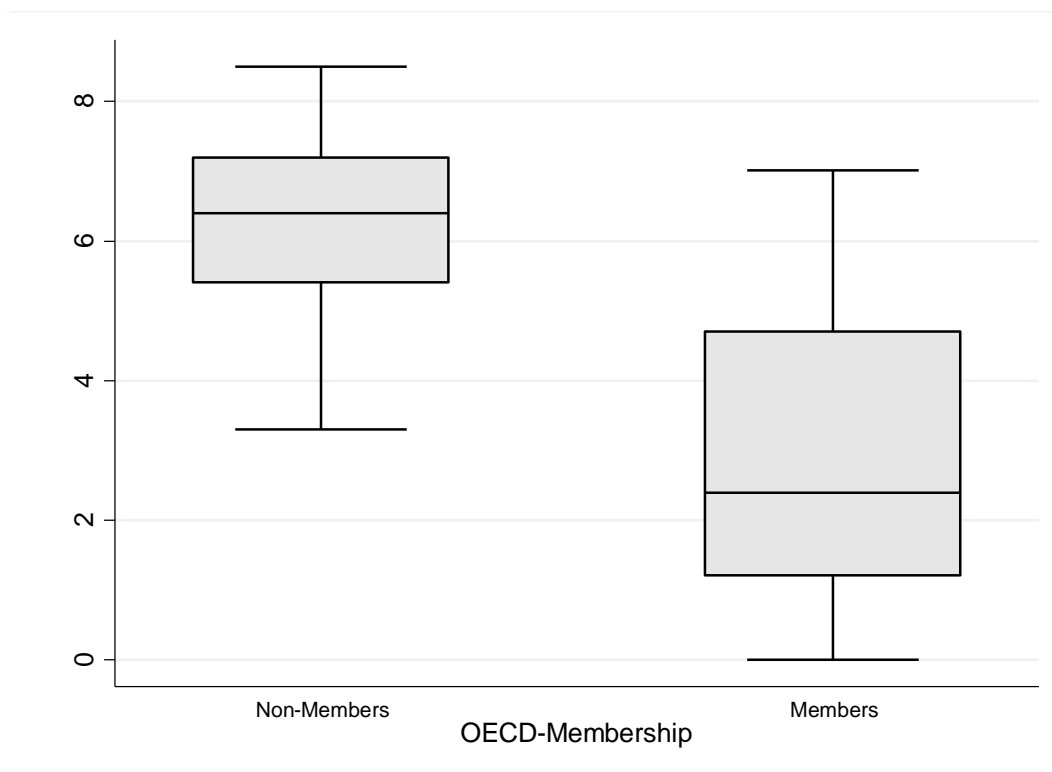
WTO-Membership is measured by 1 = WTO-Member and 0 = Non-WTO-Member.

- **OECD-Membership**

Approximately 65% of the European sample, which means 24 out of 37 countries, are member states of the OECD. The East European countries Albania, Belarus, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, Georgia, Latvia, Lithuania, Macedonia, Moldova, Romania, and the Ukraine are not members of this organization. Similar to the results about

EU- and WTO-membership, a correlation coefficient of -0.68 indicates a negative relationship between the extent of corruption and OECD-membership. Compared to the EU- and WTO-membership it is the highest coefficient. According to this, the assumed relationship (hypothesis 1d3) *“The extent of corruption will be lower, if the country is a member state of the OECD.”* can be initially confirmed.

Figure 16: Boxplots of the Extent of Corruption and OECD-Membership



Note: Dependent Variable: Extent of Corruption: Corruption Perception Index transformed:

0= low corruption; 10=highest level of corruption.

OECD-Membership is measured by 1 = OECD-Member and 0 = Non-OECD-Member.

The following table reports the overall summary of the descriptive statistics of the economic variables used in the empirical analysis. It presents the number of observations, means, standard deviations, and minimums and maximums of used data. The number of observations results from the time period (1995-2010) and the number of included European countries. Overall, I collected the data from different sources such as the World Bank, OECD or International Labour Organisation, supported by the Quality of Government dataset of the University of Gothenburg in Sweden (see Appendix D).

Table 4: Economic Variables (1995-2010)

Variables	Observations	Mean	Standard Deviation	Min	Max
Rate of Inflation	562	1.3	1.2	-3.73	6.89
Unemployment Rate	586	9.48	6.57	0.7	37.3
Civil Service Wages	412	15.97	7.74	4.14	41.14
International Integration					
EU-Membership	592	.52	.49	0	1
WTO-Membership	592	.83	.37	0	1
OECD-Membership	592	.58	.49	0	1

Findings of the Economic Model of Corruption

In the following section, the results of the economic model of corruption for the European sample are presented and subsequently compared with the findings of the non-European sample. Due to comparison reasons and for easily interpretation, all economic variables are standardized to a scale from minimum 0 to maximum 1, except the dummy variables. Therefore, the original variable is subtracted by its minimum value and subsequently divided by its maximum values. The variable rate of inflation is additionally logarithmized. Furthermore, the economic variables include a time-lag – the difference in time by which one observation lags behind or is later than another. Also calculating with 5-years- and 10-years-lags, the 2-years-lag shows the optimal performance (see Appendix G.1). The dependent variable is the transformed Corruption Perception Index.

Table 5: Economic Model of Corruption

Variables	Dependent Variable: Extent of Corruption	
	European Countries	Non-European Countries
Rate of Inflation	0.37*** (0.08)	0.40*** (0.09)
Unemployment Rate	0.45*** (0.08)	-0.12*** (0.04)
Civil Service Wages	-0.02 (0.04)	0.01 (0.03)
EU-Membership	-0.03** (0.01)	
WTO-Membership	-0.04*** (0.01)	-0.05*** (0.01)
OECD-Membership	-0.19*** (0.02)	-0.41*** (0.03)
Constant	0.23*** (0.08)	0.41*** (0.09)
Observations	399	249
R-squared	0.59	0.62
Number of Countries	37	37

Note: Standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1.
Dependent Variable: "Extent of Corruption" (Corruption Perception Index transformed); 0= low corruption; 10=highest level of corruption.

Findings of the European Country Sample

The economic model of corruption includes 37 European countries and 399 observations. Table 5 illustrates that a variety of economic factors such as the rate of inflation, the unemployment rate, and international integration measured by the EU, WTO and OECD-membership, influence the extent of corruption in European states. However, the variable civil service wages is not significant, suggesting that there is no relationship between the extent of corruption and government expenditures on wages and employer contributions. Overall, the explained variance of the model (r^2) is 59%, meaning that almost 60% of the extent of corruption in Europe can be explained by economic factors.

In terms of the variable rate of inflation, the hypothesis (1a) that *"The extent of corruption will be higher, the higher the level of inflation"* is confirmed. Controlling for other economic variables such as the unemployment rate, civil service wages and a country's international integration, the coefficient is 0.37. This finding corresponds to previous research such as of Braun and Di Tella (2004), Sung (2004) and Gerring and Thacker (2005) who have

demonstrated a significant positive relationship between corruption and inflation variability. That implies that higher inflation is associated with higher levels of corruption.

Moreover, hypothesis 1b *“The extent of corruption will be higher, the higher the rate of unemployment”* is also confirmed. Similar to the correlation analysis, the coefficient is with 0.45 relatively high. Only a few previous studies have examined this nexus and could show that an increase of joblessness is associated with higher levels of corruption. For instance, Goel and Rich (1989), Sung (2004) and Mocan (2008) have demonstrated that enhancing the unemployment rate increases the counts of bribery. My analysis verifies this finding for the European sample.

However, the relationship between the extent of corruption and the level of civil service wages is not significant in the European sample. Contrary to the preliminary correlation analysis, suggesting a positive nexus between both variables, the hypothesis (1c) *“The extent of corruption will be higher, the lower the level of civil service wages”* has to be rejected. This contradicts the analyses of van Rijckeghem and Weder (2001), Xin and Rudel (2004) and van Veldhuizen (2012) who considered civil service income as a determinant of corruption and indicated a negative relationship between these variables. The result of this model in European states rather confirms the studies by Husted (1999), Treisman (2000), and Gurgur and Shah (2005) who did not find any statistically significant relationship between civil service income and the extent of corruption.

As already illustrated by the correlation analysis, the assumption that the *“The extent of corruption will be higher, the lower the degree of integration in the world economy”* is also confirmed by the European sample. The coefficient for the EU-membership is -0.03, implying that EU-membership leads to a decrease of a country's extent of corruption. Notably, this strongly confirms the research of Kostadinova (2012) who demonstrated that integration in the European Union has had a significant influence on reducing a country's extent of corruption.

The relationships between corruption and WTO- and OECD-memberships are also negative. Yet, similar to the variable EU-membership, the coefficient between corruption and the WTO-membership is very low with -0.04. The nexus between the extent of corruption and the OECD-membership is -0.19. Despite the low values, this also confirms the preliminary results of the correlation analysis. In sum, a country's international integration, measured by the membership in international organizations, negatively influence a country's extent of corruption. This confirms the results of Sandholtz and Koetzle (2000) and Sandholtz and Gray (2003) who empirically demonstrate that greater degrees of international integration lead to lower levels of corruption, assuming that countries that are more integrated into the Western international society are more exposed to both economic and normative pressures against corruption.

Findings of the Non-European Country Sample

Comparing the results of the European sample with the non-European country sample, it demonstrates that there are only a few differences in explaining the extent of corruption. This economic model includes 37 countries outside Europe and 249 observations for a time period from 1995 to 2010. The small number of cases, compared to the European sample, results from poor data availability, especially for African states. The explained variance of the model (r^2) is almost 63% and with that higher than in the European sample ($r^2=0.59$). Similar to the European model, the rate of inflation has also an influence on the extent of corruption, indicating that a high rate of inflation leads to higher levels of corruption. Compared to the European sample, the coefficient is somewhat higher by 0.40. Yet, it is striking that, in contrast to European states, there is a significant negative relationship between corruption levels and a country's unemployment rate. The coefficient is -0.12, indicating a negative relationship between both variables. This result contradicts the analyses of Goel and Rich (1989), Sung (2004) and Mocan (2008) and implies that a high unemployment rate tends to hinder the growth of the extent of corruption. As in the European sample, the variable civil service wages is also not significant in the non-European sample, indicating that there is no relationship between the extent of corruption and people's income. A country's integration in international organizations (WTO and OECD-membership) has also a significantly negative influence on corruption in the non-European sample. The variable membership in the European Union has to be excluded in the second sample, because it obviously does not play any role in countries outside Europe. The coefficient between corruption and WTO-membership is with -0.05 almost the same as in the European sample (-0.04). Therefore, the OECD-membership is with -0.41 much higher than in European states (-0.19). In sum, hypothesis 1d that *"The extent of corruption will be higher, the lower the degree of integration in the world economy."* can also be confirmed for the non-European country sample. Additionally, I have run these economic models by using the KOF Index of Globalization that measures a country's global connectivity, integration and interdependence⁸⁷ (Dreher, 2006).

⁸⁷ KOF is an acronym for the German word "Konjunkturforschungsstelle", which means "business cycle research institute". The KOF Index of Globalization includes the weighted average of three dimensions of globalization: economic, social and political. Most weight has been given to economic followed by social globalization. Economic globalization is measured by actual flows of trade and investments, and by restrictions on trade and capital such as tariff rates. Political globalization is measured by the number of embassies and high commissions in a country, the number of international organizations of which the country is a member, the number of UN peace missions the country has participated in, and the number of international treaties that the country has signed since 1945. Social globalization is measured by personal contacts (e.g. telephone traffic and tourism), information flows (e.g. number of Internet users) and cultural proximity (e.g. trade in books and number of Ikea warehouses per capita) Dreher (2006). However, by using the Index of Globalization the

The findings also indicate significant relationships and strongly confirm the hypothesis 1d that *“The extent of corruption will be higher, the lower the degree of integration in the world economy”* (see Appendix H).

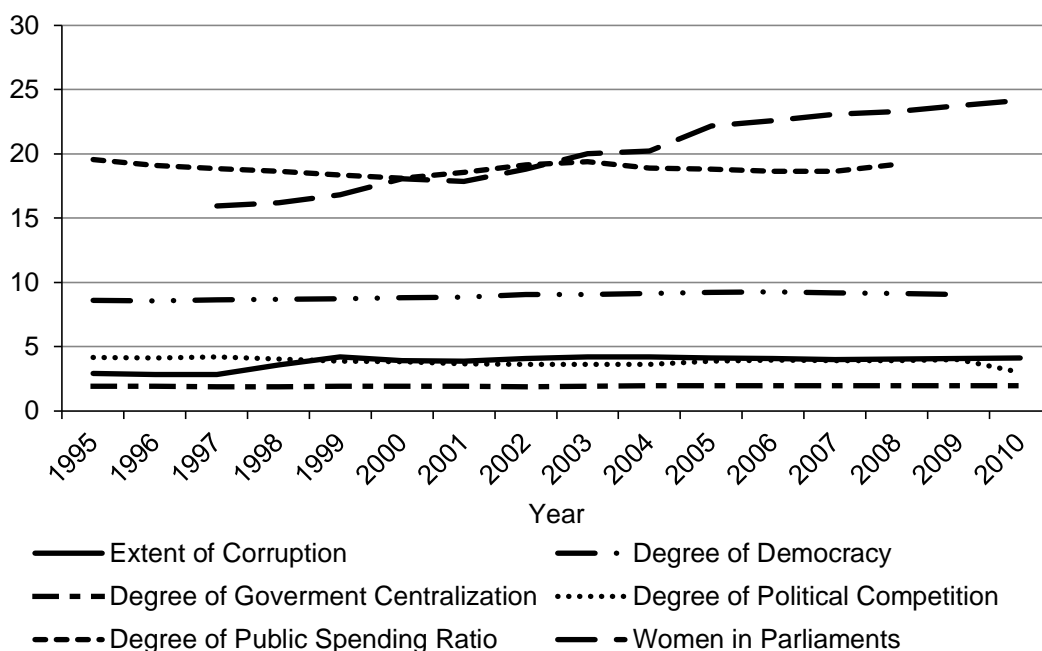
To conclude, a comparison of the economic models of the European and the non-European sample demonstrates that there are a few differences regarding the explanatory factors of corruption. This is especially the case for the variable unemployment rate. Referring to the variable international integration, it is striking, that the relationship between the extent of corruption and the membership in the OECD is significantly stronger in the non-European sample than in the European sample.

4.2.2 Political Model of Corruption

The political model of corruption includes six independent variables: the degree of democracy, a country’s anti-corruption policy, the degree of government centralization, degree of political competition, a state’s public spending ratio and the percentage of women in parliaments.

The following figure visualizes the average development of the political variables, compared to the average score of corruption in Europe. The variable “anti-corruption policy” is illustrated by boxplots, because it is a dummy variable.

number of observations is reduced from 399 to 341 in the European sample and from 249 to 205 in the non-European sample (see Appendix G). This effect is heightened in the last analytical step by including the significant variables in an overall model of the determinants of corruption (from 365 to 292 numbers of observations in the European sample and from 355 to 275 in the non-European sample). As a result, the model fit would decline.

Figure 17: Extent of Corruption and Political Variables across Time

Degree of Democracy

To measure the degree of democracy, I use an average by Freedom House (political rights and civil liberties)⁸⁸ that is transformed to a scale of 0-10 and Polity IV⁸⁹ that is transformed to a scale of 0-10 as well. Thereby, the scale of the variables ranges from 0-10 where 0 is least democratic and 10 most democratic. Moreover, the version of Polity IV has imputed values for countries where data on Polity is missing by regressing Polity on the average Freedom

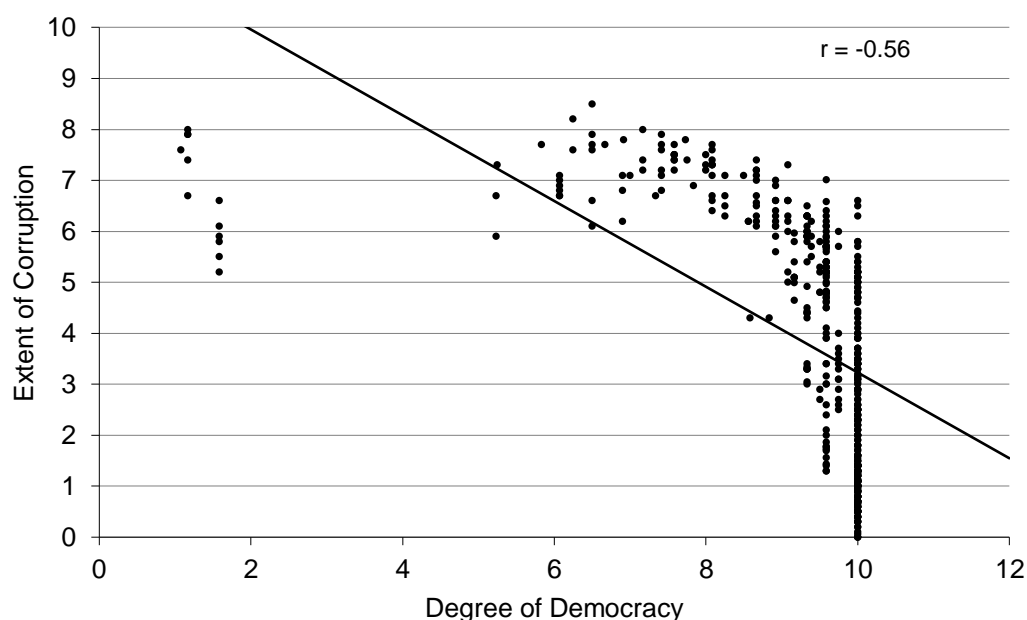
⁸⁸ Freedom House evaluates each country's political rights as well as civil liberties with a rating from 1 to 7, where 1 represents the most free and 7 the least free. Political rights ratings are based on an evaluation of the electoral process, political pluralism and participation, and the functioning of government. Civil liberties ratings are based on an evaluation of freedom of expression and belief, associational and organizational rights, rule of law, personal autonomy and individual rights. The ratings of political rights and civil liberties are determined by the total number of points (up to 100). Each country receives 10 political rights questions and 15 civil liberties questions; countries receive 0 to 4 points on each question, with 0 representing the smallest degree and 4 the greatest degree of freedom. The average of the political rights and civil liberties ratings determines the country's overall status: Free (1.0 to 2.5), Partly Free (3.0 to 5.0) or Not Free (5.5 to 7.0). Freedom House also assigns upward or downward trend arrows to countries that saw general positive or negative trends during the year that were not significant enough to result in a ratings change Freedom House (2012).

⁸⁹ The Polity IV Project carries data collection that especially includes indices that measure the degree of democracies and autocracies for purposes of comparative, quantitative analyses. The Polity score covers all independent states with a total population greater than 500,000 for a time period from 1800 to 2010 and captures the regime authority spectrum on a 21-point scale ranging from -10 (hereditary monarchy) to +10 (consolidated democracy). The indicators are primarily based on subjective interpretations of historical material and similar sources by experts Polity IV .

House measure. Hadenius and Teorell (2005) show that this average index performs better, both in terms of validity and reliability than its constituent parts (Quality of Government, 2012). A preliminary descriptive analysis suggests that the average degree of democracy in European states gradually increases for the period from 1995-2010. While in 1995 the average score was 8.58, the level has improved to 9.04 in 2010. As figure 22 illustrates, the least democratic country in Europe is Belarus (1.58), followed by Bosnia and Herzegovina (4.84) and Georgia (6.51). In contrast, the most democratic nations are Austria (10.00), Finland (10.00) or Ireland (10.00)⁹⁰ (Freedom House; Polity IV).

As assumed, the following scatterplots indicate a negative relationship between the extent of corruption and the degree of democracy, suggesting that high degrees of democracy may hinder the growth of corruption in European countries. The correlation coefficient is -0.56 and conforms the assumed corruption-democracy-nexus that *“The extent of corruption will be higher, the lower the degree of democracy”* (hypothesis 2a).

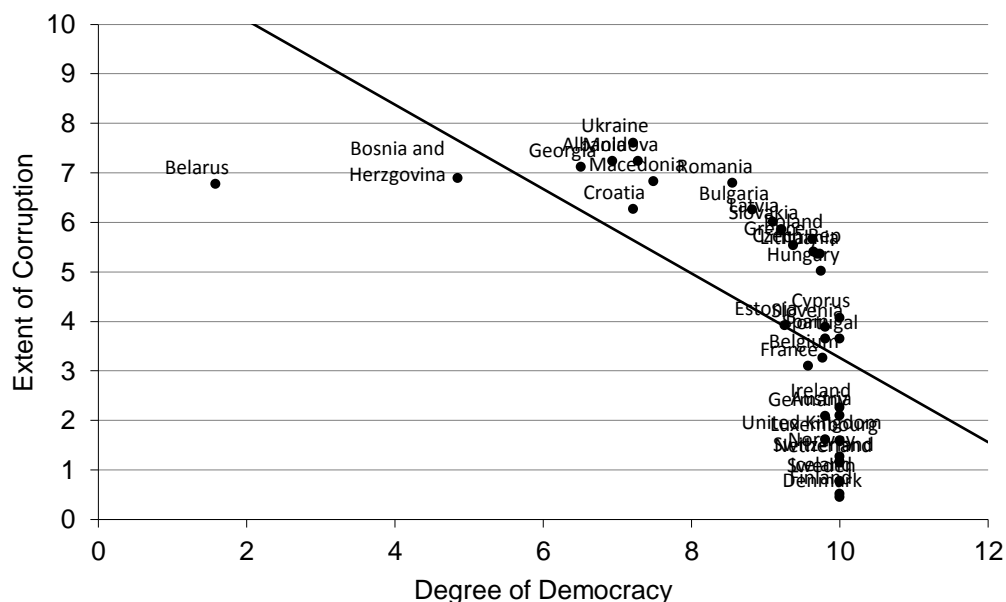
Figure 18: Correlation between the Extent of Corruption and the Degree of Democracy



Note: Dependent Variable: Extent of Corruption: Corruption Perception Index transformed: 0= low corruption; 10=highest level of corruption.
Degree of Democracy is measured by an average of Freedom House and Polity IV scaled from 0 (“least democratic”) to 10 (“most democratic”).

⁹⁰ Countries such as Cyprus, Denmark, Iceland, Luxembourg, Netherlands, Norway, Portugal, Sweden and Switzerland also received an average of 10.00 points by Freedom House/Polity IV and were ranked as well as established democracies.

Figure 19: Correlation between the Extent of Corruption and the Degree of Democracy across European Countries (Average)



Note: Dependent Variable: Extent of Corruption: Corruption Perception Index transformed: 0= low corruption; 10=highest level of corruption.
 Degree of Democracy is measured by an average of Freedom House and Polity IV scaled from 0 ("least democratic") to 10 ("most democratic").

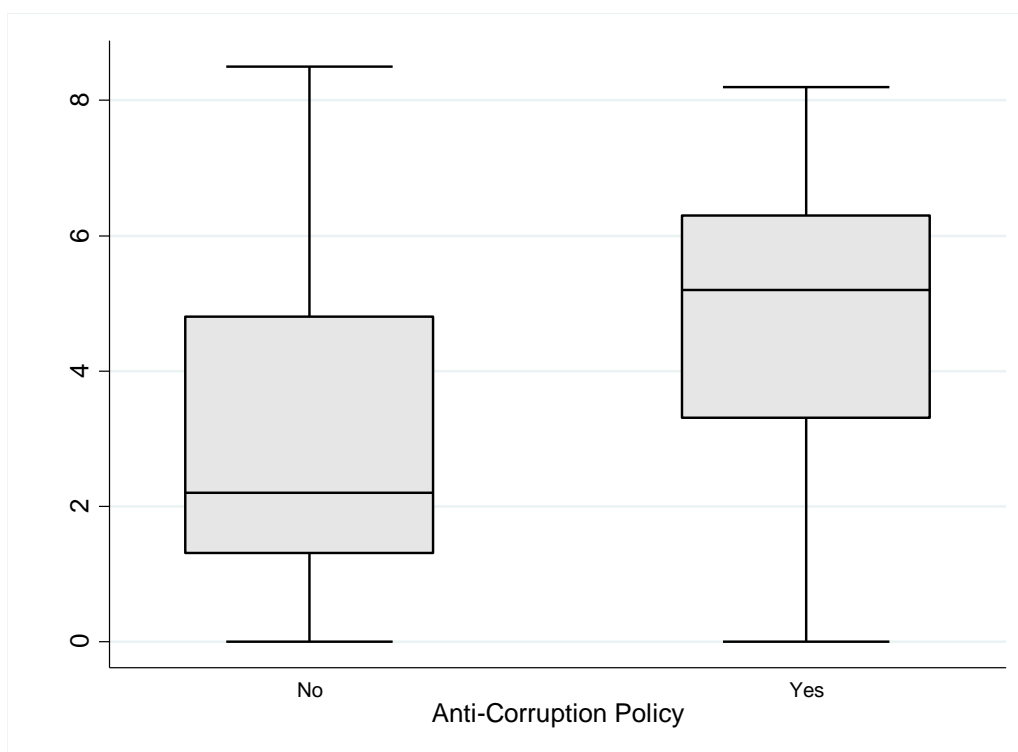
Anti-Corruption Policy

The anti-corruption policy of certain countries is operationalized by a dummy variable: 1) If the country is member of GRECO and additionally has ratified both conventions of the Council of Europe – the Criminal Law Convention on Corruption, Civil Law Convention on Corruption; 0) if not. Overall, both conventions of the Council of Europe are still not ratified by many European countries. For example, Austria, Germany and Italy have not yet ratified the Criminal Law Convention on Corruption. The Civil Law Convention on Corruption is also awaiting ratification by Germany, Denmark, Iceland, Ireland, Italy, Luxembourg, Portugal, Switzerland and United Kingdom (status as of March 2013) (see Appendix F). In other words, this means that only 28 out of 37 European countries, about three-quarter, pursue an anti-corruption policy.

A correlation coefficient of 0.36 indicates a positive relationship between the extent of corruption and a country’s anti-corruption policy, suggesting that an existing anti-corruption policy may lead to an increase in the extent of corruption. However, this implies, that the assumption (hypothesis 2b) that “The extent of corruption will be higher, if the country has no anti-corruption policy.” can initially not be confirmed. The positive relationship is more likely

to the alternative hypothesis that *“The extent of corruption will be higher, if the country has an anti-corruption policy.”*

Figure 20: Boxplots of the Extent of Corruption and Anti-Corruption Policy



Note: Dependent Variable: Extent of Corruption: Corruption Perception Index transformed: 0= low corruption; 10=highest level of corruption.

Anti-Corruption Policy is operationalized by a dummy variable: 1 = If the country is member of GRECO and additionally has ratified both conventions of the Council of Europe – the Criminal Law Convention on Corruption, Civil Law Convention on Corruption; 0 = if not.

Degree of Government Centralization

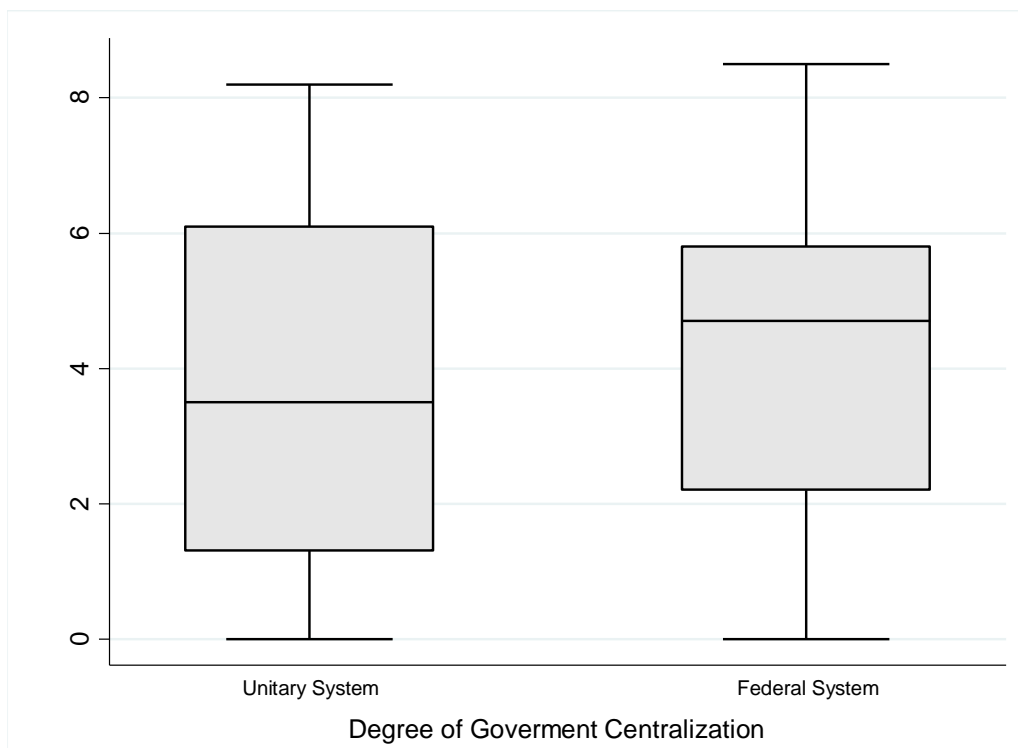
To measure the degree of government centralization, I take data from the Institutions and Elections State, that describes the relationship between the central and those regional governments that are immediately below the central government. The data is coded as 1) Unitary system, 2) Confederation and 3) Federal system.

19 out of 37 countries are unitary systems such as Albania, Belarus, Bulgaria, Denmark, Estonia, Georgia, Iceland, Ireland, Latvia, Lithuania, Luxembourg, Macedonia, Netherlands, Norway, Portugal, Romania, Slovakia, Slovenia, and Sweden. The other countries are federal systems such as Austria, Belgium, Bosnia a Herzegovina, Croatia, Cyprus, Czech Republic, Finland, France, Germany, Greece, Hungary, Italy, Moldova, Poland, Spain,

Switzerland, Ukraine, United Kingdom.⁹¹ None of the countries is assigned as the status of a confederation state.

A correlation coefficient of 0.07 suggests a slightly positive relationship between the extent of corruption and government centralization and does not correspond to hypothesis 2c “*The extent of corruption will be higher, the higher the degree of government centralization.*”

Figure 21: Boxplots of the Extent of Corruption and the Degree of Government Centralization



Note: Dependent Variable: Extent of Corruption: Corruption Perception Index transformed: 0= low corruption; 10=highest level of corruption.
A country's Degree of Government Centralization is coded by 1= Unitary system; 2 = Confederation; 3 = Federal system.

Degree of Political Competition

Political competition is operationalized as the number of veto players in a political system that is measured by the Legislative Index of Political Competitiveness (LIPC) and the Executive Index of Political Competitiveness (EIPC). The index is scaled from 1 to 9, where a high number indicates a high degree of political competition in a system.

The Legislative Index of Political Competitiveness measures the degree of political competitiveness in the legislature as follows: (1) No legislature; (2) Unelected legislature; (3)

⁹¹ The variable government centralization also varies in its manifestation over time. For instance, from 1995-2003 France was ranked as unitary system and from 2004 until 2010 as federalist country Quality of Government (2012).

Elected legislature with single candidates; (3,5) Unclear whether there is competition among elected legislators in a single party system; (4) Single party with multiple candidates; (5) Multiple parties are legal but only one party won seats; (5,5) Not clear whether multiple parties ran and only one party won or multiple parties ran and won more than 75% of the seats; (6) Multiple parties won seats but the largest party received more than 75% of the seats; (6,5) Multiple parties won seats but it is unclear how many the largest party got; (7) Largest party got less than 75%.

The EIPC uses the same scale as the LIPC but applies for executive elections instead (Quality of Government, 2012). The data originally comes from the Database of Political Institutions. I use it from the Quality of Government Dataset supplied by the University of Gothenburg. It equals one if the Legislative Index of Political Competitiveness or the Executive Index of Political Competitiveness is less than 6. In countries where the LIPC and the EIPC are greater than or equal to 6, the variable political competition is incremented by one if there is a chief executive, further by one if the chief executive is competitively elected (EIPC greater than six), and by a further one if the opposition controls the legislature.

In presidential systems the variable is incremented by one for each chamber of the legislature (unless the president's party has a majority in the lower house and a closed-list system is in effect), and by one for each party that is coded as allied with president's party and that has an ideological (left-right) orientation closer to that of the main opposition party than to that of the president's party.

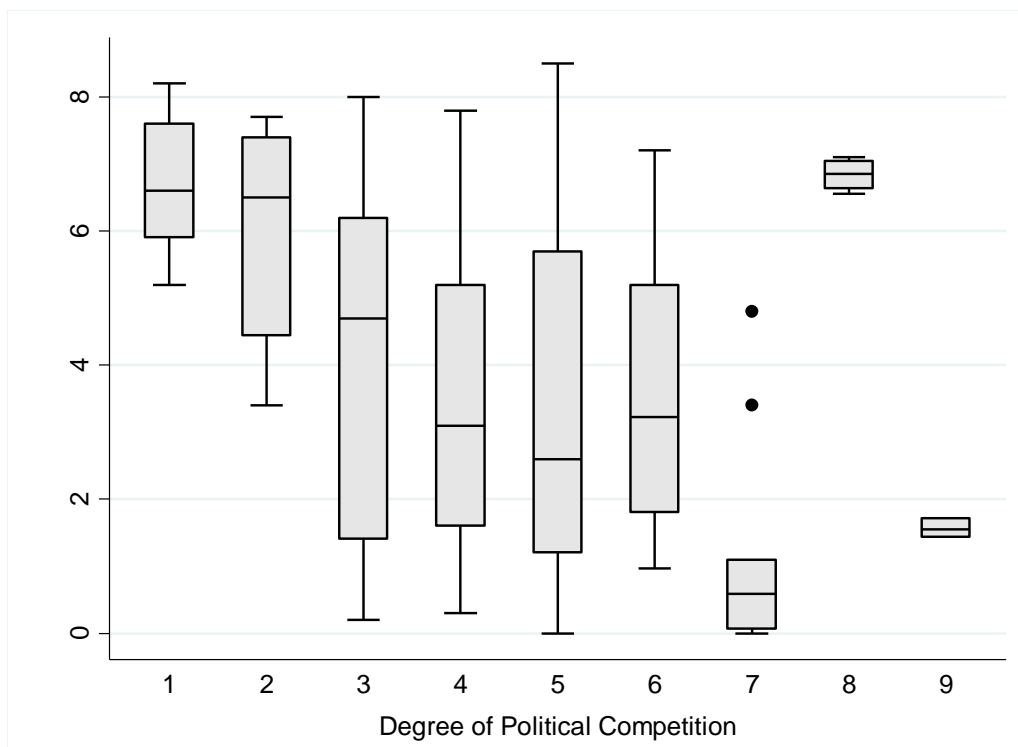
In parliamentary systems the variable is incremented by one for every party in the government coalition as long as the parties are needed to maintain a majority, and by one for every party in the government coalition that has a position on economic issues closer to the largest opposition party than to the executive party. The prime minister's party is not counted as a check if there is a closed rule in place (Quality of Government, 2012).

A preliminary descriptive analysis suggests that the degree of political competition was scored at 4.17 in 1995 and decreased to a level of 3. Countries with a smaller number of veto players in their political system, indicating a score between 2 and 4, are Georgia (1.09), Belarus (2.07) and Albania (2.31), followed by Moldova (2.4), Portugal (2.46), Macedonia (2.5), Bulgaria (2.66), Croatia (3.0), Greece (3), Iceland (3.2), Lithuania (3.21), United Kingdom (3.23), Switzerland (3.26), Italy (3.4), Hungary (3.5), Estonia (3.6), Spain (3.8), Sweden (3.9). Countries with a score between 2 and 4 are Finland (4.), Luxembourg (4.06), Slovakia (4.26), Poland (4.26), Bosnia and Herzegovina (4.28), Austria (4.3), Belgium (4.46), France, Germany (4.5), Norway (4.6), Ukraine, Latvia (4.7), Slovenia (4.8), Czech Republic (5.53), Netherlands (5.8), Denmark (5.93), Romania (6.06) and Ireland (6.3).

A correlation coefficient of -0.27 indicates a negative relationship between the extent of corruption and the degree of political competition, suggesting that high degrees of political

competition reduce the growth of corruption in certain countries. This conforms the assumed linkage between the extent of corruption and the degree of political competition that “*The extent of corruption will be higher, the lower the political competition in a political system.*” (hypothesis 2d).

Figure 22: Boxplots of the Extent of Corruption and Degree of Political Competition



Note: Dependent Variable: Extent of Corruption: Corruption Perception Index transformed:

0= low corruption; 10=highest level of corruption.

Degree of Political Competition is scaled from 1 (low degree) to 9 (high degree).

Degree of Public Spending Ratio

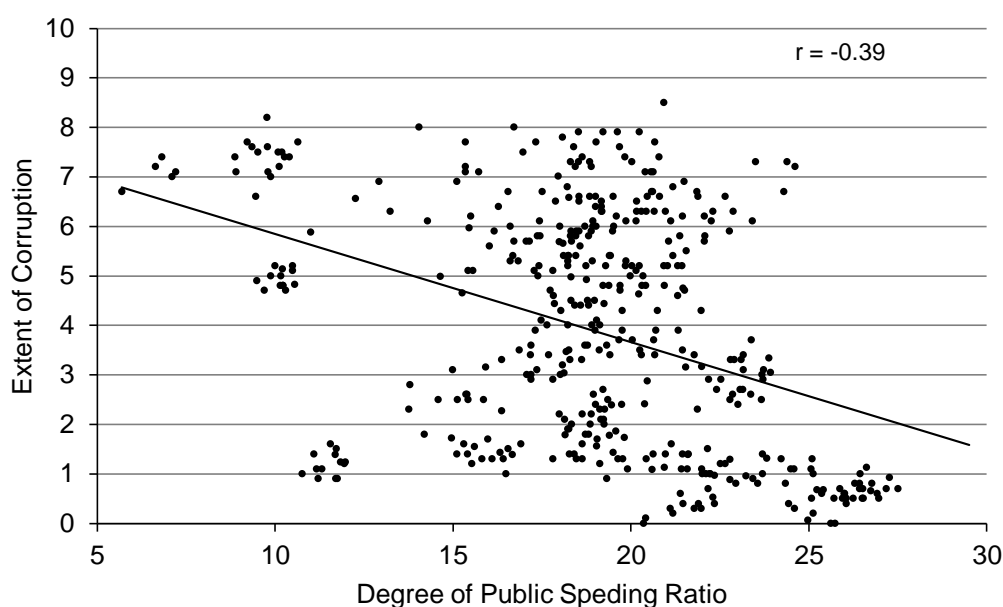
To measure a nation’s degree of public spending ratio I take data from the World Bank and OECD. It includes the government consumption expenditure (% of GDP). General final consumption expenditure of a government includes all current government expenditures for purchases of goods and services (including compensation of employees). It also covers most expenditures on national defense and security, but excludes government military expenditures that are part of government capital formation (Quality of Government, 2012).

Preliminary descriptive analyses suggest that the average degree of public spending ratio in Europe was 19.54% in 1995 and remains constant until 2010 (19.20%). Albania has with 9.85% the lowest degree of public spending ratio in Europe, followed by Hungary (10.20%) and Romania (10.28%). On the other hand, Sweden has with 26.67% the highest score of

public spending ratio, followed by Denmark (25.82%) and Iceland (23.72%) (World Bank Indicators; OECD).

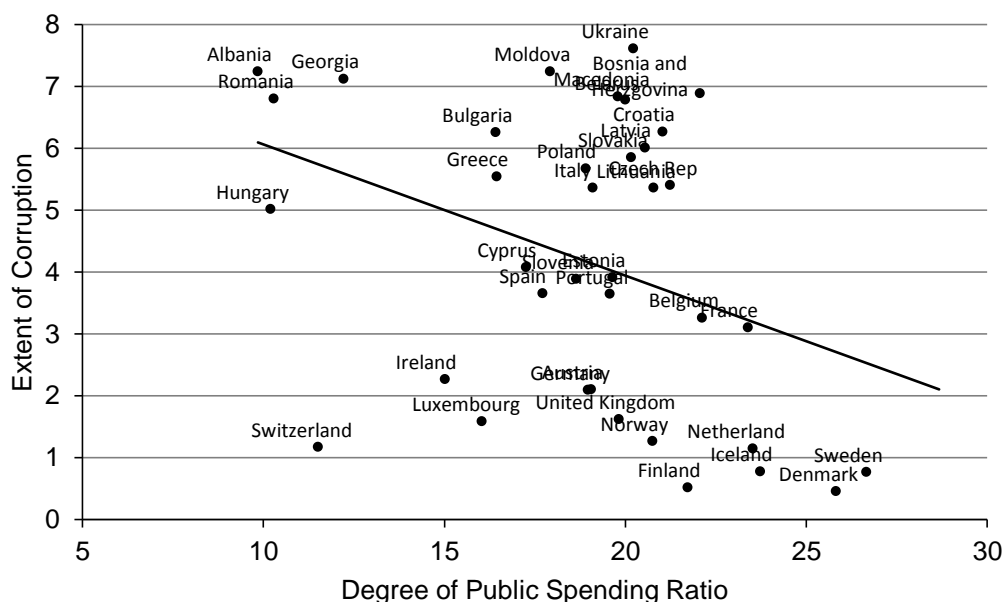
The following scatterplots indicate a negative relationship between the extent of corruption and the degree of public spending ratio, suggesting that a high rate of public spending ratio negatively reduces the degree of corruption (see figure 23 and 24). This is confirmed by a negative correlation coefficient of -0.39 and leads to an initial rejection of the assumed hypothesis 2e that *“The extent of corruption will be higher, the larger the degree of public spending ratio.”* and complies with the alternative hypothesis that *“The extent of corruption will be lower, the larger the degree of public spending ratio.”*

Figure 23: Correlation between the Extent of Corruption and Degree of Public Spending Ratio



Note: Dependent Variable: Extent of Corruption: Corruption Perception Index transformed:
0= low corruption; 10=highest level of corruption.
Degree of Public Spending Ratio is measured by government consumption expenditure
(% of GDP).

Figure 24: Correlation between the Extent of Corruption and Degree of Public Spending Ratio across European Countries (Average)



Note: Dependent Variable: Extent of Corruption: Corruption Perception Index transformed: 0= low corruption; 10=highest level of corruption.
 Degree of Public Spending Ratio is measured by government consumption expenditure (% of GDP).

Women in Parliaments

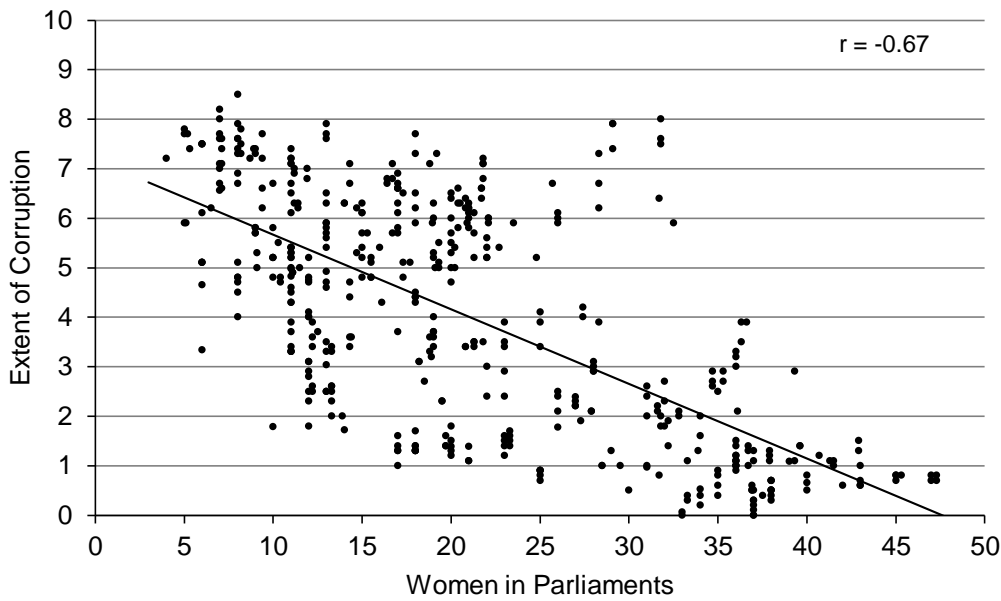
To investigate the hypothesis 2f, I particularly use data from the World Bank and the United Nations to measure the percentage of parliamentary seats in a single or lower chamber held by women. A preliminary descriptive analysis demonstrates that the percentage of women in European parliaments increases steadily. In 1997⁹², the average score was 15.97%, whereas it increased to 24.17% in 2010. The Ukraine has with 6.9% the lowest percentage of women in parliaments and is followed by Georgia with 7.27% and Albania with 8.18%. However, Sweden has with 44.35% the highest percentage of women in parliaments, followed by Finland with 37.75% and Denmark with 36.83% (World Bank Indicators, 2013).

The following scatterplots indicate a negative relationship between the extent of corruption and the percentage of women in parliaments (figure 25 and 26). The cases are relatively well distributed along the negative regression line. This suggests that a high share of women in parliaments leads to a decrease in the extent of corruption in European states. This is substantiated by a negative correlation coefficient of -0.67 between both variables and

⁹² There is no data available on the percentage of women in parliaments in European states for the years 1995 and 1996.

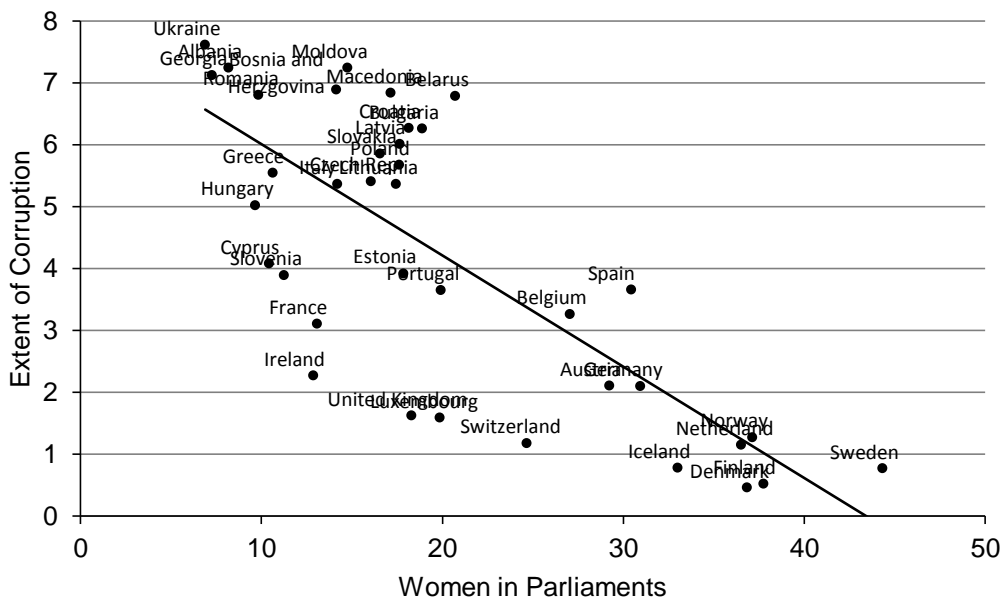
initially confirms the hypothesis (2f) that the “*The extent of corruption will be lower, the higher the percentage of women in parliaments.*”

Figure 25: Correlation between the Extent of Corruption and Women in Parliaments



Note: Dependent Variable: Extent of Corruption: Corruption Perception Index transformed: 0= low corruption; 10=highest level of corruption.
 The variable Women in Parliaments is measured by the percentage of parliamentary seats in a single or lower chamber held by women.

Figure 26: Correlation between the Extent of Corruption and Women in Parliaments across European Countries (Average)



Note: Dependent Variable: Extent of Corruption: Corruption Perception Index transformed:

0= low corruption; 10=highest level of corruption.

The variable Women in Parliaments is measured by the percentage of parliamentary seats in a single or lower chamber held by women.

The following table 6 gives an overall overview of the descriptive statistics of the political variables used in the analysis. It illustrates the number of observations, means, standard deviations, and minimums and maximums of used data. The number of observations is also based on the time period (1995-2010) and the number of included European countries. Most of the data comes from international organizations such as the World Bank, OECD or United Nations (see Appendix D).

Table 6: Political Variables (1995-2010)

Variables	Observations	Mean	Standard Deviation	Min	Max
Degree of Democracy	555	8.93	1.83	1.08	10
Anti-Corruption Policy	592	.49	.50	0	1
Degree of Government Centralization	590	1.93	0.99	1	3
Degree of Political Competition	540	3.89	1.40	1	9
Degree of Public Spending Ratio	508	18.85	4.38	5.69	27.50
Women in Parliaments	511	20.27	10.76	3	47.3

Findings of the Political Model of Corruption

In the following table the results of the political model of corruption for the European states are presented and subsequently compared with the findings of the non-European sample. For comparison purposes, all political variables are standardized to a scale of 0-1, except the dummy variables. Similar to the economic variables, the original variables are subtracted by their minimum value and subsequently divided by their maximum values. The political variables also include a time-2-years-lag. I have also calculated the model with 5-years and 10-years-lags (see Appendix G.2). The dependent variable is the transformed Corruption Perception Index.

Table 7: Political Model of Corruption

Variables	Dependent Variable: Extent of Corruption	
	European Countries	Non-European Countries
Degree of Democracy	-0.68*** (0.04)	-0.38*** (0.01)
Anti-Corruption Policy	0.13*** (0.01)	0.00 (0.02)
Degree of Government Centralization	0.04*** (0.01)	-0.09*** (0.01)
Degree of Political Competition	0.07 (0.08)	0.24*** (0.05)
Degree of Public Spending Ratio	-0.05 (0.04)	-0.47*** (0.02)
Women in Parliaments	-0.01*** (0.00)	-0.00*** (0.00)
Constant	1.17*** (0.04)	1.04*** (0.01)
Observations	418	443
R-squared	0.73	0.52
Number of Countries	37	41

Note: Standard errors in parentheses*** p<0.01, ** p<0.05, * p<0.1

Dependent Variable: "Extent of Corruption" (Corruption Perception Index transformed); 0= low corruption; 10= highest level of corruption.

Findings of the European Sample

The political model includes 37 European countries and 418 observations. The findings of my analysis clearly demonstrates that corruption in Europe is particularly rooted in political factors such as the degree of democracy, a country's anti-corruption policy, the degree of government centralization and the percentage of women in parliaments. The explained variance of the model (r^2) is, with 73%, higher than the variance explained by means of the economic model of corruption ($r^2= 0.59$). In this model, the degree of democracy seems to be the most important contributor to the reduction of corruption levels and confirms the hypotheses (2a) *"The extent of corruption will be higher, the lower the degree of democracy"*. Similar to the correlation analysis, the coefficient is relatively high with -0.68.⁹³ This finding is

⁹³ To measure the degree of democracy in an alternative way, I use an average of Freedom House (political rights and civil liberties) that is transformed to a scale of 0-15, where 0 is least democratic and 15 most democratic. However, to prevent endogeneity problems, I excluded the subindex "functioning of government"

consistent with the studies of Hill (2003), Shah (2007), Billger and Goel (2009), and Saha *et al.* (2009) who particularly suggest that more advanced democratic structures lead to lower degrees of corruption. In contrast to this, my results contradict the analyses of Uslaner (2002), Shen and Williamson (2005) and Treisman (2000) who demonstrated that democracy does not necessarily guarantee honest and transparent governments.

With regard to the variable anti-corruption policy the hypothesis (2b) "*The extent of corruption will be higher, if the country has no anti-corruption policy.*" is not confirmed by the model. Although the relationship between both variables is significant, the coefficient is 0.13, implying a positive relationship between the variables. This does not confirm previous research (e.g. Hanna *et al.*, 2011) indicating that a country's anti-corruption policy reduces the extent of corruption. It rather confirms the alternative hypothesis "*The extent of corruption will be higher, if the country has an anti-corruption policy*" and is therefore consistent with the research of Larmour (2007), Anechiarico and Jacobs (1996), and Gong and Wu (2012) who claim that anti-corruption strategies can cause just the opposite effect, as new regulations might, paradoxically, create new opportunities for corruption.

According to the relationship between the extent of corruption and the degree of government centralization, the hypothesis (2c): "*The extent of corruption will be higher, the higher the degree of government centralization.*" is confirmed. Similar to the correlation analysis, the coefficient is 0.04, suggesting a positive relationship between both variables. This does not confirm, for instance, the research of Shleifer and Vishny (1993) who assert that decentralization of power create competition in the distributions of public goods that may, in turn, reduce the degree of corruption, and the results of Paldam (2002) and Gurgur and Shah (2005), suggesting that federal structures of the government system support greater accountability in the public sector and therefore tend to reduce the extent of corruption. Contrary to this, my findings confirm the assumptions of Weingast (1995), Goldsmith (1999), and Kunicová and Rose-Ackerman (2005) who have provided evidence that federal or decentralized states tend to be more corrupt than unitary countries.

In contrast to the preliminary correlation analysis, indicating a negative relationship between corruption and the extent of political competition, hypothesis 2d, stating that "*The extent of corruption will be higher, the lower the political competition in a political system*" is not confirmed in the European model. In the European sample the relationship between both variables is not significant and contradicts previous research such as analyses of (Rose-Ackerman, 1999), Shleifer and Vishny (1993), Persson *et al.* (2003) and Montinola and Jackman (2002) who illustrated that competition between politicians and bureaucrats,

because it includes questions concerning corruption such as "Is the government free from pervasive corruption?" Freedom House (2012). The correlation coefficient is 0.96. The findings are almost identical and confirm the hypothesis 2a that "*The extent of corruption will be higher, the lower the degree of democracy*".

measured by the number of veto players and opposition parties in a political system, reduces a country's extent of corruption.

With regard to the variable public spending ratio, the assumed relationship "*The extent of corruption will be higher, the larger the degree of public spending ratio*" (hypothesis 2e) is also not confirmed. Contrary to the preliminary results of the correlation analysis that indicates a negative correlation the relationship between both variables is not significant. This is inconsistent with authors claiming that a large government sector may create opportunities for corruption and has a strong positive influence on levels of corruption (e.g. Tanzi, 1994/1999; Ali and Isse, 2003). Rather, these findings confirm Husted (1999) and Montinola and Jackman (2002) who did not find a significant relationship between a country's degree of government size and the extent of corruption.

According to the relationship between the extent of corruption and the percentage of women in parliaments, hypothesis (2f) – "*The extent of corruption will be lower, the higher the percentage of women in parliaments.*" – is confirmed. Similar to the correlation analysis, the coefficient is -0.01. Even if the coefficient is not very high, it indicates that a higher percentage of women in parliaments seem to hinder the growth of corruption in certain countries. This confirms the research of Swamy *et al.* (2001), Dollar *et al.* (2001) and Lambsdorff and Fink Hady (2006) who indicated that a higher female labour participation generally leads to less corruption. Therefore, the findings contradict the results of Treisman (2007) and Sung (2003) who doubted the results of Swamy *et al.* (2001) and Dollar *et al.* (2001) for several reasons.

Findings of the Non-European Sample

Comparing the political model of the European states with the model of the non-European sample, it points out that there are differences in the explaining political factors of corruption. The model includes 41 countries and 443 observations. The explained variance of the model (r^2) is with almost 53% significantly lower than in the European sample ($r^2=0.73$). Similar to the European model, the degree of democracy has also a strong negative influence on corruption, indicating that a high degree of democracy leads to lower levels of corruption. Compared to the European sample, the coefficient is, however, much lower by -0.38. Yet, it is striking that in contrast to European states, there is no significant relationship between corruption and a country's anti-corruption policy, suggesting that a country's anti-corruption policy has no effects on the extent of corruption. The variable degree of government centralization is with a coefficient of -0.09 significant in the non-European sample. However, in contrast to the European sample it indicates a negative relationship and contradicts the hypothesis (2c) that "*The extent of corruption will be higher, the higher the degree of government centralization.*" While in the European sample the relationship between the

extent of corruption and the degree of political competition is not significant, the coefficient in the non-European sample is 0.24 and therefore positive. However, it does not confirm hypothesis 2d, implying that *“The extent of corruption will be higher, the lower the political competition in a political system.”*, but it corresponds to the alternative hypothesis, suggesting that high levels of political competition fosters a country’s extent of corruption. This is inconsistent with past research of Shleifer and Vishny (1993), Persson *et al.* (2003) or Montinola and Jackman (2002) who find the opposite direction of this relationship. In contrast to the European sample, the relationship between the extent of corruption and the variable public spending ratio is significant. However, the coefficient is -0.47, implying that higher degrees of public spending ratio lead to a decrease in corruption levels. This does not confirm hypothesis 2e that *“The extent of corruption will be higher, the larger the degree of public spending ratio.”*, but it complies with the alternative hypothesis that *“The extent of corruption will be lower, the larger the degree of public spending ratio.”* Particularly, this finding is in contradiction with the research of La Porta *et al.* (1999); Ali and Isse (2003) or Seldadyo and Haan, (2006) who find positive correlations between both variables.

Similar to the European sample, the relationship between the extent of corruption and the percentage of women in parliaments is confirmed as well. The coefficient is negative (-0.00) and, however, slightly lower than in the European sample (-0.01), indicating that a high percentage of women in country’s parliaments reduces the extent of corruption.

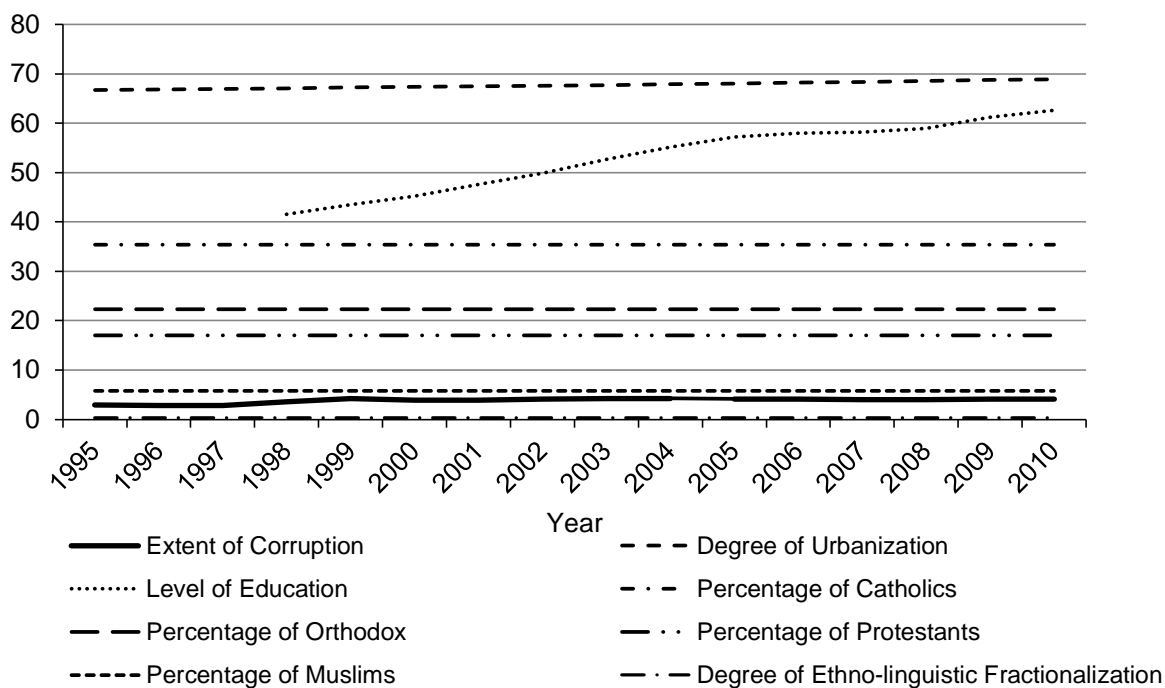
In sum, a comparison of the political models of the European and the non-European sample makes clear, that there are decisive differences between political indicators that explain the extent of corruption across time. This explicitly applies to the effects of a country’s anti-corruption policy, the degree of government centralization, the degree of political competition and a state’s public spending ratio. Similarities are found in the variables degree of democracy and the percentage of women in parliaments, that both negatively influence the extent of corruption.

4.2.3 Socio-Cultural Model of Corruption

The socio-cultural model of corruption includes four independent variables: a society’s dominant religion (Catholics, Orthodox, Protestants, Muslims), the degree of ethno-linguistic fractionalization in a country, the degree of urbanization and the level of education.

The following graphic illustrates the average development of the socio-cultural variables over time (1995-2010), compared to the average score of corruption in Europe.

Figure 27: Extent of Corruption and Socio-Cultural Variables across Time



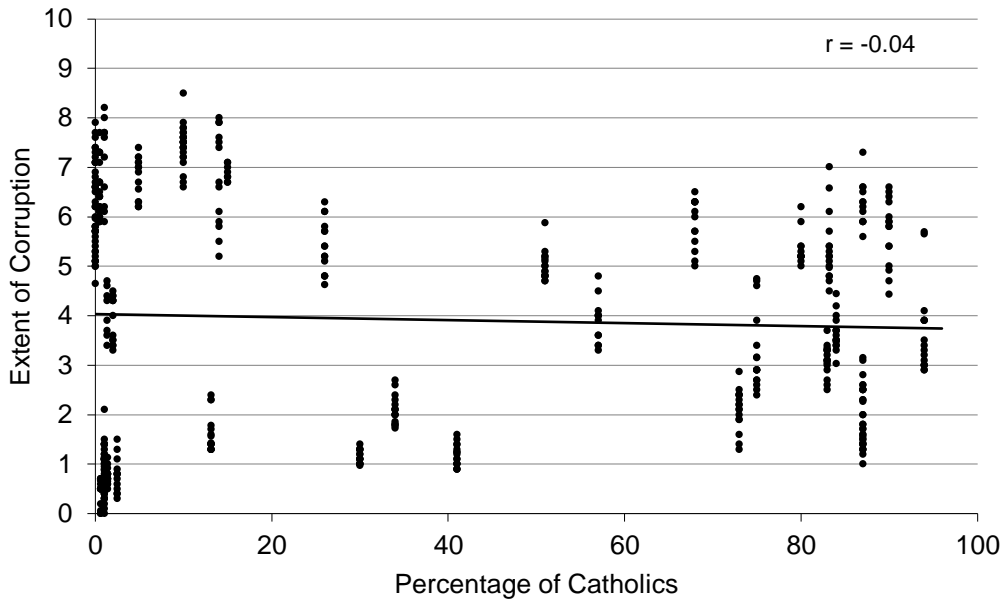
Religion

To examine the influence of religion on the extent of corruption, I primarily took percentage data from the Worldmark Encyclopedia of the Nations, the Statistical Abstract of the World and the United Nations to measure a society’s dominant religion.

- **Percentage of Catholics**

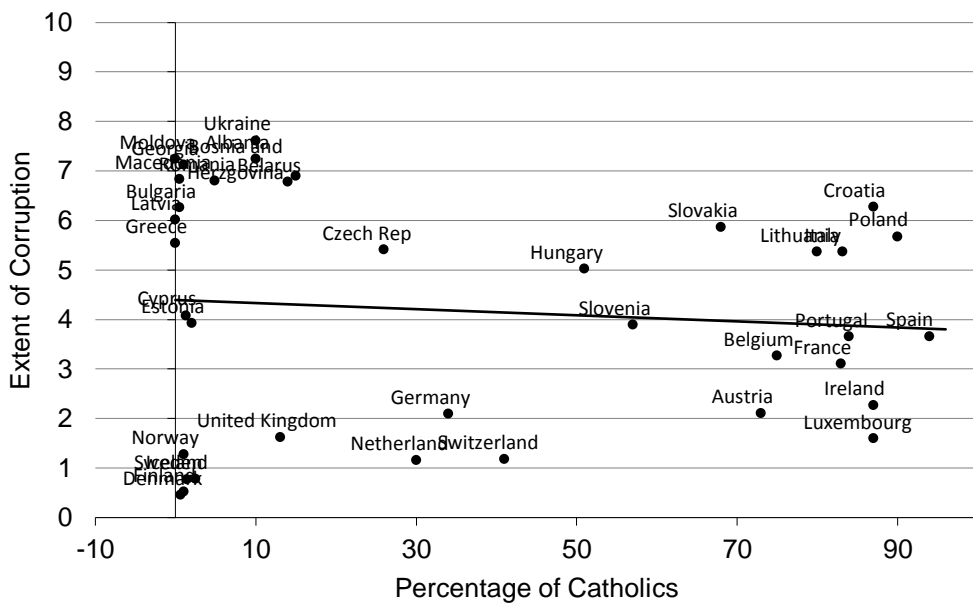
The average percentage of Catholics in European states is 35%. European countries with a large proportion of Catholics are, for instance, Spain, Poland and Croatia (Worldmark Encyclopedia of the Nations). Countries with low percentages of Catholics are the Scandinavian countries such as Denmark, Norway or Sweden. The regression line of the following scatterplots indicates a weak negative relationship between the extent of corruption and a society’s percentage of Catholics (see figure 28 and 29). This is substantiated by a correlation coefficient of -0.04 and does not initially confirm the assumed relationship that *“The extent of corruption will be higher, the larger the proportion of Catholics in a country’s population.”* (hypothesis 3a1). It is more likely to the alternative hypothesis that *“The extent of corruption will be lower, the larger the proportion of Catholics in a country’s population.”*

Figure 28: Correlation between the Extent of Corruption and Percentage of Catholics



Note: Dependent Variable: Extent of Corruption: Corruption Perception Index transformed:
0= low corruption; 10=highest level of corruption.

Figure 29: Correlation between the Extent of Corruption and Percentage of Catholics across European Countries (Average)

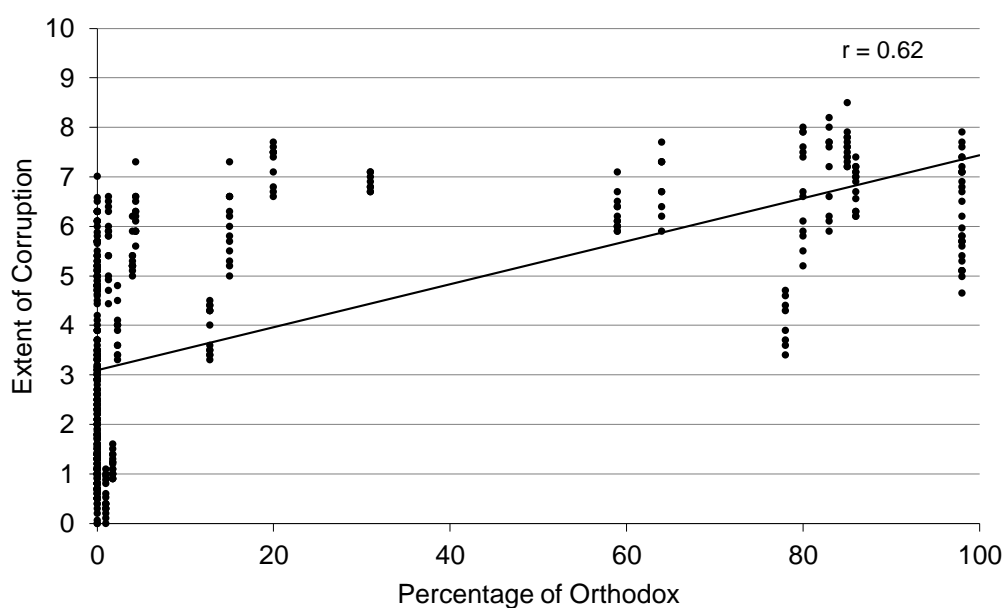


Note: Dependent Variable: Extent of Corruption: Corruption Perception Index transformed:
0= low corruption; 10=highest level of corruption.

- **Percentage of Orthodox**

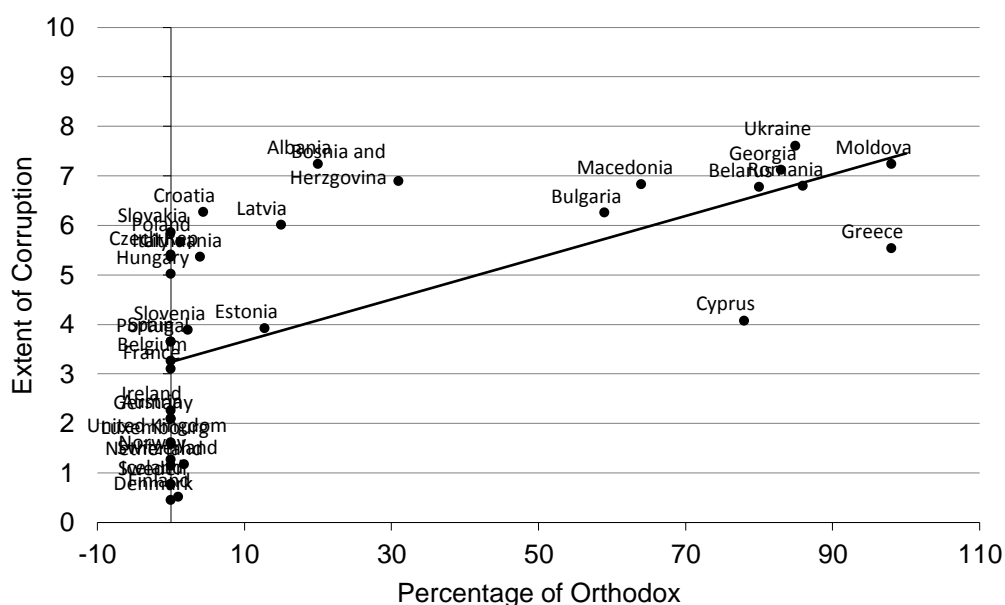
The average percentage of Orthodox in European states is with 0.22% very low. Countries with a large proportion of Orthodox are especially found in Greece, Moldova and Romania (Worldmark Encyclopedia of the Nations). Countries with low percentages of Orthodox people are especially Western and Northern societies such as Belgium, France and the United Kingdom. The regression lines of the following scatterplots indicate a positive relationship between the extent of corruption and a society's percentage of Orthodox. This is confirmed by the correlation coefficient of 0.62, suggesting that a high percentage of Orthodox leads to an increase in the extent of corruption (figure 30 and 31). This result initially confirms hypothesis 3a that *“The extent of corruption will be higher, the larger the proportion of Orthodox in a country's population.”*

Figure 30: Correlation between the Extent of Corruption and Percentage of Orthodox



Note: Dependent Variable: Extent of Corruption: Corruption Perception Index transformed:
0= low corruption; 10=highest level of corruption.

Figure 31: Correlation between the Extent of Corruption and Percentage of Orthodox across European Countries (Average)

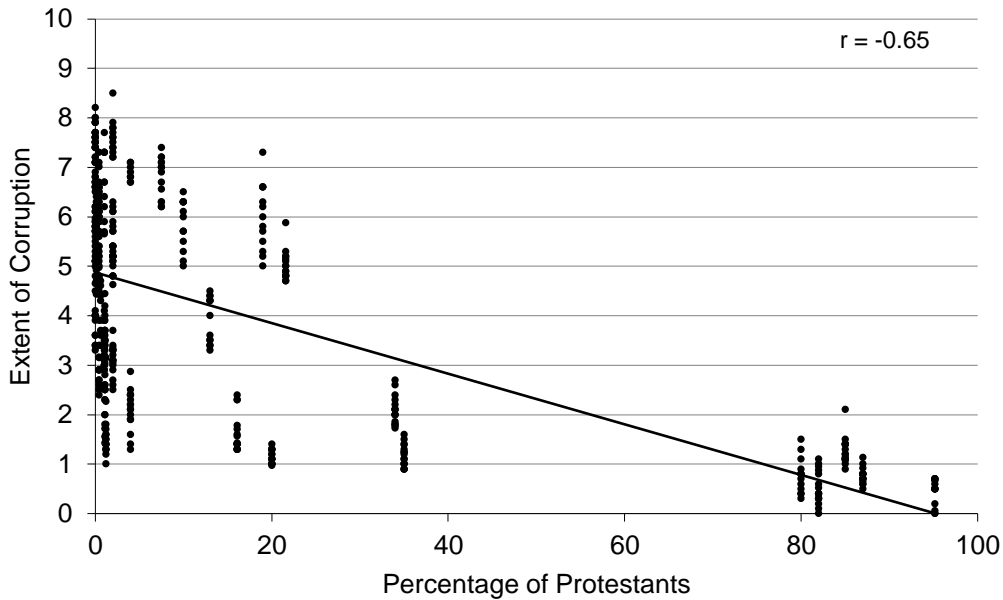


Note: Dependent Variable: Extent of Corruption: Corruption Perception Index transformed: 0= low corruption; 10=highest level of corruption.

- **Percentage of Protestants**

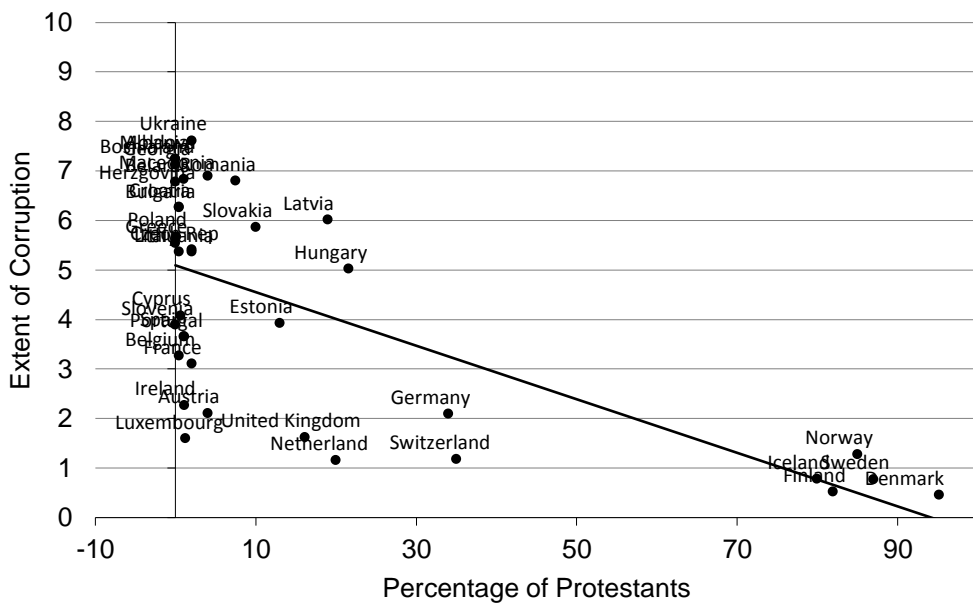
The average percentage of Protestants in European is 17%. In particular, Denmark, Finland, Iceland, Norway and Sweden are countries with a high proportion of Protestants (Worldmark Encyclopedia of the Nations). The regression line of the following scatterplots suggests a negative relationship between the extent of corruption and a society’s percentage of Protestants (figure 32 and 33). The correlation coefficient is -0.65 and initially verifies the assumed relationship (hypothesis 3a3) that *“The extent of corruption will be higher, the smaller the proportion of Protestants in a country’s population.”*

Figure 32: Correlation between the Extent of Corruption and Percentage of Protestants



Note: Dependent Variable: Extent of Corruption: Corruption Perception Index transformed: 0= low corruption; 10=highest level of corruption.

Figure 33: Correlation between the Extent of Corruption and Percentage of Protestants across European Countries (Average)

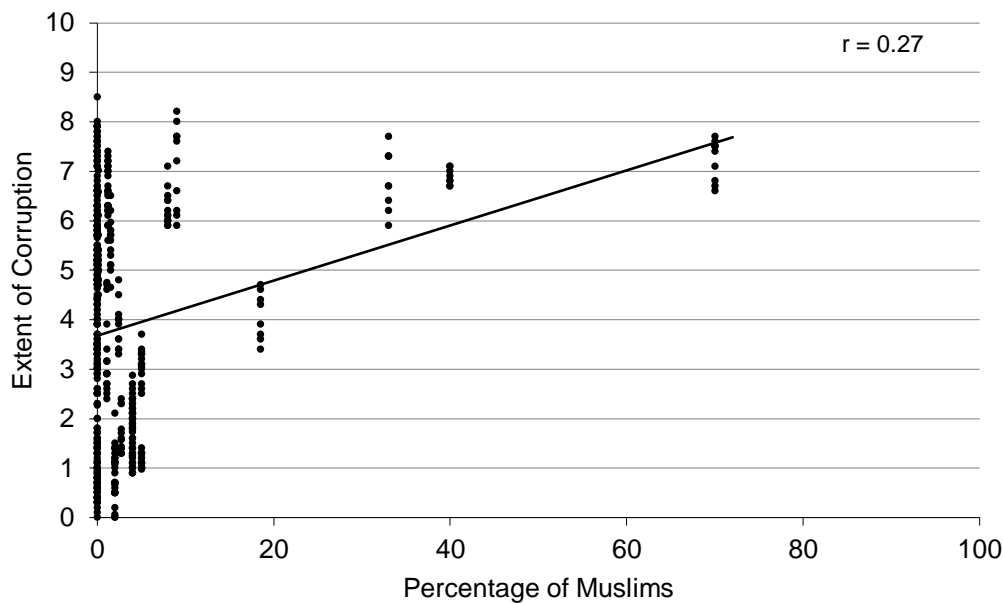


Note: Dependent Variable: Extent of Corruption: Corruption Perception Index transformed: 0= low corruption; 10=highest level of corruption.

- **Percentage of Muslims**

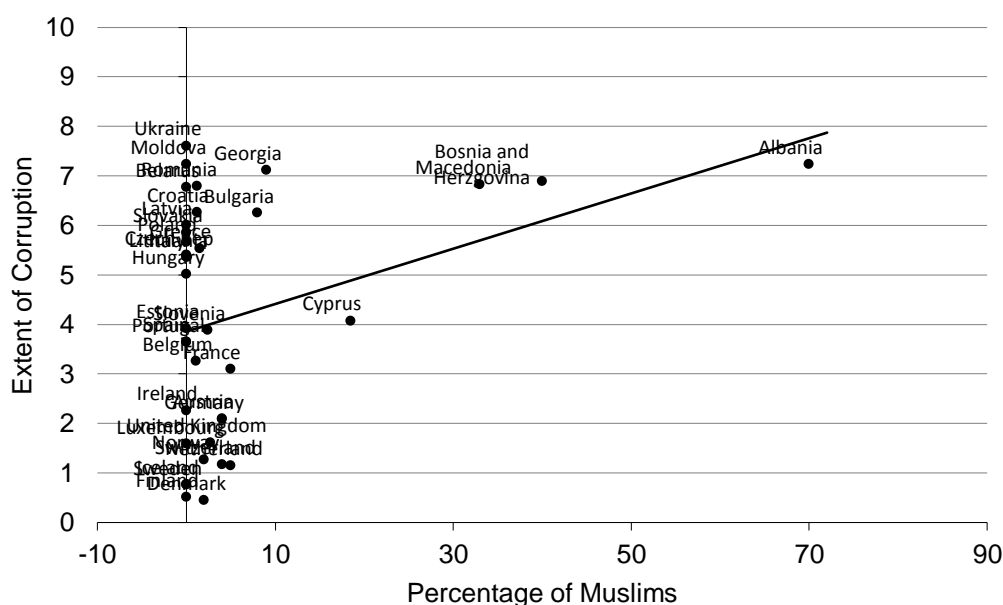
The average percentage of Muslims in European states is approximately 6%. Albania, Bosnia and Herzegovina, and Macedonia are societies with a high percentage of Muslims (Worldmark Encyclopedia of the Nations). The regression line of the following scatterplots indicates a positive relationship between corruption levels and a society's percentage of Muslims. The correlation coefficient is 0.27 (figure 34 and 35). This initially does not comply with the assumed relationship (hypothesis 3a4) that *"The extent of corruption will be higher, the larger the proportion of Muslims in a country's population."*

Figure 34: Correlation between the Extent of Corruption and Percentage of Muslims



Note: Dependent Variable: Extent of Corruption: Corruption Perception Index transformed:
0= low corruption; 10=highest level of corruption.

Figure 35: Correlation between the Extent of Corruption and Percentage of Muslims across European Countries (Average)

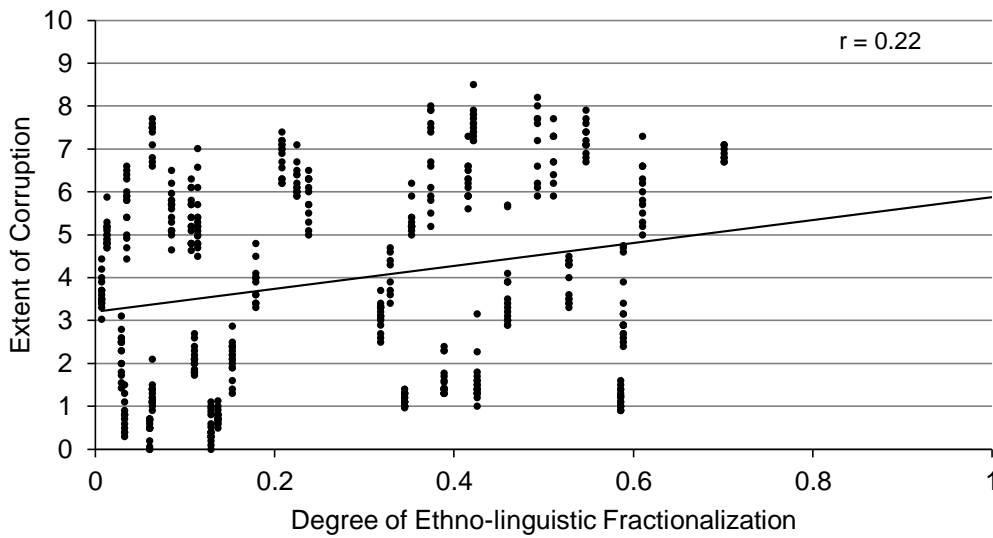


Note: Dependent Variable: Extent of Corruption: Corruption Perception Index transformed: 0= low corruption; 10=highest level of corruption.

Degree of Ethno-linguistic Fractionalization

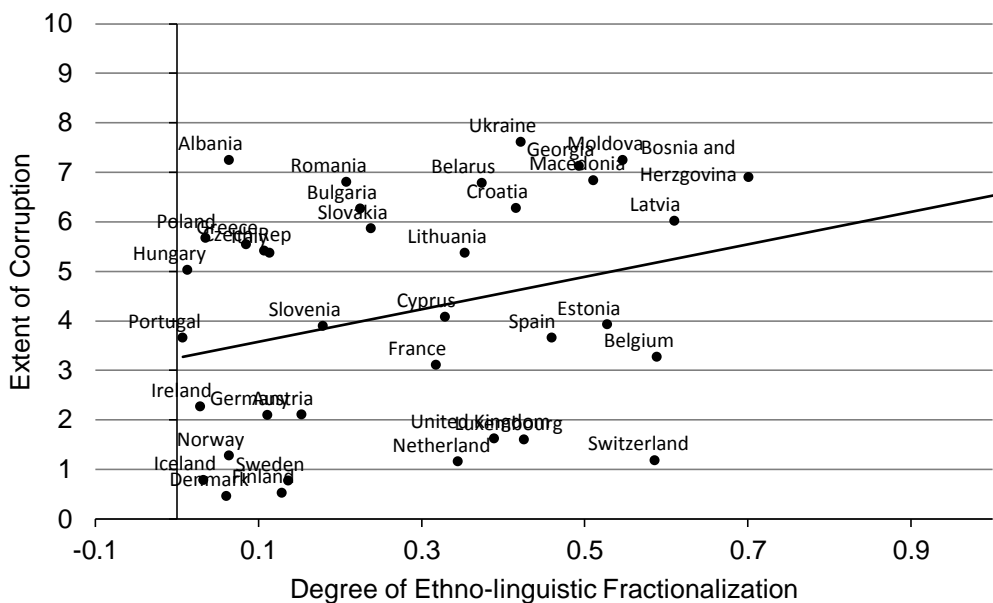
To measure the degree of ethno-linguistic fractionalization in a country, I use the index of ethno-linguistic fractionalization that reflects the probability that two randomly selected individuals from a given country do not belong to the same ethno-linguistic group. The index is a standard instrument for analysing ethno-linguistic fractionalization and is scaled to a range of 0 to 1, implying that the higher the number, the more fractionalized is a society (Quality of Government, 2012; for original sources see Roeder, 2001). The average degree of ethno-linguistic fractionalization in European states is .28. Countries with high levels of ethno-linguistic fractionalization are particularly found in post-communist societies such as Bosnia and Herzegovina (0.70), Latvia (0.61), Moldova (0.54), Estonia (0.52), Macedonia (0.51) or Georgia (0.49). Contrary to these countries, Portugal (0.01), Denmark (0.06), Greece (0.08), the Czech Republic (0.10) or Finland (0.12) are societies with low levels of ethno-linguistic fractionalization. The following scatterplots indicate a positive relationship between the extent of corruption and the degree of ethno-linguistic fractionalization (figure 36 and 37). The correlation coefficient is weak with 0.22 and initially does not confirm hypothesis (3b) that “The extent of corruption will be higher, the higher the degree of ethno-linguistic fractionalization in a country.”

Figure 36: Correlation between the Extent of Corruption and the Degree of Ethno-linguistic Fractionalization



Note: Dependent Variable: Extent of Corruption: Corruption Perception Index transformed: 0= low corruption; 10=highest level of corruption.
Ethno-linguistic Fractionalization is scaled to a range of 0 (low fractionalization) to 1 (high fractionalization).

Figure 37: Correlation between the Extent of Corruption and the Degree of Ethno-linguistic Fractionalization across European Countries (Average)

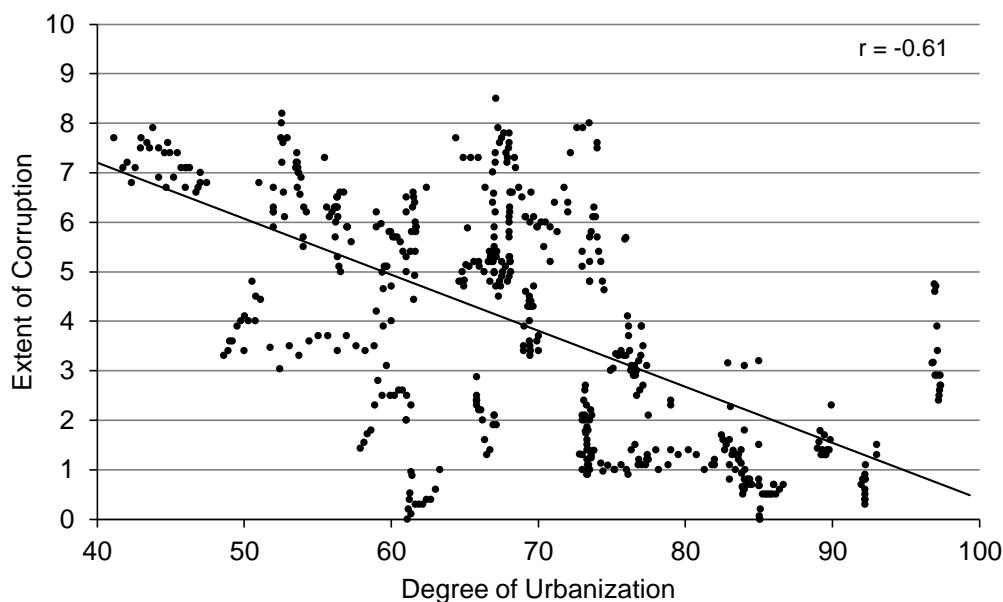


Note: Dependent Variable: Extent of Corruption: Corruption Perception Index transformed: 0= low corruption; 10=highest level of corruption.
Ethno-linguistic Fractionalization is scaled to a range of 0 (low fractionalization) to 1 (high fractionalization)

Degree of Urbanization

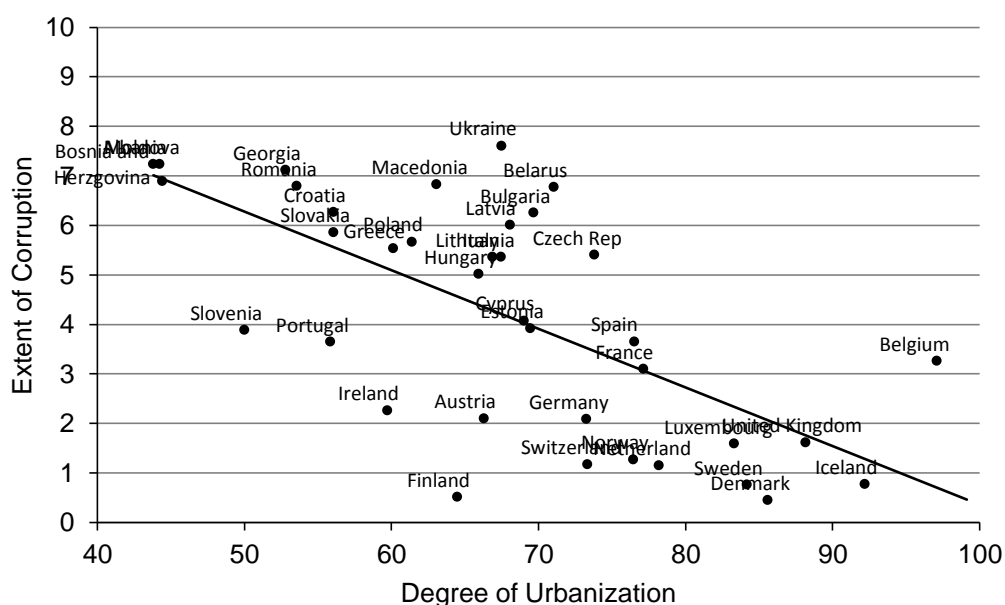
In the following analysis, the degree of urbanization is measured as the percentage of total population living in urban areas as defined by national statistical offices (Quality of Government, 2012). The data was mainly collected from the World Bank and the United Nations World Urbanization Prospects. Similar to the extent of corruption and as illustrated by figure 27, the average degree of urbanization in European states gradually increases for the period from 1995-2010. While in 1995 the average score was 66.76%, the level has increased to 68.91% in 2010. Bosnia and Herzegovina (44.43%), Moldova (44.23%) and Slovenia (50%) have the lowest average degree of urbanization in Europe. In contrast to these countries, Belgium has with almost 98% the highest degree of urbanization and is followed by Iceland (92.19%) and the United Kingdom (88.16%). The regression line in the scatterplots and a correlation coefficient of -0.61 suggest a negative relationship between the extent of corruption and a country's degree of urbanization (figure 38 and 39). Regarding to this, the hypothesis (3c) *"The extent of corruption will be higher, the higher the degree of urbanization."* can initially not be confirmed. These preliminary findings rather correspond to the alternative hypothesis that *"The extent of corruption will be lower, the higher the degree of urbanization."*

Figure 38: Correlation between the Extent of Corruption and the Degree of Urbanization



Note: Dependent Variable: Extent of Corruption: Corruption Perception Index transformed:
0= low corruption; 10=highest level of corruption.
The Degree of Urbanization is measured as the percentage of total population living in urban areas as defined by national statistical offices.

Figure 39: Correlation between the Extent of Corruption and the Degree of Urbanization across European Countries (Average)



Note: Dependent Variable: Extent of Corruption: Corruption Perception Index transformed: 0= low corruption; 10=highest level of corruption.
 The Degree of Urbanization is measured as the percentage of total population living in urban areas as defined by national statistical offices.

Level of Education

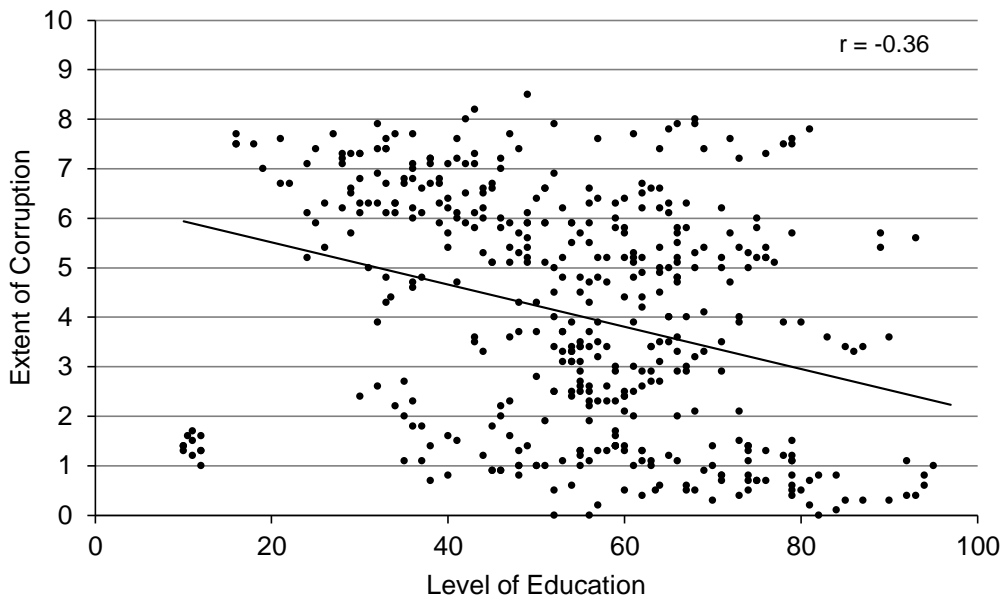
To measure a country’s level of education, I collected data from the Unesco Institutions for Statistics and the OECD Factbook and use the average score of female and male gross tertiary education enrollment (Unesco Institutions for Statistics). The values are given as gross enrollment rates that are defined as the number of enrolled pupils at a certain level of education and can be over 100% due to the inclusion of over-aged and under-aged pupils and students because of early or late entrants, and grade repetition (Quality of Government, 2012).

As graphically illustrated by figure 27, the average level of education in European states strongly increases for the period from 1995-2010. While in 1998 the average score was 41.51%, the level improved to 62.60% in 2010. Luxembourg (11.04%) Albania (22%) and Macedonia (29.53%) indicate the lowest score of gross tertiary education enrollment. Contrary to this, the highest gross enrolment rates are found in the Scandinavian countries such as Finland (88.30%), Norway (73.30%) and Sweden (72.69%).

The regression line in the scatterplots visualizes a negative relationship between the extent of corruption and the level of education (figure 40 and 41). The correlation coefficient is -0.31

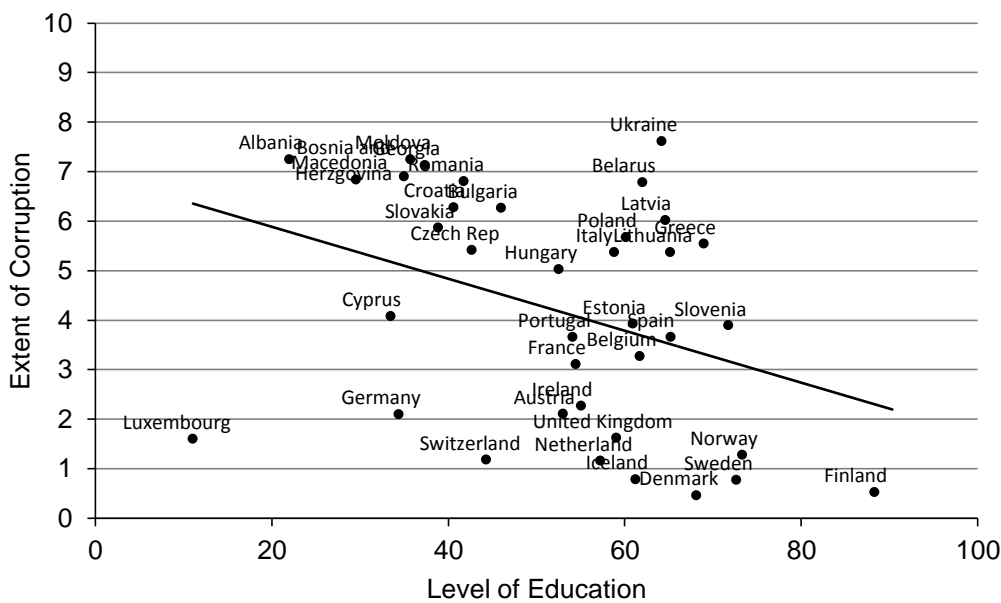
and initially does not verify the hypothesis (3d) that “The extent of corruption will be higher, the lower the level of education.”

Figure 40: Correlation between the Extent of Corruption and Level of Education



Note: Dependent Variable: Extent of Corruption: Corruption Perception Index transformed: 0= low corruption; 10=highest level of corruption. Level of Educations is measured as the average score of female and male gross tertiary education enrollment (percentage).

Figure 41: Correlation between the Extent of Corruption and Level of Education across European Countries (Average)



Note: Dependent Variable: Extent of Corruption: Corruption Perception Index transformed:

0= low corruption; 10=highest level of corruption.

Level of Educations is measured as the average score of female and male gross tertiary education enrollment (percentage).

The following table illustrates the descriptive statistics of the socio-cultural variables used in the following analysis. It illustrates the number of observations, means, standard deviations, and minimums and maximums of the included data. The number of observations is also based on the time period (1995-2010) and the number of European countries. The data was mainly collected from the Worldmark Encyclopedia of the Nations, the Statistical Abstract of the World, United Nations, the World Bank, OECD or United Nations (see Appendix D).

Table 8: Socio-Cultural Variables (1995-2010)

Variables	Observations	Mean	Standard Deviation	Min	Max
Religion					
Percentage of Catholics	592	35.37	35.77	0	94
Percentage of Orthodox	592	22.28	34.59	0	98
Percentage of Protestants	592	17.00	28.75	0	95.2
Percentage of Muslims	592	5.80	13.72	0	70
Degree of Ethno-linguistic Fractionalization	592	.28	.20	.00	.70
Degree of Urbanization	518	67.57	13.11	38.9	97.36
Level of Education	344	53.57	17.84	9.5	95

Findings of the Socio-Cultural Model of Corruption

In the following table 9 the results of the socio-cultural model of corruption for the European sample are presented and compared with the findings of the non-European sample. For comparison purposes, all socio-cultural variables are standardized to a scale of 0-1, except the dummy variables. Similar to the economic and political variables, the socio-cultural variables include a time-lag of two years. I also calculated the model with 5-years and 10-years-lags (see Appendix G.3). The dependent variable is the transformed Corruption Perception Index.

Table 9: Socio-Cultural Model of Corruption

Variables	Dependent Variable: Extent of Corruption	
	European Countries	Non-European Countries
Religion		
Percentage of Catholics	-0.09*** (0.01)	0.27*** (0.01)
Percentage of Orthodox	0.19*** (0.01)	0.28*** (0.03)
Percentage of Protestants	-0.39*** (0.01)	-0.47*** (0.03)
Percentage of Muslims	0.03 (0.04)	0.16*** (0.00)
Degree of Ethno-linguistic Fractionalization	-0.01 (0.00)	-0.05*** (0.01)
Degree of Urbanization	-0.58*** (0.04)	-0.51*** (0.02)
Level of Education	0.00 (0.04)	-0.08*** (0.02)
Constant	0.83*** (0.04)	0.85*** (0.01)
Observations	382	351
R-squared	0.70	0.64
Number of Countries	37	40

Note: Standard errors in parentheses*** p<0.01, ** p<0.05, * p<0.1

Dependent Variable: "Extent of Corruption" (Corruption Perception Index transformed); 0= low corruption; 10= highest level of corruption.

Findings of the European Sample

The socio-cultural model of corruption includes 37 European countries and 382 observations. The table illustrates that a variety of socio-cultural factors hold great power of explanatory of corruption in European states. The variables a society's percentage of Catholics, Orthodox and Protestants and the degree of urbanization are significant in explaining corruption. The findings also indicate that the percentage of Muslims, the degree of ethno-linguistic fractionalization and the level of education have no influence on the extent of corruption in European countries. Overall, the explained variance of the model (r^2) is 70%, similar to the political model of corruption in Europe.

With regard to religion, the variable percentage of Catholics indicates a coefficient of -0.09, suggesting a significant negative relationship with the extent of corruption. This corresponds to the preliminary findings of the correlation analysis. Thereby, the hypothesis 3a1 that "The

extent of corruption will be higher, the larger the proportion of Catholics in a country's population." cannot be confirmed. However, the results are more likely to the alternative hypothesis that *"The extent of corruption will be lower, the larger the proportion of Catholics in a country's population."* The percentage of Orthodox of a society has a significant influence on the extent of corruption. The coefficient is 0.19, indicating that a high percentage of Orthodox may lead to high levels of corruption. This also confirms the results of the previous correlation analyses. Therefore, the hypothesis 3a2 that *"The extent of corruption will be higher, the larger the proportion of Orthodox in a country's population."* is confirmed.

In contrast to this result, the relationship between the extent of corruption and the percentage of Protestants is negative, suggesting that a high percentage of Protestants in a society may lower the extent of corruption. Similar to the correlation analyses, the coefficient is -0.39 and confirms the hypothesis 3a3 that the *"The extent of corruption will be higher, the smaller the proportion of Protestants in a country's population."*

However, there is no significant relationship between the extent of corruption and a society's percentage of Muslims. Although, the regression line of the scatterplot initially indicates a positive relationship between both variables, the hypothesis 3a4 that *"The extent of corruption will be higher, the larger the proportion of Muslims in a country's population."* cannot be confirmed. Overall, I can conclude that particular religious affiliations determine the extent of corruption in European states. Referring to the percentage of Orthodoxy and Protestantism, this corresponds to previous research such as of Treisman (2000) who provided evidence that in more hierarchical systems (for example, Catholicism, Orthodoxy), people are more prone to tolerance towards power abuses and corrupt behavior in more egalitarian or individualistic religions. Similar results are presented by Bonaglia *et al.* (2001), Paldam (2001) or Serra (2006). These findings also demonstrate that Protestant tradition appears to have a negative effect on corruption in European states. However, with regard to the negative relationship between the percentage of Catholics and the extent of corruption, and the share of Muslims, past research does not apply (e.g. La Porta *et al.*, 1999; Chang and Golden, 2004).

Contrary to the correlation analysis, that initially indicates a positive relationship between the extent of corruption and a country's degree of ethno-linguistic fractionalization, the relationship is not significant in the panel analysis. This does not confirm the hypothesis (3b) that *"The extent of corruption will be higher, the higher the degree of ethno-linguistic fractionalization in a country."* This contradicts, in particular, the studies of La Porta *et al.* (1999) or Alesina *et al.* (2002) who assumed a negative relationship between the variables and provided evidence that countries that are ethno-linguistically diverse are associated with higher levels of corruption than homogenous societies. The results of the European sample rather confirm the research of Treisman (2000) or Pellegrini and Gerlagh (2008)

demonstrating that there is no evidence for an impact of a society's linguistic fractionalization on corruption.

However, the variable degree of urbanization strongly influences the extent of corruption. The coefficient is -0.58, suggesting that a high degree of urbanization hinders the extent of corruption. However, as the preliminary analysis demonstrates, that does not correspond to the assumed relationship, implying that *"The extent of corruption will be higher, the higher the degree of urbanization."* (hypothesis 3c). This contradicts the research of Billger and Goel (2009) and Mocan (2008) who particularly revealed that living in larger cities increases the risk of exposure to bribery. The findings of the socio-cultural model in European states confirm the alternative hypothesis that *"The extent of corruption will be lower, the higher the degree of urbanization."*

Surprisingly, the level of education does not have any influence on the extent of corruption in European societies. That implies that the hypothesis (3d) that *"The extent of corruption will be higher, the lower the level of education."* has to be rejected. This is contrary to the preliminary negative correlation coefficient and the studies of Ahrend (2002), Ali and Isse (2003) and Glaeser and Saks (2006) who argue that corruption levels are lower in more educated and literate societies.

Findings of the Non-European Sample

In contrast to the European model, in the non-European sample all socio-cultural variables show significant relationships (see table 9). The model includes 40 countries and 351 observations. However, the explained variance of the model (r^2) is almost 65% and with that lower than in the European sample ($r^2=0.70$). Contrary to the European countries, the relationship between the extent of corruption and the percentage of Catholics is positive with 0.27. This confirms the assumed relationship that *"The extent of corruption will be higher, the larger the proportion of Catholics in a country's population."* (hypothesis 3a1) and, in particular, the research of Treisman (2000) and La Porta *et al.* (1999) arguing that countries with a high proportion of Catholics or Muslims show lower levels of governmental performance that, in turn, may increase the extent of a country's corruption level. Similar to the European model, hypothesis 3a2, that *"The extent of corruption will be higher, the larger the proportion of Orthodox in a country's population."* is also confirmed. The coefficient is even higher with 0.28 than in European states (0.19). The relationship between the extent of corruption and the percentage of Protestants is also significant. The coefficient is -0.47, similar to European states, indicating a negative relationship with corruption. That confirms the hypothesis 3a3 that *"The extent of corruption will be higher, the smaller the proportion of Protestants in a country's population."* In contrast to the European model, the relationship between corruption and a society's percentage of Muslims is significantly positive (0.16). This

confirms the results of the correlation analysis and corresponds with the hypothesis 3a4 that *“The extent of corruption will be higher, the larger the proportion of Muslims in a country’s population.”*

Overall, the findings of the non-European sample also confirm the general assumption that religion determines the extent of corruption in certain countries and therefore the research of Bonaglia *et al.* (2001) or Gerring and Thacker (2005). Contrary to the European model, the degree of a country’s ethno-linguistic fractionalization significantly influences the extent of corruption. The coefficient is -0.05, suggesting that high levels of ethnic and linguistic fractionalization of a society may reduce the extent of corruption. Yet, this implies the rejection of the hypothesis (3b) that *“The extent of corruption will be higher, the higher the degree of ethno-linguistic fractionalization in a country.”* and leads to the confirmation of the alternative hypothesis: *“The extent of corruption will be lower, the higher the degree of ethno-linguistic fractionalization in a country.”* Additionally, this confirms the studies of La Porta *et al.* (1999) and Lederman *et al.* (2005) who have provided evidence that ethno-linguistic homogeneity leads to more efficient government performance and hence to lower corruption levels. However, this contradicts the findings of Alesina *et al.* (2002) presenting evidence that countries that are ethno-linguistically diverse are associated with higher levels of corruption than homogenous societies. Similar to the European model, the variable degree of urbanization negatively influences the extent of corruption. The coefficient is slightly lower with -0.51 than in the European sample. However, as the preliminary analysis already demonstrates, this confirms the alternative hypothesis that *“The extent of corruption will be lower, the higher the degree of urbanization.”* and contradicts previous studies (e.g. Billger and Goel, 2009; Mocan, 2008). In contrast to European states, the relationship between the extent of corruption and the level of education is significantly negative. The coefficient is -0.08 and corresponds to the correlation coefficient of my preliminary results. Thereby, the hypothesis (3d) that *“The extent of corruption will be higher, the lower the level of education.”* is confirmed and consistent with the research of Ahrend (2002), Ali and Isse (2003) or Glaeser and Saks (2006) who argue that corruption levels will be lower in more educated and literate societies.

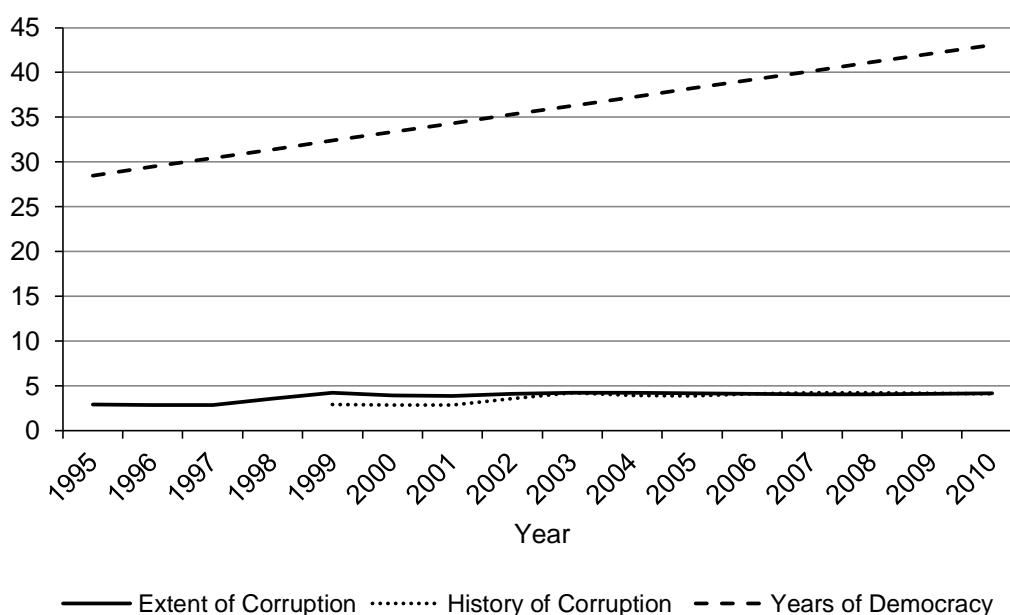
In sum, the findings of the non-European sample are rather in accordance with the assumed relationships between the extent of corruption and certain socio-cultural variables than in the European sample. This is especially the case in the religious indicators such as the percentage of Catholics and Muslims, the degree of a society’s ethno-linguistic fractionalization and the level of education. This again indicates that there are high regional disparities among certain countries, and especially regions, world-wide and that specific European indicators of the determinants of corruption exist. Yet, similarities are found in the variables percentage of Orthodox and Protestants, and a country’s degree of urbanization.

While a high percentage of Orthodox seems to foster corruption, high percentages of Protestant people and a high degree of urbanization lowers the extent of corrupt activities.

4.2.4 Historical Model of Corruption

The historical model of corruption includes three independent variables: a country's years of democracy, the communist past ("communist legacies") and a country's history of corruption. The following graphic illustrates the average development of the historical variables, compared to the average score of the extent of corruption in Europe. The variable communist past is a dummy variable and therefore illustrated by boxplots.

Figure 42: Extent of Corruption and Historical Variables across Time



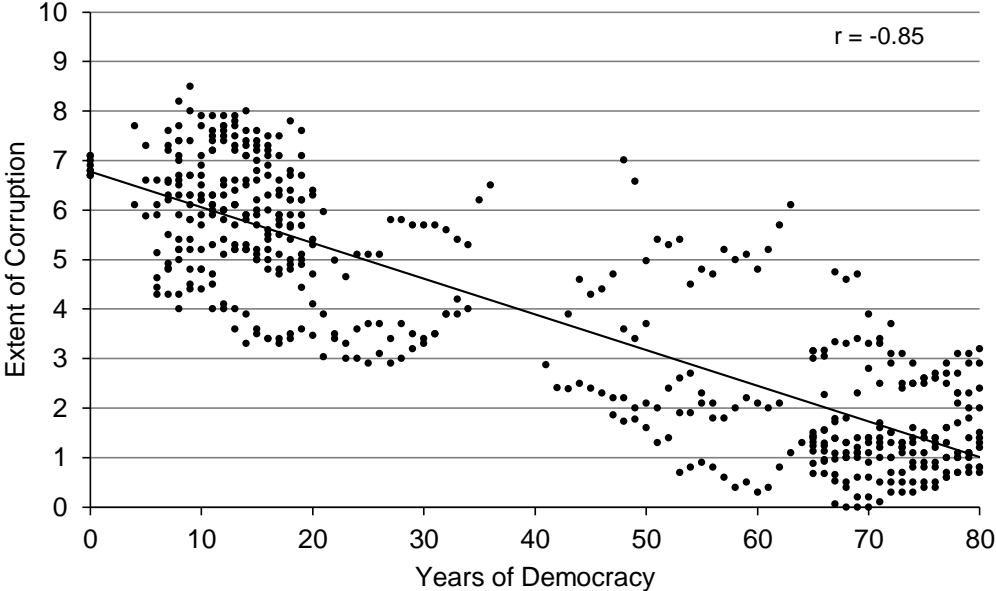
Years of Democracy

To measure a country's democratic history, I used the number of consecutive years since 1930 when the system had been democratic, as classified by (Beck *et al.*, 2001). This is adapted from Beck *et al.*'s variable "tensys", which just measured tenure of the system, whether democratic or authoritarian. Democracies are those with a 6 or higher on Beck *et al.*'s Executive Index of Electoral Competitiveness. I take the data from the Quality of Government Dataset (2012) (Quality of Government, 2012).

The average score of democratic years in Europe is 36. Georgia (15 years), Belarus (16 years) and Latvia (17 years) are comparatively young democracies in Europe. Particularly, Belgium, Denmark, Finland or France are with approximately 80 years the oldest

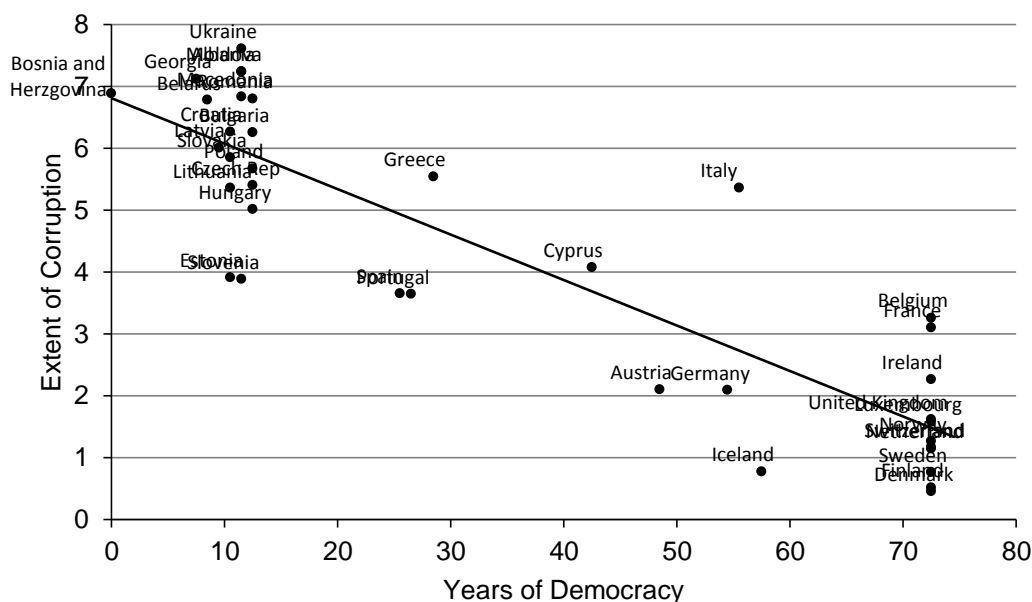
democracies in Europe. The regression line of the scatterplots indicates a negative relationship between the extent of corruption and years of democracy, suggesting that a high number of democratic years reduces the growth of corruption in certain countries. This is confirmed by a negative correlation coefficient of -0.85, suggesting a strong negative relationship between a country’s experience of democracy and the extent of corruption (figure 43 and 44). This initially confirms the assumption that “*The extent of corruption will be lower, if the country has a long democratic history.*” (hypothesis 4b).

Figure 43: Correlation between the Extent of Corruption and Years of Democracy



Note: Dependent Variable: Extent of Corruption: Corruption Perception Index transformed:
0= low corruption; 10=highest level of corruption.
Years of Democracy are measured by the number of consecutive years since 1930 when the system had been democratic.

Figure 44: Correlation between the Extent of Corruption and Years of Democracy across European Countries (Average)



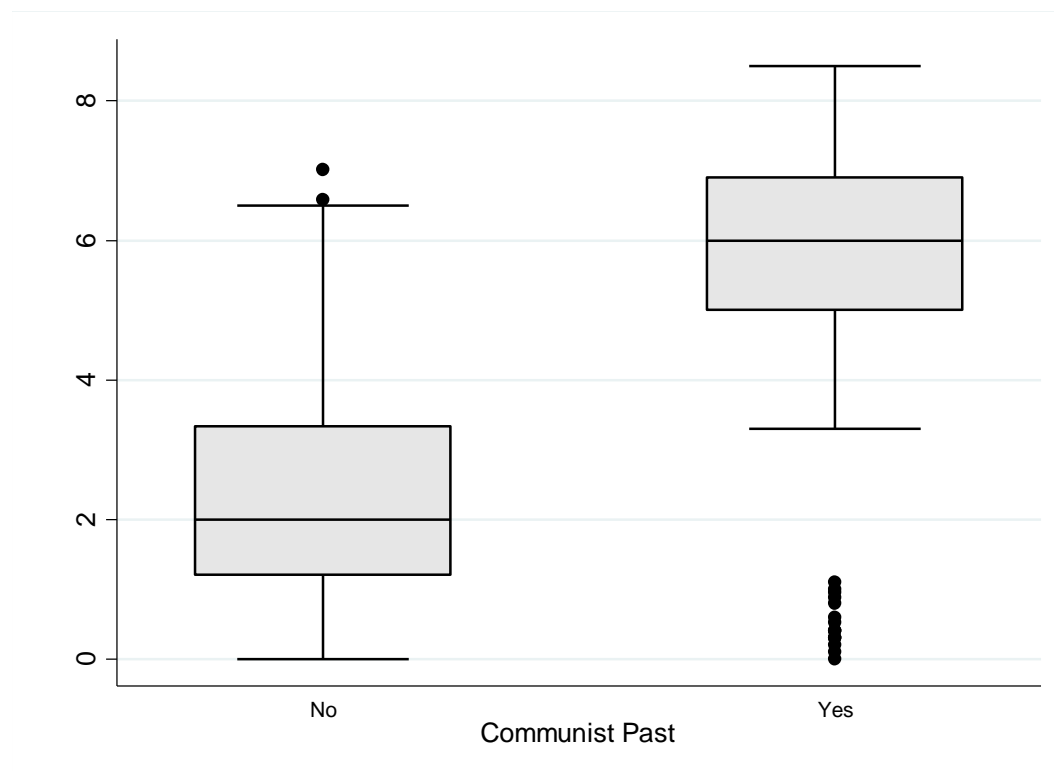
Note: Dependent Variable: Extent of Corruption: Corruption Perception Index transformed: 0= low corruption; 10=highest level of corruption. Years of Democracy are measured by the number of consecutive years since 1930 when the system had been democratic.

Communist Past

To measure the history of communist rules in a country, I use a dummy-variable (1= communist past; 0= no communist past).⁹⁴ I primarily collected data from the Worldmark Encyclopedia of the Nations. More than half of the European societies examined, 19 out of 37 countries, have a communist past. Countries with a post-communist past are Albania, Belarus, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Estonia, Finland, Georgia, Hungary, Latvia, Lithuania, Macedonia, Moldova, Poland, Romania, Slovakia, Slovenia and the Ukraine.

A correlation coefficient of 0.69 indicates a positive relationship between the extent of corruption and a society’s communist past, suggesting that a communist past may foster the extent of corruption in certain countries. Figure 45 illustrates that on average post-communist countries have higher levels of corruption than countries without a communist past. This complies with the assumed relationship that “The extent of corruption will be higher, if the country has a communist past.” (hypothesis 4c).

⁹⁴ Using dummy-variables does not present the best analysis approach, because it can be assumed that there are larger differences in the intensity of communist legacies between countries. However, currently, it is common practice in political science research (e.g. Pop-Eleches and Tucker (2011)).

Figure 45: Boxplots of the Extent of Corruption and Communist Past

Note: Dependent Variable: Extent of Corruption: Corruption Perception Index transformed: 0= low corruption; 10=highest level of corruption.
 Communist Past is measured by a dummy variable: 1= Communist Past; 0= no Communist Past.

History of Corruption

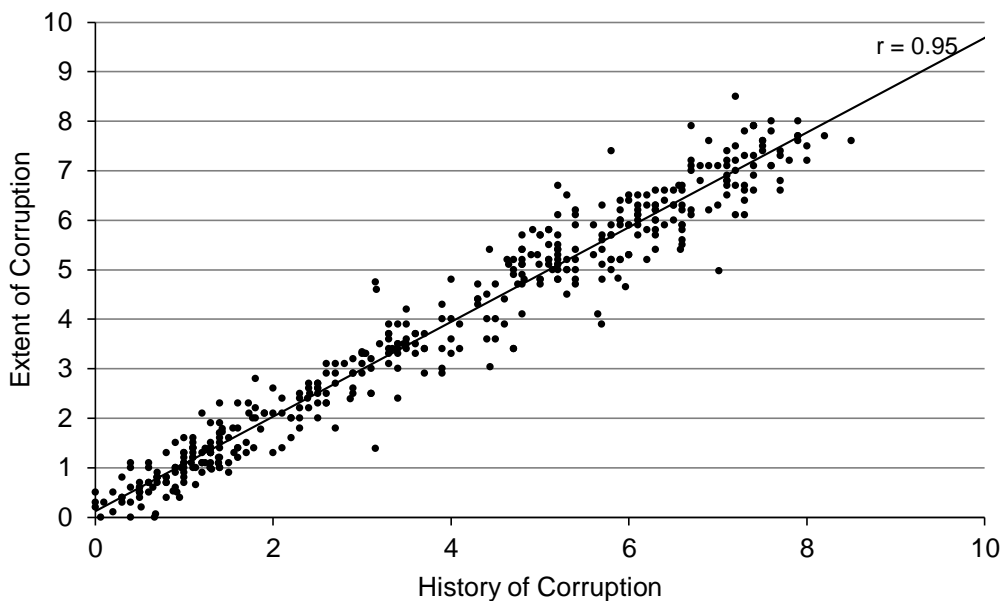
The variable history of corruption is measured by a 4-years lagged dependent variable⁹⁵, the transformed Corruption Perception Index (Corruption Perception Index, 2011). The 4-years-lag results from the fact that the other independent variables are lagged by 2-years and the “history of corruption” variable has to be lagged even further behind.

As expected, the regression line of the following scatterplot indicates a strong positive relationship between the extent of corruption and a country’s history of the past. The cases are very well distributed along the positive regression line. This is substantiated by the high correlation coefficient of 0.95 (figure 46 and 47). This initially confirms the assumed

⁹⁵ To reduce the problem of omitted variable bias, I included the variable “history of corruption” - as lagged dependent variable - as one of the explanatory variables. Achen (2002) argues that this fix can overcorrect, washing out the effect of other variables, especially when they trend in the same direction as the dependent variable. Beck and Katz (2011), however, argue that there is no purely statistical reason to avoid using a lagged dependent variable. It does not necessarily overpower other independent variables and, if it does, whether or not it should be included in the model is a theoretical question rather than a statistical one (see also Coppedge (2012)).

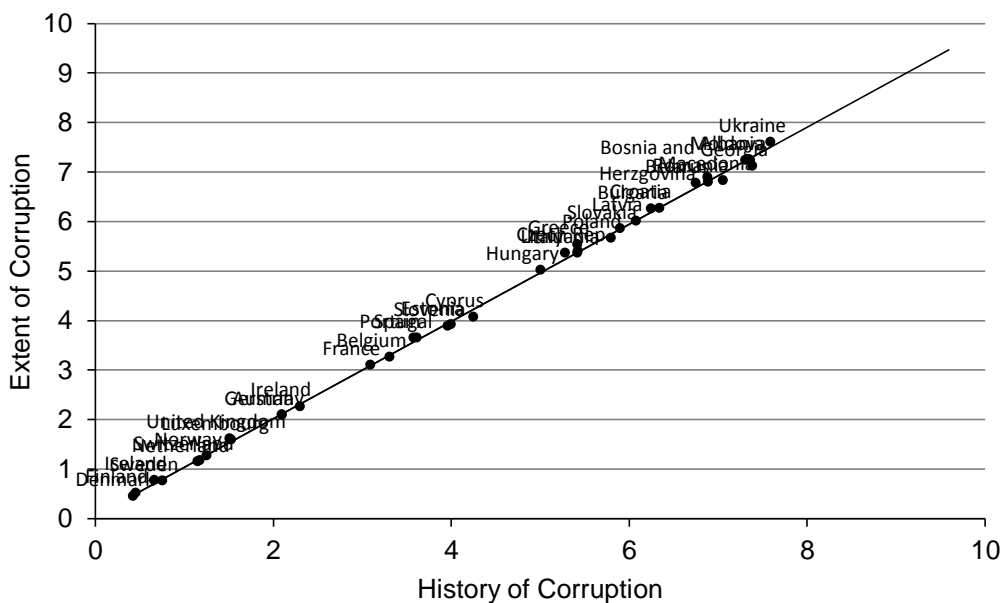
relationship “The extent of corruption will be higher, the higher the degree of corruption years before.” (hypothesis 4a).

Figure 46: Correlation between the Extent of Corruption and History of Corruption



Note: Dependent Variable: Extent of Corruption: Corruption Perception Index transformed: 0= low corruption; 10=highest level of corruption. The variable History of Corruption is measured by a 4-years-lagged dependent variable, the transformed Corruption Perception Index.

Figure 47: Correlation between the Extent of Corruption and History of Corruption across European Countries (Average)



Note: Dependent Variable: Extent of Corruption: Corruption Perception Index transformed:

0= low corruption; 10=highest level of corruption.

The variable History of Corruption is measured by a 4-years lagged dependent variable', the transformed Corruption Perception Index.

The following table reports the descriptive statistics of the historical variables used in the analysis. It illustrates the number of observations, means, standard deviations, and minimums and maximums of used data. The number of observations arise from the time period (1995-2010) and the number of European countries. The data was mainly collected from the Worldmark Encyclopedia of the Nations, the Statistical Abstract of the World, the United Nations and Transparency International (see Appendix D).

Table 10: Historical Variables (1995-2010)

Variables	Observations	Mean	Standard Deviation	Min	Max
Years of Democracy	592	35.78	28.01	0	80
Communist Past	592	.51	.50	0	1
History of Corruption	366	3.86	2.39	0	8.5

Findings of the Historical Model of Corruption

In the following analysis, the findings of the historical model of corruption for the European sample are presented and subsequently compared with the results of the non-European sample. Due to comparison reasons, the historical variables are standardized to a scale of 0-1, except the dummy variables. Furthermore, the variables “years of democracy” and “communist past” also include a 2-years-time-lag. Similar to previous models, I also calculated the following historical model with 5- and 10-years lagged variables (see Appendix G.4). The dependent variable is the transformed Corruption Perception Index.

Table 11: Historical Model of Corruption

Variables	Dependent Variable: Extent of corruption			
	European Countries (1)	European Countries(2)	Non-European Countries(1)	Non-European Countries(2)
Years of Democracy	-0.07*** (0.02)	-0.55*** (0.01)	-0.00 (0.01)	-0.50*** (0.00)
Communist Past	0.00 (0.01)	0.04*** (0.00)	0.00 (0.00)	-0.00 (0.00415)
History of Corruption	0.82*** (0.04)		0.96*** (0.02)	
Constant	0.09*** (0.03)	0.65*** (0.01)	0.02 (0.01)	0.79*** (0.00)
Observations	368	478	394	516
R-squared	0.92	0.73	0.94	0.46
Number of Countries	37	37	41	41

Note: Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

Dependent Variable: "Extent of Corruption" (Corruption Perception Index transformed); 0= low corruption; 10= highest level of corruption

Findings of the European Sample

The historical model of corruption (model 1) includes 37 European countries and 368 observations (see table 11). The table illustrates that a country's years of democracy and the history of corruption are significant and hold great power of explanatory of corruption. However, contrary to the expectations, the variable communist past is not significant. Overall, the explained variance of the model (r^2) is very high with 92%, meaning that over 90% of the extent of corruption in Europe can be explained by these historical factors.

As suggested by the preliminary correlation coefficient of -0.85, there is a negative relationship between a country's experience of democracy and the extent of corruption. This is confirmed by the coefficient of -0.07 and corresponds to hypothesis 4b that "*The extent of corruption will be lower, if the country has a long democratic history.*" That endorses the research of Treisman (2000), Blake and Martin (2006) and Pellegrini and Gerlagh (2008). For instance, Treisman (2000) observes a significant impact of the distant past on the extent of corruption and illustrates that a long duration of democracies seems to be necessary to significantly reduce corruption levels.⁹⁶

⁹⁶ To measure a country's experience of democracy in an additional way, I use Gerring *et al.* (2012)'s variable "stock of democracy" that measures a country's historically accumulated experience with democracy from

Model 1 indicates that a country's communist past has no impact on the extent of corruption, implying that the assumed relationship that *"The extent of corruption will be higher, if the country has a communist past."* (hypothesis 4c) has to be rejected. This finding initially contradicts previous studies of Herzfeld and Weiss (2003), Kostadinova (2012) or Skaaning (2009).

With regard to a country's history of corruption, the assumed relationship *"The extent of corruption will be higher, the higher the degree of corruption years before."* (hypothesis 4a) is confirmed. The findings confirm the arguments of Herzfeld and Weiss (2003), Kostadinova (2012) or Skaaning (2009) who in particular ascribe corruption as cultural heritage and suggest that corruptive behavior is path-dependent.

However, the coefficient of the extent of corruption and the history of corruption is very high (0.82) and absorbs a lot of explanatory power of the overall model. For this reason, the model is also calculated without the variable history of corruption (Europe 2). It demonstrates that the explained variance of the model (r^2) decreases to 73% and that the variable communist past has also a significant influence on the extent of corruption. The coefficient is 0.04, suggesting that a country's communist past fosters the growth of corruption levels. This corresponds to the preliminary correlation coefficient and complies with the assumed relationship that *"The extent of corruption will be higher, if the country has a communist past."* (hypothesis 4c). This finding confirms analyses of Sandholtz and Taagepera (2005) and Kostadinova (2012) that have shown similar results.

Findings of the Non-European Sample

Comparing the results of the European sample with the non-European sample, it again clearly demonstrates that there are differences (see table 11). Model 1 includes 41 countries and 394 observations. The explained variance of the model (r^2) is 94% and with that slightly lower than in the European sample ($r^2=0.92$). Contrary to the European model, a country's duration of democracy has no influence on corruption, implying that hypothesis 4b that *"The extent of corruption will be lower, if the country has a long democratic history."* cannot be confirmed. Therefore, this is inconsistent with the studies of Paldam (2002, p. 238) who even speak of "cultural determinism" referring to corruption, Herzfeld and Weiss (2003) or Kostadinova (2012). Similar to the European sample, there is no relationship between the extent of corruption and a country's communist past. That implies that hypothesis 4c that *"The extent of corruption will be higher, if the country has a communist past."* (hypothesis 4c)

1900 to the observation year. It is constructed on the Polity 2 score from the Polity IV dataset. Both variables "years of democracy" and "stock of democracy" are highly correlated ($r=0.87$). I additionally calculated the models with Gerring's variable and have found results that also confirm hypothesis 4b that *"The extent of corruption will be lower, if the country has a long democratic history."*

has also be rejected for the non-European sample. As in the European sample, the variable a country's history of corruption has a strong impact on a country's extent of corruption. The assumed relationship *"The extent of corruption will be higher, the higher the degree of corruption years before."* (hypothesis 4a) is therefore confirmed and also consistent with the arguments of Herzfeld and Weiss (2003), Kostadinova (2012) and Skaaning (2009). The coefficient is even higher with 0.96 than in the European sample (0.82) and also absorbs a lot of explanatory power of the overall historical model. That is why I also run a second model with the non-European sample indicating that the variable years of democracy has a significant negative influence on the extent of corruption. The coefficient is -0.50, implying that a long democratic history hinders the growth of a country's corruption extent. As in the European model (1 and 2) hypothesis 4b that *"The extent of corruption will be lower, if the country has a long democratic history."* can be confirmed. However, that is the only variable in the second non-European model that has any influence on the extent of corruption. As a result, the explained variance of the model (r^2) decreases to 47%, compared to the European model (2) with an explained variance of 73% that is much lower.

To conclude, a comparison of the historical models of the European and the non-European sample also illustrates, that there are some distinctions regarding the historical explanatory factors of corruption. This is especially the case in the variables years of democracy and communist past. Both samples are similar in the effects of the indicator history of corruption that strongly fosters the growth of a country's extent of corruption.

4.2.5 European-Specific Model of Corruption

The next analytic step is the comprehension of all significant variables of the four models (economic, political, socio-cultural and historical) in one overall model. It has to be stressed, that this entails the risk of an over-identification or over-interpretation of the model. The following table (table 12) illustrates which factors maintain their explanatory power, by controlling for additional variables, in the explanation of corruption for both samples the European and the non-European. Moreover, I have also run random- and fixed effects models (see Appendix L and M).

Table 12: Overall Model of Corruption

Variables	Dependent Variable: Extent of Corruption	
	European Countries	Non-European Countries
Rate of Inflation	0.05** (0.02)	0.04* (0.02)
Unemployment Rate	-0.00 (0.03)	0.03** (0.01)

EU-Membership	-0.02*** (0.00)	
WTO-Membership	-0.00 (0.01)	0.00 (0.00)
OECD-Membership	0.03*** (0.01)	-0.00 (0.00)
Degree of Democracy	-0.14** (0.06)	-0.05*** (0.01)
Anti-Corruption Policy	0.01* (0.00)	
Degree of Government Centralization	0.01 (0.00)	-0.00 (0.01)
Degree of Political Competition		-0.01 (0.02)
Degree of Public Spending Ratio		-0.02 (0.02)
Women in Parliaments	-0.00** (0.00)	-0.00 (0.00)
Percentage of Catholics	0.01 (0.01)	0.04*** (0.01)
Percentage of Orthodox	0.05*** (0.01)	0.12** (0.04)
Percentage of Protestants	-0.04** (0.02)	-0.00 (0.02)
Percentage of Muslims		0.00 (0.00)
Degree of Ethno-linguistic Fractionalization		0.01* (0.01)
Degree of Urbanization	-0.01 (0.03)	-0.07*** (0.02)
Years of Democracy	-0.08*** (0.02)	
History of Corruption	0.64*** (0.06)	0.83*** (0.03)
Constant	0.27*** (0.05)	0.11*** (0.03)
Observations	365	318
R-squared	0.94	0.95
Number of Countries	37	40

Note: Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

Dependent Variable: "Extent of Corruption" (Corruption Perception Index transformed); 0= low corruption; 10= highest level of corruption

Findings of the European Sample

The European model of corruption includes 37 European countries and 365 observations (see table 12). Controlling for a wide range of different variables, the table illustrates that a high number of variables is still significant. These factors include a country's rate of inflation, EU-membership, OECD-membership, degree of democracy, anti-corruption policy, the percentage of women in parliaments, Orthodoxy, Protestantism, years of democracy and a society's history of corruption. However, the variables a country's unemployment rate, WTO-membership, the degree of government centralization, Catholicism and urbanization are not significant any more. Overall, the explained variance of the model (r^2) is 0.94, meaning that over 90% of the extent of corruption in Europe can be explained by economic, political, socio-cultural and historical factors. Calculating the model without the variable "history of corruption", the explained variance decreases to 89% (see Appendix J). That is still very high and a great indicator for the robustness of the results.

In the European model, the variable rate of inflation is still significant. Compared to the economic model (0.37), the correlation coefficient is slightly lower with 0.05. This implies that hypothesis (1a) that *"The extent of corruption will be higher, the higher the level of inflation"* is again confirmed. As a result, I conclude that the rate of inflation, considered as a proxy for a country's economic development, influences the extent of corruption in European states.

Yet, hypothesis 1b – *"The extent of corruption will be higher, the higher the rate of unemployment"* – has to be rejected in the overall model. Controlling for other variables, the unemployment rate is not significant. This contradicts the findings of Goel and Rich (1989), Sung (2004) and Mocan (2008).

Regarding the variable international integration, the EU- and OECD-membership are still significant. However, in contrast to the economic model the relationship between a country's corruption level and being a member in the OECD is positive, implying that the membership seem to foster the growth of corruption. That confirms the alternative hypothesis, that *"The extent of corruption will be higher, if the country is a member state of the OECD."* and contradicts previous research such as of Sandholtz and Koetzle (2000) and Sandholtz and Gray (2003). The model also demonstrates that there is no relationship between levels of corruption and WTO-membership anymore. That implies that hypothesis (1d2) – *"The extent of corruption will be lower, if the country is a member state of the WTO."* – has to be rejected. As a result, hypothesis (1d) that *"The extent of corruption will be higher, the lower the degree*

of integration in the world economy.” can only be confirmed for the EU-membership. That strongly supports the findings of (Kostadinova, 2012).

In this overall model, the degree of democracy is still one of the most important contributors to the decrease in a country's corruption levels. The coefficient is with -0.14 lower than in the previous analysis (-0.68), but confirms again the hypotheses (2a) *“The extent of corruption will be higher, the lower the degree of democracy”*. This result assists the assumption, in particular, of Hill (2003), Shah (2007), Billger and Goel (2009) and Saha *et al.* (2009).

As in the political model, the relationship between the extent of corruption and anti-corruption policy is significantly positive, implying that a country's anti-corruption efforts may lead to higher levels of corruption. Even if the relationship between both variables is weaker, this confirms the alternative hypothesis *“The extent of corruption will be higher, if the country has an anti-corruption policy.”* and is therefore consistent with the research of Larmour (2007), Anechiarico and Jacobs (1996) and Gong and Wu (2012).

According to the relationship between the extent of corruption and the degree of government centralization, the hypothesis (2c): *“The extent of corruption will be higher, the higher the degree of government centralization”* has to be rejected. In contrast to the political model, in the overall model is no significant relationship between both variables. This result contradicts the studies of Shleifer and Vishny (1993), Paldam (2002) and Strøm *et al.* (2003) and rather supports the statistical analysis of Pellegrini and Gerlagh (2008) who did not find a significant relationship between corruption levels and government decentralization.

Similar to the political model, the relationship between the extent of corruption and the percentage of women in parliaments is significantly negative. As a result, hypothesis (2f), *“The extent of corruption will be lower, the higher the percentage of women in parliament.”* is again confirmed and indicates that a higher percentage of women in parliaments may hinder the growth of levels of corruption in European countries. Moreover, the coefficients are in both models the political and overall, almost identical.

With regard to religion, the relationship between the percentage of Catholics and the extent of corruption is not significant anymore. This implies that both hypotheses that *“The extent of corruption will be higher, the larger the proportion of Catholics in a country's population”* (3a1) and the alternative hypothesis, that is confirmed by the socio-cultural model are rejected. However, similar to previous findings, the percentage of Orthodox in a society has still a significant influence on the degree of corruption in the overall model. Therefore, hypothesis 3a2, that *“The extent of corruption will be higher, the larger the proportion of Orthodox in a country's population”* is confirmed. Similar to the socio-cultural model, the relationship between the extent of corruption and the percentage of Protestants is negative, suggesting that a high percentage of Protestants in a society hinders the growth of

corruption. This confirms the hypothesis 3a3 that the *“The extent of corruption will be higher, the smaller the proportion of Protestants in a country’s population.”*

Contrary to the previous analysis, that indicates a negative relationship between corruption and the degree of urbanization, this variable has no significant effect anymore. Consequently, the assumed relationship, implying that *“The extent of corruption will be higher, the higher the degree of urbanization”* (hypothesis 3c) has to be rejected.

However, the variables years of democracy and history of corruption still have a strong impact on the extent of corruption. Similar to the historical model, there is a negative relationship between a country’s experience of democracy and the extent of corruption. The nexus in the overall model (0.08) is even slightly stronger than in the previous model (-0.07). As a result, by controlling for economic, political, socio-cultural and historical variables, hypothesis 4b that *“The extent of corruption will be lower, if the country has a long democratic history”* is confirmed again.

As expected, the variable a country’s history of corruption is still the most important contributor to the growth of a country’s corruption level. However, the coefficient is 0.64 and therefore lower than in the historical model (0.82). Yet, the assumed relationship (hypothesis 4a) *“The extent of corruption will be higher, the higher the degree of corruption years before”* is confirmed.

Findings of the Non-European Sample

Comparing the results of the European sample with the non-European sample, it clearly demonstrates that there are differences (table 12). The non-European model includes 40 countries and 318 observations.⁹⁷ The explained variance of the model (r^2) is 95% and with that slightly higher than in the European sample ($r^2=0.94$). Controlling for a wide range of different variables, the table illustrates that a high number of variables is still significant. These factors include a country’s rate of inflation, unemployment rate, a country’s degree of democracy, a society’s percentage of Catholics and Orthodoxy, the degree of a country’s ethno-linguistic fractionalization, urbanization and a society’s history of corruption. However, the variables WTO-membership, OECD-membership, degree of government centralization, degree of political competition, public spending ratio, women in parliaments, Protestantism and Islam are not significant any more.

Similar to the European model, the rate of inflation has still an influence on the extent of corruption, indicating that a high rate of inflation facilitates the growth of corruption levels. Compared to the European sample, the coefficient is still somewhat higher by 0.04, but it is much weaker than in the economic non-European model (0.40). As in the European overall

⁹⁷ It is important to note that despite its significance in the previous socio-cultural model, the variable education has to be excluded because of multicollinearity.

model, there is no significant relationship between the extent of corruption and a country's WTO- and OECD-membership anymore. As a result, while controlling for political, socio-cultural and historical variables, a country's international integration does not affect the extent of corruption in non-European states. Similar to the European model, the degree of democracy is still significantly negative in the non-European sample. Yet, the relationship between both variables is with -0.05 weaker than in European states (-0.14), but it confirms again the hypotheses (2a) "*The extent of corruption will be higher, the lower the degree of democracy*". According to the relationship between the extent of corruption and government centralization, the hypothesis (2c): "*The extent of corruption will be higher, the higher the degree of government centralization*" has to be rejected in the non-European sample. In contrast to the previous political model, there is no significant relationship between both variables. This is similar to the European-specific model. Contrary to the political non-European model, the variable political competition has no significant impact on a country's extent of corruption. Consequently, hypothesis 2d ("*The extent of corruption will be higher, the lower the political competition in a political system*") and its alternative hypothesis, that is confirmed in the previous analysis and implies the opposite direction of relationship, are rejected. This also holds for the variable public spending ratio. Hypothesis 2e that "*The extent of corruption will be higher, the larger the degree of public spending ratio*", and the alternative hypothesis that "*The extent of corruption will be lower, the larger the degree of public spending ratio*" are rejected in the non-European sample. This result supports the findings of Husted (1999) and Montinola and Jackman (2002) who did not find a relationship between both variables. In contrast to the European overall model, the relationship between the extent of corruption and the percentage of women in parliaments is no significant any more, implying that hypothesis (2f) that "*The extent of corruption will be lower, the higher the percentage of women in parliaments*" is not confirmed. This finding contradicts the studies of a lot of researchers such as Swamy *et al.* (2001), Dollar *et al.* (2001) and Lambsdorff and Fink Hady (2006). Contrary to European states, the results of the non-European sample again confirm hypothesis (3a1) that "*The extent of corruption will be higher, the larger the proportion of Catholics in a country's population.*" The coefficient is 0.04 and supports the analyses of Treisman (2000) and La Porta *et al.* (1999). Similar to the European sample, hypothesis 3a2, that "*The extent of corruption will be higher, the larger the proportion of Orthodox in a country's population*" is still confirmed in this model. However, in contrast to the European sample, the relationship between the extent of corruption and the percentage of Protestants is not significant any more. In contrast to the preliminary model, the relationship between corruption and society's percentage of Muslims is also not significant anymore. Consequently, hypothesis 3a4 that "*The extent of corruption will be higher, the larger the proportion of Muslims in a country's population.*" is rejected. However, the findings

of the non-European sample referring to religious affiliations still confirm the general assumption that religion determines the extent of corruption in certain countries. The relationship between the degree of ethno-linguistic fractionalization and the extent of corruption is still significant. In contrast to the European model, the variable degree of urbanization still negatively influences the extent of corruption in the non-European sample. The coefficient is -0.07, confirming the alternative hypothesis that *“The extent of corruption will be lower, the higher the degree of urbanization”* and contradicts previous studies such as of Billger and Goel (2009) and Mocan (2008). As in European states, the variable a country’s history of corruption is still the most important contributor to the growth of a country’s corruption level. The coefficient is 0.83 and therefore even higher than in the European sample (0.64). Yet, the hypothesis 4a *“The extent of corruption will be higher, the higher the degree of corruption years before”* is in the non-European sample confirmed as well.

In sum, a comparison of the overall models of the European and non-European sample indicates that in both samples, the rate of inflation, Orthodoxy and a country’s history of corruption enhance corruption, whereas the degree of democracy significantly decreases corruption levels. The variables WTO-membership and the degree of government centralization are not significant in both samples. In all other variables, Europe and the non-European countries are different from each other. These variables include a country’s unemployment rate, OECD-membership, anti-corruption policy, political competition, public spending ratio, the percentage of women in parliaments, Catholics, Protestants, Muslims, the degree of ethno-linguistic fractionalization, degree of urbanization and a country’s years of democracy. Consequently, I can conclude, that there is a model of the determinants of corruption that only applies and is unique to European countries. Moreover, these European-specific results also provide evidence for the importance of finding middle grounds between case-studies and highly aggregated quantitative analyses in order to better understand which area-specific factors are responsible for explaining the extent of corruption.

Robustness Check

I have implemented several approaches to check the robustness of my results through empirical investigation. These attempts include, in particular, re-estimating the models with the Control of Corruption Index (transformed) as a dependent variable as well. The findings are very similar to each other (Appendix I1 - I10). Moreover, where possible, I tested several alternative specifications of the independent variables such as a country’s international integration, the degree, and duration of democracy to reduce the danger of misspecification. The evidence has shown that the results are very similar, sometimes nearly identical. As supplementary test, I have also run a series of several OLS regression models and different

forms of panel analyses as fixed-effects models⁹⁸ aiming to eliminate unobserved constant factors, or random-effects models that take within- as well as between country variations into account (see Appendix K, L, M). Furthermore, I have run additional models with country and year-dummy variables to find out specific geographic and temporal characteristics within Europe. The panel analysis including country dummy variables makes clear, that country differences exist. However, the explained variance of the model is 0.97, indicating an overestimating of the model (see Appendix N). Unfortunately, the model including year-dummies was insignificant because of collinearity problems. Finally, the linear regression models with panel-corrected standard errors performed in the best way and the main findings of the models remain robust throughout the changes.

⁹⁸ A problem with fixed-effects models is that it excludes all countries without variation in the dependent variable. However, a Hausman test reveals that the unique errors are correlated with the independent variables, hence suggesting that fixed-effects models are preferable to random-effects models.

4.3 Analyzing Corruption at the Micro-Level

Multilevel models, also known as mixed models, hierarchical linear or nested models, present an appropriate analytical procedure for analyzing corruption at certain levels. They are considered as generalizations of linear models, but can also be extended to non-linear models. As standard regression models multilevel modeling aims to study the relationship between a dependent variable and a set of independent variables. Overall, the data structure is hierarchical, and the sample data are viewed as multistage sample from this hierarchical population (Hox, 2002).⁹⁹ By allowing for residual components at each level, multilevel modeling takes the existence of the hierarchical data structure into account. The most common types of multilevel modeling are random intercepts, random slopes, and random coefficient models.¹⁰⁰

There are a number of reasons for using multilevel models in the research of corruption. Primarily, multilevel analyses afford researchers the opportunity to use data with certain levels of analysis simultaneously and focus on questions of how individuals are affected by their context, and of how higher levels structures merge from lower level events. Moreover, they allow studying effects that vary by the units of observations, and estimate group level averages. Of particular note is that multilevel research allows researchers to measure and use variables directly at their natural and not at the aggregate level (e.g. Rabe-Hesketh, 2012).¹⁰¹ In this manner, multilevel modeling offers an advanced instrument to explain why individuals within and across countries vary in their corruptive behavior in certain European states.

⁹⁹ Hox (2002, p. 1) defines multilevel analysis as follows: "The general concept is that individuals interact with the social contexts to which they belong, meaning that individual persons are influenced by the social groups or contexts to which they belong, and that the properties of those groups are in turn influenced by the individuals who make up that group. Generally, the individuals and the social groups are conceptualized as a hierarchical system of individuals and groups, with individuals and groups defined at separate levels of this hierarchical system. Naturally, such systems can be observed at different hierarchical levels, and variables may be defined at each level. This leads to research into the interaction between variables characterizing individuals and variables characterizing groups, a kind of research that is now often referred to as 'multilevel research'."

¹⁰⁰ Random intercepts models imply that the intercepts are allowed to vary across different groups or countries, after controlling for covariates. Assuming that the slopes are fixed, it implies that the scores on the dependent variable for every individual observation are predicted by the intercept that varies across groups. In contrast, in random slope models, the slopes are allowed to vary across certain groups or countries, implying that the slopes are different across these groups and that intercepts are fixed across different contexts. Random coefficient models include both random intercepts and random slopes and allow both to vary across groups, meaning that they are different in different contexts (e.g. Steenbergen and Jones (2002); Jones (2008)).

¹⁰¹ See also Raudenbush and Bryk (2002) and Hox and Roberts (2011).

The usual formula of multilevel analysis reads as follows: $Y_{ij} = \beta_{0j} + \beta_{1j}(X_{1ij}) + \beta_{2j}(X_{2ij}) + r_{ij}$ (Level 1 regression equation). Referring to this formula, Y_{ij} is the dependent variable for an individual observation at Level 1, subscript i refers to individual cases, j refers to the group /country, X_{ij} indicates the level 1 independent variable, β_{0j} refers to the intercept of the dependent variable in country j at Level 2, β_{1j} refers to the slope for the relationship in country j (Level 2) between the independent and the dependent variable at Level 1; r_{ij} refers to the random errors of prediction for the Level 1 equation.

At the individual level, both the intercepts and slopes in the countries can be either fixed, meaning that all groups have the same values; non-randomly varying, implying that the intercepts and /or slopes are predictable from an independent variable at Level 2; or randomly varying, meaning that the intercepts and /or slopes are different in the different groups, and that each have their own overall mean and variance.

With regard to the Level 2 regression equation, the dependent variables are the intercepts and the slopes for the independent variables at Level 1 in the groups of Level 2. The formula used here are: $\beta_{0j} = \gamma_{00} + \gamma_{01}W_j + u_{0j}$ and $\beta_{1j} = \gamma_{10} + u_{1j}$.

In this context, γ_{00} refers to the overall intercept. This is the grand mean of the scores on the dependent variable across all the groups when all the predictors are equal to 0. W_j refers to the Level 2 predictor; γ_{01} corresponds to the overall regression coefficient, or the slope, between the dependent variable and the Level 2 predictor; u_{0j} refers to the random error component for the deviation of the intercept of a group from the overall intercept. Whereas γ_{10} corresponds to the overall regression coefficient, or the slope, between the dependent variable and the Level 1 predictor, u_{1j} refers to the error component for the slope, implying that the deviation of the group slopes from the overall slope.

I specify three multilevel models. At first, I run a random intercept model (table 15), including micro level variables such as an individual's socio-demographic characteristics, values, norms, and attitudes. Subsequently, I estimate a random intercept and random slope model (table 16) that integrates two random slopes, including the variables level of interpersonal trust and the justification of bribery, and three cross-level effects. Finally I estimate a model that additionally integrates the significant independent variables of the overall macro models for European states (table 17). In order to uncover specific European determinants of corruption, I also run all calculations with a non-European country sample.

Measuring Corruption at the Individual Level

To measure corruption at the individual level I use the item "Extent of political corruption" of the World Values Survey covering more than ninety percent of the world population. It includes data of almost a hundred countries in the world in five different rounds and allows

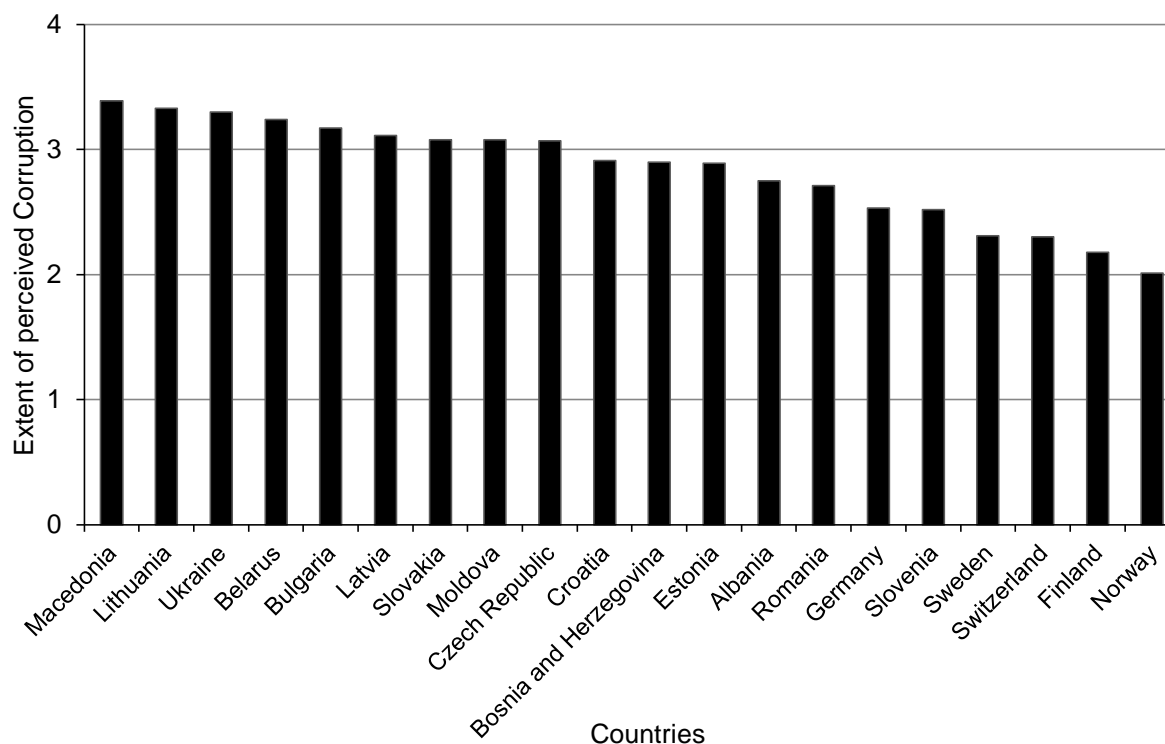
the comparison of numerous countries worldwide. Similar to the Corruption Perception Index, the item refers to the perception of corruption by individuals from multiple countries. For the following analyses, I use three waves from the World Values Survey: 1994-1999; 1999-2004 and 2005-2008. This is nearly equivalent to the time period that is used at the macro level (1995-2010). Between these years, polls were conducted in 20 European societies. These countries encompass Albania, Bosnia and Herzegovina, Bulgaria, Belarus, Croatia, Czech Republic, Estonia, Finland, Germany, Latvia, Lithuania, Macedonia, Moldova, Norway, Romania, Slovakia, Spain, Sweden, Switzerland, and the Ukraine. In this context, I focus on the maximum numbers of countries that have sufficient observations at both levels macro and micro level, for all the variables being considered. In this way, I acquire corruption estimates from almost 30.000 respondents in 20 countries.¹⁰² To clarify the specific determinants of corruption in European states and for comparative purposes, I also run multilevel models with a non-European sample that is similar to the sample used for the previous panel analyses.¹⁰³ It includes the following 20 countries: Azerbaijan, Argentina, Armenia, Australia, Bangladesh, Brazil, Chile, Colombia, Dominican Republic, El Salvador, India, Mexico, New Zealand, Peru, Russia, South Africa, South Korea, United States, Uruguay and Venezuela.

The dependent variable “extent of political corruption” is generated by asking “How widespread do you think bribe taking and corruption is in this country?” Responses were recorded on a four-point scale where “1” implies “no public officials engaged in it”; 2 = “a few are”; 3 = “most are” and 4 implies “almost all public officials are engaged in it.” (World Values Survey, 2013). It is important to underline that this WVS-item measures the extent of corruption that is perceived by interviewed people and not the actual level of corrupt activities. Therefore, using subjective perceptions while measuring culture dimensions and corruption are prone to bias. Consequently, I call the dependent variable “extent of perceived corruption” and results have to be interpreted cautiously.

The following illustrations (figure 48 and table 13) illustrate how European societies distribute over the extent of perceived corruption.

¹⁰² Contrary to the panel analyses at the macro level, countries such as Austria, Belgium, Cyprus, Georgia, Greece, Denmark, France, Hungary, Iceland, Italy, Ireland, Luxembourg, Netherlands, Poland, Portugal, Spain and the United Kingdom have to be excluded.

¹⁰³ For comparative reason, I use data from the World Values Survey. If I would take data from the European Social Survey or Eurobarometer, I could not adequately compare the European and non-European sample.

Figure 48: Extent of perceived Corruption in Europe

Similar to the extent of corruption at the macro level, figure 48 demonstrates that corruption varies widely across different European countries. The overall mean score on the four point scale in these 20 European countries is 2.89. The highest extent of perceived corruption are found in Macedonia (3.39), Lithuania (3.33), and the Ukraine (3.30), followed by Belarus (3.24), Bulgaria (3.17), Latvia (3.11), Slovakia and Moldova (3.08) and Czech Republic (3.07), whereas the countries with the lowest extent of corruption turn out to be, in particular, the Scandinavian countries Norway (2.01) and Finland (2.18), followed by Switzerland (2.30), and Sweden (2.31). Slovenia (2.52), Germany (2.53), Romania (2.71), Albania (2.75), Estonia (2.89), Bosnia and Herzegovina (2.90), and Croatia (2.91) score between 2.5 and 3.0. On the whole, European societies are characterized by diverging values of perceived corruption extent. Furthermore, table 13 gives an overall overview of the descriptive statistics of the dependent variable, including the number of observations, means, standard deviations, and minimums, maximums and coefficients of variance of the data.

Contrary to the analysis of the dependent variable on the macro level, the coefficient of variation of the European countries indicates that the variation of the perceived extent of corruption is very similar to the variation of the non-European states. The coefficient of variation of the European sample is 0.28 and of the non-European sample it is slightly higher with 0.29. The highest variation of the perceived extent of corruption is found in the “Western countries” including Australia, New Zealand and the United States (0.31).

Table 13: Extent of perceived Corruption in Europe

Countries	Observations	Mean (1994-2008)	Standard Deviation	Min	Max	Coefficient of Variation
Norway	1099	2.01	.67	1	4	
Finland	910	2.18	.84	1	4	
Switzerland	1111	2.30	.73	1	4	
Sweden	991	2.31	.76	1	4	
Slovenia	893	2.52	.74	1	4	
Germany	1955	2.53	.66	1	4	
Romania	1101	2.71	1.08	1	4	
Albania	846	2.75	.67	1	4	
Estonia	911	2.89	.67	1	4	
Bosnia and Herzegovina	1006	2.90	.71	1	4	
Croatia	1027	2.91	.64	1	4	
Czech Republic	1069	3.07	.81	1	4	
Slovakia	1009	3.08	.81	1	4	
Moldova	905	3.08	.75	1	4	
Latvia	1137	3.11	.63	1	4	
Bulgaria	792	3.17	.71	1	4	
Belarus	1962	3.24	.62	1	4	
Ukraine	2539	3.30	.68	1	4	
Lithuania	950	3.33	.68	1	4	
Macedonia	900	3.39	.75	1	4	
European Countries(Total)	28742	2.88	.82	1	4	0.28
Non-European Countries (Total)	33843	2.89	0.85	1	4	0.29
East Asia ¹⁰⁴	3108	3.14	0.71	1	4	0.22
South Asia ¹⁰⁵	3156	2.90	0.77	1	4	0.26
The Middle East ¹⁰⁶	3019	3.16	0.69	1	4	0.21

¹⁰⁴ Russia and South Korea are included in the East Asian sample.

¹⁰⁵ The sample of South Asia includes Bangladesh and India.

¹⁰⁶ The Middle East sample includes Azerbaijan and Armenia.

Latin America ¹⁰⁷	15875	3.00	0.86	1	4	0.28
African States ¹⁰⁸	2488	2.70	0.83	1	4	0.30
Western Countries ¹⁰⁹	5039	2.29	0.72	1	4	0.31

More precisely, it is again striking, that there are significant differences between West and East European states. These findings are very similar to the descriptive results of the macro level. The average score of the Western countries¹¹⁰ is 2.41. With this score, West Europe ranges at the bottom of corruption values in Europe. Contrary to this, the average corruption level of the Eastern societies¹¹¹ is 3.09 and thereby comparatively higher. A comparison of Northern¹¹² (2.63) and Southern Europe¹¹³ (2.89) show a similar picture. Notably, levels of corruption are not exceptionally lower in Southern Europe than in post-communist societies. The differences among the respondents in their estimation are still unexplained. According to cultural and economic approaches, it is assumed, that corruption is likely experienced differently depending on socio-demographic factors, social norms, values and attitudes. The following analysis takes into consideration that people are not interchangeable: they are individuals and different inside and therefore respond differently to the same external factors. Not everyone is obliged to pay bribes, for example, and not everyone believes is endemic (e.g. Elster, 1989; Banuri and Eckel, 2012).

These descriptive results presented in figure 48 and table 13 also illustrate the similarities to the levels of corruption at the macro level. More precisely, compared these corruption parameters at the individual level to the transformed CPI index, where on a 10 point scale, the mean score is 3.92 and the standard deviation is 2.33 in European states. Moreover, of particular importance in comparing the dependent variables of the macro and micro level is their high correlation. As already described in the third chapter about measuring corruption (chapter 3.3) the mean estimates of perceived corruption at the micro level correlate with estimates of corruption from the macro level indices such as the Corruption Perception

¹⁰⁷ Argentina, Brazil, Chile, Colombia, Dominican Republic, El Salvador, Mexico, Peru, Uruguay and Venezuela belong to Latin America.

¹⁰⁸ South Africa is included in the African state sample.

¹⁰⁹ To the Western country sample belong Australia, New Zealand and the United States.

¹¹⁰ The sample of Western Europe only includes Germany and Switzerland. As a result of the exclusion of a lot of Western countries such as Belgium, France or Luxembourg this sample is comparatively underrepresented. This only serves as an illustration.

¹¹¹ Belarus, Bulgaria, Czech Republic, Moldova, Romania, Slovakia, Slovenia and the Ukraine and belong to the sample of Eastern Europe.

¹¹² Northern Europe includes Estonia, Finland, Lithuania, Latvia, Norway and Sweden.

¹¹³ Albania, Bosnia and Herzegovina, Croatia and Macedonia and Slovenia belong to the sample of Southern Europe United Nations Statistics Division (2013).

Index. For instance, Atkinson and Seiferling (2006) have already demonstrated that the correlation between the extent of corruption and the Kaufmann, Kray Zoido-Lobaton Governance indicators (1998) is $r = -.81$. They reveal that these high correlations implies that average citizens and the business elites whose aggregated views comprise the country score are in broad agreement regarding the extent of corruption in certain countries. My analysis confirms these results. The correlation between the Corruption Perception Index (transformed) and the aggregated item "Extent of political corruption" of the World Values Survey is 0.84. The correlation between the Control of Corruption Index (transformed) shows a similarly high value of 0.82. In fact, the correlation of both levels, macro and micro, especially indicates the linkage between the country and the individual level offered by the bathtub model of corruption

4.4 Empirical Findings: The Impact of Socio-Demographic Characteristics, Values, Norms, and Attitudes on Corruption

The certain multilevel models of corruption include eight independent variables: gender, age, employment status, level of income, societal values, level of interpersonal trust, satisfaction with the financial situation and justification of bribery.¹¹⁴ The following table reports the overall summary of descriptive statistics of the individual-specific explanatory variables including socio-demographic factors, values, norms and attitudes used in the empirical analysis. It presents the number of observations, means, standard deviations, and minimums and maximums of the original data. The number of observations results from the time period (1995-2008) and the number of included European countries. The data was mainly collected from the World Values Survey (see Appendix D).

Table 14: Socio-Demographic Characteristics, Values, Norms, and Attitudes (1994-2008)

Variables	Observations	Mean	Standard Deviation	Min	Max
Socio-Demographic Characteristics					
Gender	59075	1.52	0.49	1	2
Age	59052	1955.58	17.15	1902	1991
Employment Status	55489	3.16	2.16	1	8
Level of Income	51304	128330.2	26.4143.6	-99	826040
Values and Norms					
Societal Values	53995	.47	.17	0.7	0.98
Level of Interpersonal Trust	56381	0.29	0.45	0	1
Attitudes					
Satisfaction with Financial Situation	56491	5.08	2.59	1	10
Justification of Bribery	56874	1.82	1.74	1	10

¹¹⁴ One can easily think of better variables or items to cover the explaining factors of the “perceived extent of corruption.” However, these were the best available data and items in the WVS and the only items that were measured throughout the three consecutive waves.

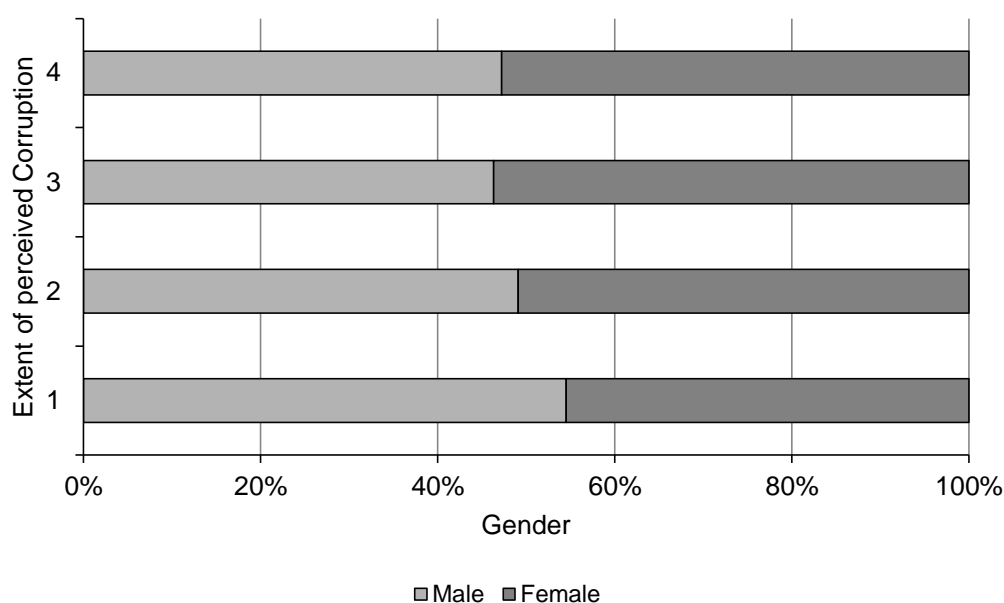
Socio-Demographic Characteristics

Gender

To measure the variable gender, I use the three waves of the World Values Survey, covering a period from 1994-2008. The categories are 1) Male and 2) Female.

A correlation coefficient of 0.02 illustrates a slightly positive relationship between the extent of perceived corruption and an individual's gender in European states. This result does not confirm the assumed corruption-gender-nexus that "*Gender influences the extent of perceived corruption.*" (hypothesis 5a). Yet, figure 49 slightly indicates that on average females perceive a higher extent of corruption than males.¹¹⁵

Figure 49: Extent of perceived Corruption and an Individual's Gender



Note: Dependent Variable: "Extent of perceived Corruption" is generated by asking "How widespread do you think bribe taking and corruption is in this country?" Responses were recorded on a four-point scale: "1" = "no public officials engaged in it"; 2 = "a few are"; 3 = "most are" and 4 = "almost all public officials are engaged in it."

Gender is measured by 1 = Male and 2 = Female

Age

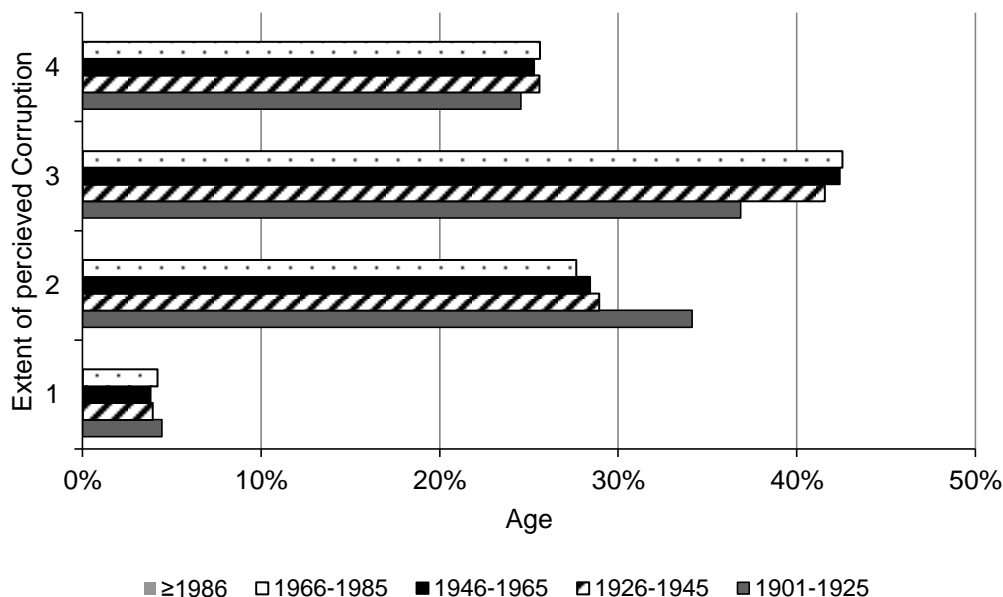
I take data on the variable age from the World Values Survey. I use the item "Year of Birth." (World Values Survey, 2013). Similar to the variable gender, the correlation coefficient is with 0.01 very low, indicating a weak positive relationship between the perceived extent of

¹¹⁵ These figures are also presented for the non-European countries (see appendix C).

corruption and the age of individuals. However, this does not correspond to hypothesis (5b) that *“Age influences the extent of perceived corruption.”*

The following graphic (figure 50) illustrates that most of the respondents, independently of age, perceive high levels of corruption in their country. Those people think that most public officials are engaged in corrupt activities. However, almost 35% of elderly people, born between 1901 and 1925, assume that only “a few” public officials behave corruptly.

Figure 50: Extent of perceived Corruption and an Individual’s Age



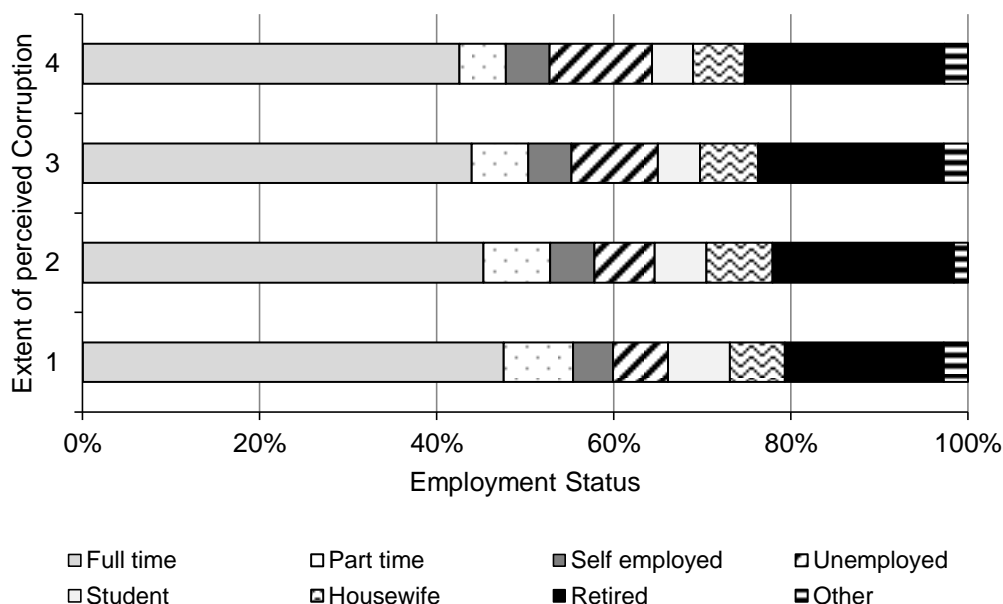
Note: Dependent Variable: “Extent of perceived Corruption” is generated by asking “How widespread do you think bribe taking and corruption is in this country?” Responses were recorded on a four-point scale: “1” = “no public officials engaged in it”; 2 = “a few are”; 3 = “most are” and 4 = “almost all public officials are engaged in it.”

The variable age is measured by “Year of Birth.”

Employment Status

To measure an individuals’ employment status I use data from the World Values Survey that includes the item: “Are you employed now or not? If yes: About how many hours a week? If more than one job: only for the main job.” The categories encompass, for example, “Full time”, “Part time”, “Self-employed”, “Retired”, “Housewife”, “Students” or “Unemployed” (World Values Survey, 2013). Yet, the correlation coefficient is, similar to the variables gender and age, also very weak with 0.04, implying that hypothesis (5c) *“Employment status influences the extent of perceived corruption.”* initially has to be rejected. The following graphic (figure 51) also illustrates that there is no significant relationship between a person’s employment status and the extent of perceived corruption.

Figure 51: Extent of perceived Corruption and an Individual’s Employment Status



Note: Dependent Variable: “Extent of perceived Corruption” is generated by asking “How widespread do you think bribe taking and corruption is in this country?” Responses were recorded on a four-point scale: “1” = “no public officials engaged in it”; 2 = “a few are”; 3 = “most are” and 4 = “almost all public officials are engaged in it.”

The item “Employment Status” is measured by the following categories: “Full time”, “Part time”, “Self-employed”, “Retired”, “Housewife”, “Students” or “Unemployed.”

Level of Income

To measure the income of a person, I take the following item from the World Values Survey: “Here is a scale of incomes. We would like to know in what group your household is, counting all wages, salaries, pensions and other incomes that come in. Just give the letter of the group your household falls into, before taxes and other deductions.” The categories encompass the deciles for society: 1= Lowest decile, 10= Highest decile (World Values Survey, 2013).

A correlation coefficient of -0.11 indicates a slightly negative relationship between the extent of perceived corruption and an individual’s level of income. Consequently, hypothesis (5d) that “Individual income influences the extent of perceived corruption.” is initially rejected. The data on level of income cannot be presented graphically because it is country-specific and therefore very complex.

Values and Norms

Societal Values

To measure societal values, I refer to emancipative values that are closely related to self-expression values. Welzel and Inglehart (2010) illustrated that their measure of self-expression values has an inherently emancipative impetus and use the terms self-expression and emancipative values interchangeably. This is substantiated by a high correlation of $r=.90$ (e.g. Welzel, 2007a). To obtain an estimate of the prevalence of emancipative values in a society, I use data from the World Values Survey. Referring to Welzel (2013) emancipative values include a combination of (1) a liberating orientation, an emphasis on freedom of choice, (2) an egalitarian qualification of this liberating orientations as equal freedom of choice, or equality of opportunities. In this context, Welzel (2013) has identified twelve items that are grouped into four domains of emancipatory orientations, covering an emphasis on autonomy, choice, equality and voice. While the emphases on autonomy and choice address more directly the liberating aspect of emancipation, the emphases on equality and voice address more directly the egalitarian aspect.

Autonomy: To measure people's emphasis on autonomy, three items are used that indicate whether respondents consider (a) "independence" and (b) "imagination" as desirable child qualities but do not consider (c) "obedience" as such a quality.

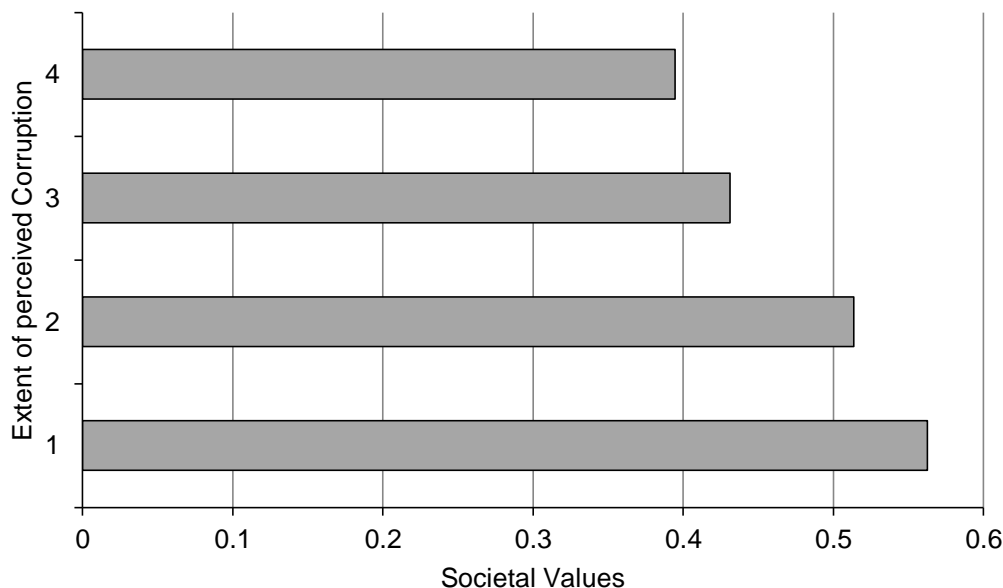
Choice: To measure how strongly people value freedom in their reproductive choices, three items are chosen that reveal how acceptable respondents find (a) "divorce," (b) "abortion," and (c) "homosexuality."

Equality: To measure a respondent's emphasis on gender equality as the most basic area of equality, Welzel uses three items that indicate how strongly people disagree with the statements that (a) "education is more important for a boy than a girl," (b) "when jobs are scarce, men should have priority over women to get a job", and (c) "men make better political leaders than women."

Voice: To measure how strongly the respondents value the voice of the people as a source of influence in their society, three items from Inglehart's (1977) materialism / postmaterialism batteries are used. These items indicate whether respondents assign first, second or no priority to the goals of (a) "protecting freedom of speech," (b) "giving people more say in important government decisions" and (c) "giving people more say about how things are done at their jobs and in their communities" (Welzel, 2013, p. 84).

A correlation coefficient of -0.20 suggests a slightly negative relationship between the extent of perceived corruption and an individual's emancipative values. This does not correspond with the hypothesis (5e) that *"The level of societal values influences the extent of perceived corruption."* Yet, figure 52 demonstrates that people with high societal values seem to perceive lower levels of corruption.

Figure 52: Extent of perceived Corruption and an Individual's Societal Values



Note: Dependent Variable: "Extent of perceived Corruption" is generated by asking "How widespread do you think bribe taking and corruption is in this country?" Responses were recorded on a four-point scale: "1" = "no public officials engaged in it"; 2 = "a few are"; 3 = "most are" and 4 = "almost all public officials are engaged in it."

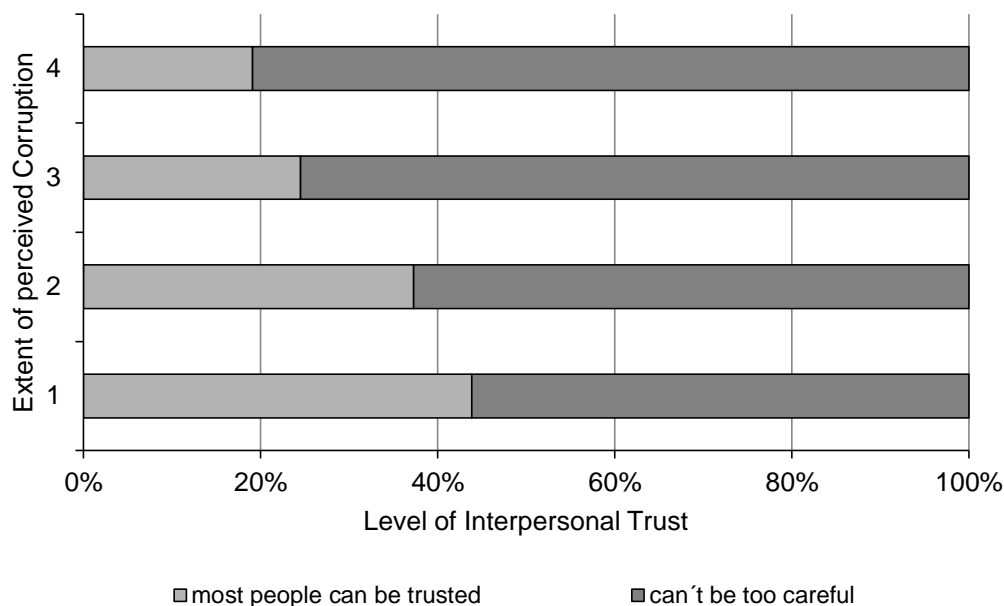
Societal Values are scaled from 0 ("Low societal values") to 1 ("High societal values").

Level of Interpersonal Trust

To measure an individual's level of interpersonal trust, I used the WVS item: "Generally speaking, would you say that most people can be trusted or that you need to be very careful in dealing with people?". The categories encompass: "1 Most people can be trusted; 0 Can't be too careful." (World Values Survey, 2013).

A correlation coefficient of -0.17 indicates a slightly negative relationship between the extent of perceived corruption and an individual's interpersonal trust. This does not initially confirm hypothesis (5f) implying that *"The level of trust in other people influences the extent of perceived corruption."* Yet, figure 53 illustrates that individuals with low levels of interpersonal trust tend to perceive higher levels of corruption.

Figure 53: Extent of perceived Corruption and an Individual’s Level of Interpersonal Trust



Note: Dependent Variable: “Extent of perceived Corruption” is generated by asking “How widespread do you think bribe taking and corruption is in this country?” Responses were recorded on a four-point scale: “1” = “no public officials engaged in it”; 2 = “a few are”; 3 = “most are” and 4 = “almost all public officials are engaged in it.”
 Level of Interpersonal Trust is scaled from 1 (“Most people can be trusted”) to 0 (“Can’t be too careful”).

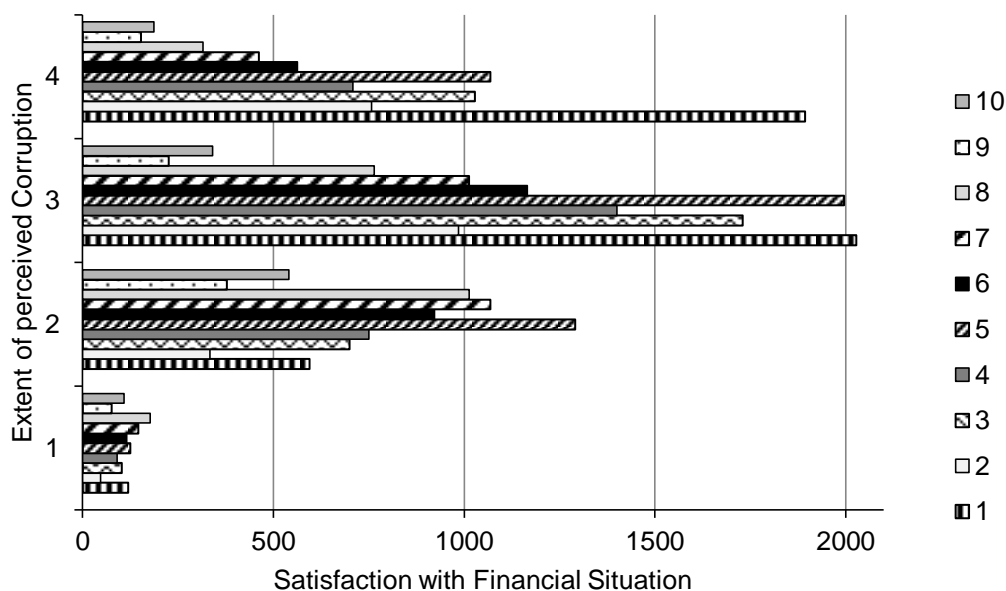
Attitudes

Satisfaction with Financial Situation

To measure the satisfaction with a financial situation, I also take data from the World Values Survey including the item: “How satisfied are you with the financial situation of your household? If '1' means you are completely dissatisfied on this scale, and '10' means you are completely satisfied, where would you put your satisfaction with your household's financial situation?” (World Values Survey, 2013).

A correlation coefficient of -0.27 suggests a slightly negative relationship between both variables, implying that people who are unsatisfied with their financial situation tend to be more willing to act illegally. This is also illustrated by figure 54. As a result, the following hypothesis (5g): “Financial satisfaction influences the extent of perceived corruption.” cannot be confirmed.

Figure 54: Extent of perceived Corruption and an Individual’s Satisfaction with the Financial Situation



Note: Dependent Variable: “Extent of perceived Corruption” is generated by asking “How widespread do you think bribe taking and corruption is in this country?” Responses were recorded on a four-point scale: “1” = “no public officials engaged in it”; 2 = “a few are”; 3 = “most are” and 4 = “almost all public officials are engaged in it.”

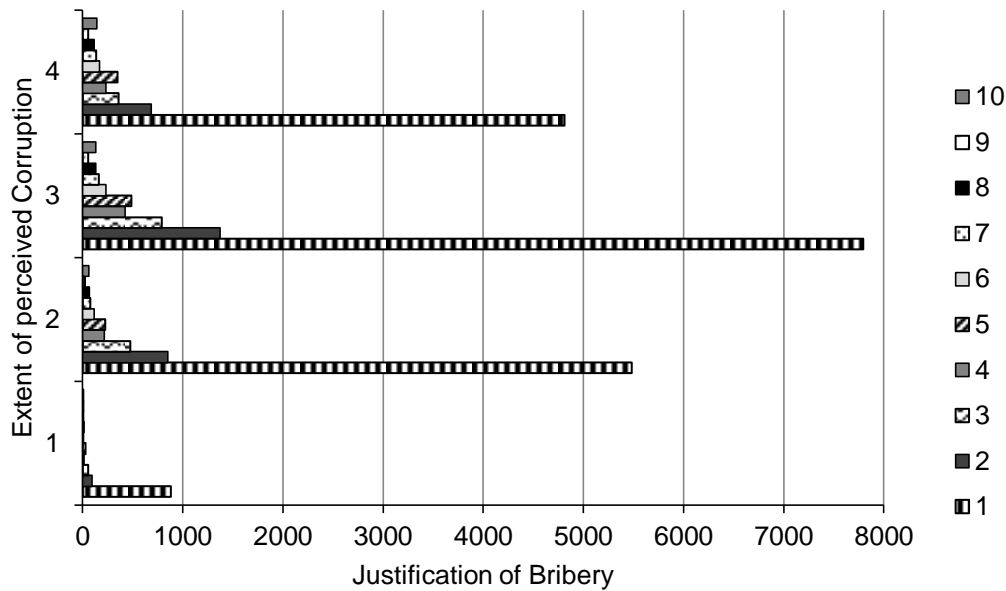
The item “Satisfaction with Financial Situation” is scaled from 1 (“Completely dissatisfied”) to 10 (“Completely satisfied”).

Justification of Bribery

To measure an individual’s justification of bribery, I use the following item from the World Values Survey: “Please tell me for each of the following statements whether you think it can always be justified, never be justified, or something in between, using this card. (Read out statements. Code one answer for each statement): Someone accepting a bribe in the course of their duties.” The item is scaled from 1 (“Never justifiable”) to 10 (“Always justifiable”) (World Values Survey, 2013).

A correlation coefficient of 0.08 indicates that there is no relationship between the perceived extent of corruption and an individual’s justification of bribery. That’s why the hypothesis (5h) that “*The level of the justification of bribery influences the extent of perceived corruption.*” has initially to be rejected.

Figure 55: Extent of perceived Corruption and an Individual’s Justification of Bribery



Note: Dependent Variable: “Extent of perceived Corruption” is generated by asking “How widespread do you think bribe taking and corruption is in this country?” Responses were recorded on a four-point scale: “1” = “no public officials engaged in it”; 2 = “a few are”; 3 = “most are” and 4 = “almost all public officials are engaged in it.”

The item “Justification of Bribery” is scaled from 1 (“Never justifiable”) to 10 (“Always justifiable”).

4.4.1 Random Intercept Model of Corruption

In the following considerations the results of the random intercept model for the European sample are presented and subsequently compared with the findings of the non-European sample as well. Random intercepts models imply that the intercepts are allowed to vary across different groups or countries. Assuming that the slopes are fixed, it implies that the scores on the dependent variable for every individual observation are predicted by the intercept that varies across groups (e.g. Steenbergen and Jones, 2002; Jones, 2008).

As is usual in multilevel models, the individual-level variables (except for dummies) are centered on country means, whereas the country-level variables are centered on the global mean. In summary, I standardize all variables into the same number format in order to establish comparability between variables that are originally measured in different schemes. Moreover, to adjust the estimation for the unequal probability of selection, sampling weights are assigned at one or both levels in the two-level model.¹¹⁶

¹¹⁶ Sample sizes vary between countries. This biases estimates when individual-level data are pooled, giving countries with the larger samples more weight. The bias is undesirable because differences in sample size exist for reasons (such as available funds) that are of no theoretical interest. To eliminate the bias, samples

The dependent variable at the micro level is the “the Extent of perceived Corruption”, measured by the item “extent of political corruption” of the World Values Survey (1994-2008).

Table 15: Random Intercept Model

Variables	Dependent Variable: Extent of perceived Corruption	
	European Countries	Non-European Countries
Individual Level		
Gender	0.03 (0.02)	0.04** (0.01)
Age	0.00* (0.00)	0.00* (0.00)
Employment Status	0.00 (0.00)	0.00 (0.00)
Level of Income	-1.67 (1.83)	-6.64** (2.41)
Societal Values	-0.60** (0.27)	-0.39 (0.28)
Level of Interpersonal Trust	-0.21*** (0.05)	-0.25*** (0.04)
Satisfaction with Financial Situation	-0.06*** (0.00)	-0.03*** (0.00)
Justification of Bribery	0.04*** (0.00)	0.02** (0.01)
Constant	-0.01 (0.05)	0.06 (0.08)
Observations	17.873	20.991
Number of Countries	20	20
Random-Effects Parameters		
Variance (cons)	1.19 (1.02)	7.11 (9.61)
Variance (Residual)	.59 (.08)	.63 (.10)

must be weighted. In this context, Welzel (2013) suggests two possibilities. One possibility is to weight each country sample for the proportion of the world population it represents. This approach is appropriate when the universe to which one infers is defined as the world population. The alternative is to weight country-samples to equal size. This approach is appropriate when country-level conditions are analyzed as a source of variation of how people act and think. Then, population size is irrelevant (Welzel (2013, p. 86)). I follow this approach throughout my multilevel analysis. Hence, in all pooled individual-level analyses, I weight country-samples to equal size without changing the overall number of cases.

Between Country-Variation of Dependent Variable	66%	82%
Within Country- Variation of Dependent Variable	34%	18%

Note: Robust Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

Dependent Variable: "Extent of perceived Corruption" is generated by asking "How widespread do you think bribe taking and corruption is in this country?"; Responses were recorded on a four-point scale: "1" = "no public officials engaged in it"; 2 = "a few are"; 3 = "most are" and 4 = "almost all public officials are engaged in it."

Individual-level variables (except for dummies) are centered on country means; Country-level variables are centered on the global mean; all variables are standardized into the same number format; Sampling weights are assigned at one or both levels in the two-level model.

Models calculated with STATA 12.1. Data cover all societies and respondents from three waves of World Values Survey (1994-2008).

Findings of the European Sample

The European random intercept model of corruption includes 20 European countries and 17,873 observations. The results of the model are reported in table 15. They show that an individual's age, societal values, level of interpersonal trust and attitudes such as an individual's satisfaction with financial situation and justification of bribery are significant in the explanation of the extent of perceived corruption at the micro level. The variables gender, employment status, and level of income do not indicate a significant relationship. Overall, estimates show, that there is evidence of variations in the intercepts. The between-country variance is estimated as 1.19 and the within-country variance is .59, implying that the total variance of the model is 1.78. Thus, the variance partition coefficient is 0.66, which indicates that 66% of the variance can be attributed to differences between countries and approximately 34% of the variances to differences between individuals. The Wald test indicates that the variables are jointly significant ($W = 94.50, p = .000$).

Yet, the coefficients of the significant variables do not show high values. For instance, as one moves up one unit on the variable satisfaction with the financial situation, the perceived extent of corruption is expected to decrease by around 0.06 points. This finding is similar to the result for the variables age and justification of bribery. Contrary to these results, the variables societal values and level of interpersonal trust show stronger relationships with the dependent variable. As already indicated by a correlation analysis (see figure 52 and 53) high levels of societal values and interpersonal trust seem to reduce the extent of perceived corruption. Furthermore, an individual's age and justification of bribery show positive relationships with the extent of perceived corruption, the variable satisfaction with the financial situation is negatively related to the dependent variable.

In terms of the variable gender, the findings contradict the studies of Swamy *et al.* (2001) and Dollar *et al.* (2001). Both of these have demonstrated a significant relationship between an individual's gender and levels of corruption, implying that women are less involved in corrupt transactions and are less likely to condone bribe-taking than men. Consequently, hypothesis 5a that "*Gender influences the extent of perceived corruption.*" is not confirmed and corresponds to the alternative hypothesis.

With regard to the positive relationship between an individual's age and the perception of corruption, my findings confirm previous research by Hirschi and Gottfredson (2000) and Torgler and Valev (2006a) that has demonstrated that age is an important indicator of illegal activities. They have argued that older people are less likely to view corruption as justifiable and illustrate that the age effect is robust across different social and cultural conditions. Therefore, my analysis confirms hypothesis 5b, implying that "*Age influences the extent of perceived corruption.*" Yet, the relationship between both variables is very weak.

Contrary to this result, hypothesis 5c, implying that an individual's "*Employment status influences the extent of perceived corruption.*" and hypothesis 5d, assuming that "*Individual income influences the extent of perceived corruption.*" are rejected.

The model also indicates a significantly negative relationship between societal values, measured by emancipative values, and the extent of perceived corruption, confirming hypothesis 5e that "*The level of societal values influences the extent of perceived corruption.*" Furthermore, it corroborates sociological approaches such as of Husted (1999), Getz and Volkema (2001), and Banuri and Eckel (2012) that generally argue that decisions about whether to engage in corrupt transactions are particularly influenced by cultural values and social norms. It also confirms the model of Welzel *et al.* (2003) indicating that societies with high self-expression values subsequently have lower corruption levels. Consequently, this implies that value changes antecede a decrease in corruption.

Additionally, the level of interpersonal trust shows a negative linkage with the extent of perceived corruption. This implies that people who have high levels of interpersonal trust show lower levels in the perception of corruption. This confirms hypothesis 5f that "*The level of trust in other people influences the extent of perceived corruption.*" This result initially confirms previous empirical research such as of Paldam and Svendsen (2001), Uslaner (2006) and You (2004) who have concluded that a strong negative relationship between corruption and interpersonal trust exists, implying that trusting societies have less people behaving corruptly.

An individual's satisfaction with their financial situation also indicates a negative relationship within the extent of perceived corruption. In other words, people who are unsatisfied with their financial situation perceive a higher extent of corruption. As a result, they may also tend to behave more corruptly. This confirms hypothesis 5g, assuming "*Financial satisfaction*

influences the extent of perceived corruption.” Moreover, it would corroborate the research of Torgler and Valev (2006a) that has provided evidence that people who are dissatisfied with their financial situation tend to be more willing to act illegally.

Hypothesis 5h, implying that *“The level of the justification of bribery influences the extent of perceived corruption.”* is also confirmed by the random intercept model. More precisely, I assume that people who are more tolerant towards corruption are more likely to behave corruptively as well. This confirms the analyses of Green (1991) and Moreno (2002) demonstrating that there are significant cross-national variations in the permissiveness of corruption, suggesting that some societies justify corrupt acts based on cultural values and norms. In this context, Moreno (2002) has demonstrated that the extent of corruption permissiveness is still higher in post-communist societies than in countries without history of communist rules.

Findings of the Non-European Sample

The non-European model includes 20 countries and 20.991 observations (see table 15). In contrast to the European sample, the variables an individual's gender and level of income show significant relationships in the non-European sample. However, in the non-European sample the relationship between societal values and the extent of perceived corruption is not significant. This implies that for the non-European sample hypothesis 5e that *“The level of societal values influences the extent of perceived corruption.”* is rejected.

Both models indicate similarities in the variables an individual's age, an individual's employment status, level of interpersonal trust, satisfaction with financial situation, and justification with bribery. While the variables gender, age, and justification of bribery show positive relationships with the extent of perceived corruption, an individual's income level, level of interpersonal trust and the satisfaction with the financial situation have a negative influence on the extent of perceived corruption.

Overall, the estimates show, that there is evidence of variations in the intercepts. The between-country variance is estimated as 7.11 and the within-country variance is estimated as .63. Thus, the total variance is 7.74 and the variance partition coefficient is .91, indicating that approximately 90% of the variance are attributed to differences across countries and only 10% to differences between individuals. The variance attributed to differences between countries is even higher than the variance in the European sample, 82% compared to 66% respectively. The Wald test indicates that the model is jointly significant ($W = 113.65$, $p = .000$).

In terms of the variable gender, hypothesis 5a that *“Gender influences the extent of perceived corruption.”* is confirmed in countries outside Europe. As a result, studies of Swamy *et al.* (2001), Dollar *et al.* (2001) and Hunt (2004) that have illustrated significant

relationships between the extent of perceived corruption and an individual's gender are confirmed by this model. Yet, the relationship is very weak (0.04). In more detail, the analysis shows that on average females perceive higher levels of corruption than men (see also figure C.2.1. in appendix C).

Contrary to the European sample, hypothesis 5d that "*Individual income influences the extent of perceived corruption.*" is confirmed as well. This finding corroborates the study of Torgler and Valev (2006a) who has indicated that people with a higher income are more likely to be asked for a bribe, as are those with a better education. For the non-European sample this result implies that people who have low levels of income and are unsatisfied with their financial situation perceive higher levels of corruption.

As in European states, interpersonal trust is the strongest predictor of the extent of perceived corruption, implying that hypothesis 5f that "*The level of trust in other people influences the extent of perceived corruption.*" is also confirmed for the non-European context. With a coefficient of -0.25, the relationship with corruption is even higher than in the European model (-0.21).

A comparison of both random intercept models based on the European and the non-European sample indicates that there are similarities in the variables an individual's age, employment status, interpersonal trust, satisfaction with financial situation, and justification with bribery. Differences exist in terms of the variables an individual's gender, level of income and societal values. Furthermore, the analysis reveals that in both models country-specific characteristics influence the extent of corruption rather than individual socio-demographic characteristics, values, norms, and attitudes.

4.4.2 Random Intercept and Random Slope Model of Corruption

A more integrated way to illustrate the results of the random intercept model is to specify models by estimating random intercepts and slopes. With this analysis, it is assumed, that cross-national differences exist as well, regarding to the regression coefficients of the independent variables that is so to say the slopes of the micro level. That implies that besides the fixed parameters of the independent variables, analogous to the random intercept, also variance components of the predictors are included in the model. The idea behind this is that particular factors, according to the country, have varying effects on the extent of perceived corruption (e.g. Hox, 2002; Steenbergen and Jones, 2002). The results of this analysis are displayed in the following table.

Table 16: Random Intercept and Random Slope Model

Variables	Dependent Variable: Extent of perceived Corruption	
	European Countries	Non-European Countries
Individual Level		
Gender	0.01 (0.01)	0.04*** (0.01)
Age	-0.00 (0.00)	0.00 (0.00)
Employment Status	0.00* (0.00)	0.00 (0.00)
Level of Income	-5.31 (6.70)	-5.43*** (-9.79)
Societal Values	-0.05 (0.13)	0.16 (0.14)
Level of Interpersonal Trust	-0.14*** (0.02)	-0.16*** (0.02)
Satisfaction with Financial Situation	-0.04*** (0.00)	-0.02*** (0.00)
Justification of Bribery	0.03*** (0.00)	0.01 (0.00)
Country Level		
Extent of Corruption (CPI (transformed))	0.09*** (0.01)	0.11*** (0.01)
Cross Level		
Interaction (Level of Interpersonal Trust x CPI (transformed))	0.04*** (0.01)	0.03*** (0.00)
Interaction (Satisfaction with Financial Situation x CPI (transformed))	0.00* (0.00)	0.00 (0.00)
Interaction (Justification of Bribery x CPI (transformed))	-0.00** (0.00)	-0.00* (0.00)
Constant	0.03 (0.04)	0.02 (0.03)
Observations	17.873	20.991
Number of Countries	20	20
Random-Effects Parameters		
Variance (Interpersonal Trust)	2.11	5.66

	(3.26)	(.) ¹¹⁷
Variance (Justification of Bribery)	4.65 (2.63)	3.43 (.)
Variance (cons)	1.13 (2.80)	8.21 (.)
Variance (Residual)	.55 (2.22)	0.57 (.)
Between Country-Variation of Dependent Variable	70%	95%
Within Country-Variation of Dependent Variable	30%	5%

Note: Robust Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

Dependent Variable: "Extent of perceived Corruption" is generated by asking "How widespread do you think bribe taking and corruption is in this country?"; Responses were recorded on a four-point scale: "1" = "no public officials engaged in it"; 2 = "a few are"; 3 = "most are" and 4 = "almost all public officials are engaged in it."

Individual-level variables (except for dummies) are centered on country means; Country-level variables are centered on the global mean; all variables are standardized into the same number format; Sampling weights are assigned at one or both levels in the two-level model.

Models calculated with STATA 12.1. Data cover all societies and respondents from three waves of World Values Survey (1994-2008).

Findings of the European Sample

As illustrated by figure 16, the model is estimated for 17.873 individuals within 20 European nations. The model integrates two slopes and three cross-level effects. The slopes include an individual's level of interpersonal trust and the justification of bribery. These variables are chosen, because of significant relationships in the random intercept model. Consequently, I assume that these variables vary between and within countries and have an impact on the extent of perceived corruption. Moreover, the model includes cross-level interactions of the variables level of interpersonal trust, an individual's satisfaction with the financial situation, justification of bribery and a country's extent of corruption, measured by the Corruption Perception Index (transformed). Compared to the random intercept model, the between-country variance increases to 1.13 and the within-country variance is estimated as .55, implying that the total variance of the model is 1.68. Thus, the variance partition coefficient is 0.67. This means that around 70% of the variance in the extent of perceived corruption is due to differences across European countries, the remaining 30% are attributable to differences between individuals. The Wald test indicates that the model is significant ($W = 1298.23, p = .000$).

¹¹⁷ Standard error calculations failed.

The results of the European random intercept and random slope model show that the variables level of interpersonal trust, satisfaction with the financial situation, and justification of bribery are still significant in the explanation of the extent of perceived corruption and confirm the respective hypotheses. While an individual's justification of bribery seem to foster the perception of corruption, the level of interpersonal trust and satisfaction with the financial situation reduce the level of perceived corruption. As expected, a country's extent of corruption is positively related to the extent of perceived corruption. More precisely, this implies that societies with high levels of corruption also show high levels of perceived corruption.

However, controlling for two slopes and three cross-level interactions, societal values do not remain robust in the model. This implies that societal values do not have an influence on the extent of perceived corruption across European states. Contrary to the random intercept model, the variable employment status has a positive influence on the extent of perceived corruption. Consequently, hypothesis 5c assuming that the *"Employment status influences the extent of perceived corruption."* is confirmed by this model. However, the relationship between both variables is very weak. The relationships between the dependent variable and the three cross-level interactions are also significant. While the cross-level effects between the level of interpersonal trust and the Corruption Perception Index (transformed) and between an individual's satisfaction with the financial situation and the Corruption Perception Index (transformed) show significantly positive relationships, the interaction of an individual's justification of bribery and the Corruption Perception Index (transformed) is significantly negative related to the extent of perceived corruption. Overall, the coefficients of the significant variables are not very high. Interpersonal trust has still the strongest impact on the dependent variable (-0.14).

In sum, the estimates show, that there is evidence of variations in the intercepts and random slopes. The two slopes for the effect of an individual's level of interpersonal trust and justification of bribery show varying effects on the dependent variable.

Findings of the Non-European Sample

The non-European model includes 20 countries and 20.991 observations (see table 16). The results of the non-European random intercept and random slope model show that the variables gender, an individual's level of income, level of interpersonal trust and satisfaction with the financial situation are still significant in the explanation of the extent of perceived corruption. The variables justification of bribery and an individual's age do not remain robust. Moreover, the extent of a country's extent of corruption and the cross-levels effects between the level of interpersonal trust and the Corruption Perception Index (transformed) and an individual's justification of bribery and the Corruption Perception Index (transformed) are also

significant. Contrary to the European model, the cross-level interaction between an individual's satisfaction with the financial situation and the Corruption Perception Index (transformed).

The between-country variance is estimated as 8.21 and the within-country variance is estimated as .57. Thus, the total variance is 8.78 and the variance partition coefficient raises to .93, indicating that almost 95% of the variance is attributed to differences between countries and approximately 5% to differences between individuals. These values are very different from the values of the European random intercept and slope model. Overall, the estimates demonstrate that there is evidence of variations in the intercepts and the random slope (interpersonal trust). The Wald test indicates that the variables are significant ($W = 4073.37, p = .000$).

Contrary to the European model an individual's gender and level of income are significant in explaining the extent of perceived corruption. This implies that hypothesis 5a "*Gender influences the extent of perceived corruption.*" and hypothesis 5d that "*Individual income influences the extent of perceived corruption.*" are confirmed by the non-European random intercept and slope model.

However, in contrast to the European model, an individual's employment status and justification of bribery are not significant in explaining the dependent variable. With regard to the variable employment status hypothesis 5c that "*Employment status influences the extent of perceived corruption*" is not confirmed and contradicts analyses of Torgler and Valev (2006a) and Mocan (2008) that have found significant relationships between both variables. In terms of an individual's justification of bribery hypothesis 5h that "*The level of the justification of bribery influences the extent of perceived corruption.*" is also rejected. This result does not confirm the analyses of Green (1991) and Moreno (2002) that have suggested that some societies justify corrupt acts based on cultural values and norms.

As a result, both samples that are based on the European and the non-European sample indicate similar results concerning the variables level of interpersonal trust, satisfaction with the financial situation, a country's extent of corruption and two cross-level interactions (level of interpersonal trust, justification of bribery, and a country's extent of corruption). Yet, there are differences in terms of the variables an individual's gender, employment status, level of income, the justification of bribery and the cross-level interaction between an individual's satisfaction with the financial situation and the Corruption Perception Index (transformed). Additionally, the comparison again illustrates that in both models country-specific characteristics influence the extent of perceived corruption stronger than individual characteristics, values, norms and attitudes. In the non-European sample the relationship between the extent of perceived corruption and country-specific characteristics is even stronger than in the European sample.

4.4.3 Multilevel Model of Corruption

Finally, I specify multilevel models in which individual-level and country-level effects are examined simultaneously. Additional to the fixed parameters of the individual level, the significant variables of the panel analyses are added to this multilevel model. For the European model these variables include a country's rate of inflation, EU-and OECD-membership, a country's degree of democracy, percentage of women in parliaments, a society's percentage of Orthodox and Protestants, a country's years of democracy and communist past.¹¹⁸ The slopes of an individual's level of interpersonal trust and justification of bribery are excluded.

Table 17 displays the results of multilevel model that examine the combined individual and country-level determination of the extent of perceived corruption.

Table 17: Multi-Level Model

Variables	Dependent Variable: Perceived Extent of Corruption	
	European Countries	Non-European Countries
Individual Level		
Gender	0.00 (0.01)	0.04*** (0.01)
Age	-0.00 (0.00)	0.00* (0.00)
Employment Status	0.00*** (0.00)	-0.00 (0.00)
Level of Income	-3.18** (1.47)	-5.98*** (1.27)
Societal Values	0.09 (0.14)	0.00 (0.06)
Level of Interpersonal Trust	-0.13*** (0.02)	-0.14*** (0.02)
Satisfaction with Financial Situation	-0.03*** (0.00)	-0.02*** (0.00)
Justification of Bribery	0.02***	0.00

¹¹⁸ The variable a country's anti-corruption policy that is also significant in the panel analysis model has to be excluded because of multicollinearity. Because of high collinearity between the variables history of corruption and communist past, a country's communist past is included.

	(0.00)	(0.00)
Country Level		
Extent of Corruption	0.06* (0.03)	0.14*** (0.02)
Rate of Inflation	6.32 (0.00)	-0.00 (0.00)
EU-Membership	0.11** (0.05)	
OECD-Membership	-0.01 (0.08)	-0.08 (0.16)
Degree of Democracy	0.06*** (0.01)	0.03 (0.04)
Women in Parliaments	-0.00 (0.01)	
Percentage of Orthodox	-0.00 (0.00)	-0.00 (0.00)
Percentage of Protestants	-0.00 (0.00)	0.00* (0.00)
Years of Democracy	-0.00 (0.00)	-0.00 (0.00)
Communist Past	0.00 (0.00)	
Unemployment Rate		0.00 (0.00)
Percentage of Catholics		0.00 (0.00)
Degree of Ethno-linguistic Fractionalization		-0.02 (0.16)
Degree of Urbanization		0.00 (0.00)
Constant	-0.08 (0.09)	-0.04 (0.05)
Observations	16.216	20.991
Number of Countries	19	20
Random-Effects Parameters		
Variance (cons)	1.86 (2.60)	9.58 (9.96)
Variance (Residual)	.54 (.08)	.56 (.10)

Between Country-Variation of Dependent Variable	77%	94%
Within Country-Variation of Dependent Variable	23%	6%

Note: Robust Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

Dependent Variable: "Extent of perceived Corruption" is generated by asking "How widespread do you think bribe taking and corruption is in this country?"; Responses were recorded on a four-point scale: "1" = "no public officials engaged in it"; 2 = "a few are"; 3 = "most are" and 4 = "almost all public officials are engaged in it."

Individual-level variables (except for dummies) are centered on country means; Country-level variables are centered on the global mean; all variables are standardized into the same number format; Sampling weights are assigned at one or both levels in the two-level model.

Models calculated with STATA 12.1. Data cover all societies and respondents from three waves of World Values Survey (1994-2008).

Findings of the European Sample

The final European multilevel of corruption includes data of 16,216 within 19 European countries. Overall, the Wald test indicates that the model is significant ($W = 39518.03$, $p = .000$). It demonstrates that the micro level variables an individual's employment status, level of income, level of interpersonal trust, and the attitudes satisfaction with the financial situation, and justification of bribery have a significant influence on the extent of perceived corruption and remain robust, compared to the European random intercept and random slope model. While an individual's employment status and justification of bribery are positively linked to the extent of perceived corruption, the variables level of an individual's income, interpersonal trust and satisfaction with the financial situation are negatively related to the dependent variable at the individual level. Socio-demographic characteristics such as an individual's gender and age, and societal values do not have an impact on the perception of corruption.

Furthermore, the macro level data a country's extent of corruption, EU-membership and a country's degree of democracy lead to a higher perception of corruption. Consequently, people living in countries that are democratic and / or are members of the European Union seem to perceive higher levels of corruption or are more critical towards the extent of corruption. Overall, the strongest relationship is indicated by interpersonal trust and EU-membership. However, a country's rate of inflation, OECD-membership, women's percentage in parliaments, Orthodoxy, Protestantism, years of democracy, and communist past do not have an influence on the extent of perceived corruption in European states.

The between-country variance of the model is 1.86 and the within-country variance is estimated as .54. Thus, the total variance is 2.40 and the variance partition coefficient is .77, indicating that almost 77% of the variance are attributed to differences between countries

and approximately 23% to differences between individuals. This again confirms that the roots of corruption lie on the country level rather than on the individual level.

All three models, the random intercept, the random intercept and random slope model, and the final European multilevel model, illustrate that interpersonal trust is the strongest predictor of corruption, implying that high levels of interpersonal trust decreases the perceived extent of corruption. These findings also corroborate the study of Moreno (2002) who has demonstrated a negative relationship between corruption permissiveness and support of democracy and interpersonal trust. Similarly, Manzetti and Wilson (2007) provided evidence that citizens living in countries with weak democratic institutions tend to support corrupt governments. As a result, these countries are likely to continue to maintain the status quo even though corruption is visible.

Findings of the Non-European Sample

For the non-European sample the included significant variables of the panel analyses are a country's rate of inflation, unemployment rate, degree of democracy, a society's percentage of Catholics and Orthodox, degree of ethno-linguistic fractionalization, degree of urbanization, and years of democracy. As illustrated by table 17, the non-European model includes 20 countries and 20.991 observations. The Wald test shows that the model is significant ($W = 1880.03$, $p = .000$).

A comparison of the results of the European sample with the non-European sample indicates a few differences. Contrary to the European model an individual's gender and age show significantly positive relationships in explaining the extent of perceived corruption at the individual level. This implies that in countries outside of Europe, females and younger (year of birth: ≥ 1986) and middle aged people, born between 1966 and 1985, seem to perceive higher levels of corruption (see also figure C.2.2 in appendix C). Both samples are similar in the following variables: an individual's level of income, level of interpersonal trust, satisfaction with the financial situation, and a country's extent of corruption. The significantly positive relationship between a country's extent of corruption and the extent of perceived corruption is with 0.14 even stronger than in the European sample (0.06). As in the European sample, high incomes, levels of interpersonal trust and an individual's satisfaction with the financial situation seem to decrease the extent of perceived corruption and therefore probably the extent of corruption. Contrary to the European sample, Protestantism shows also a weak positive relationship to the perception of corruption. This implies that individuals living in Protestant societies perceive higher levels of corruption or seem to be more critical towards the extent of corruption.

Overall, the between-country variance is estimated as 9.58 and the within-country variance is estimated as .56. Thus, the total variance is 10.14 and the variance partition coefficient is

.94, indicating that almost 95% of the variance is attributed to differences between countries and only 5% to differences between individuals. These values are very similar to the values of the random intercept and random slope model. Furthermore, the variance attributed to cross national differences country is again higher than in the European sample.

A comparison of the multilevel models based on European and the non-European states demonstrates that there are differences in terms of the socio-demographic variables an individual's gender, age, employment status, and justification of bribery at the micro level. At the macro level both models differentiate in the variables a country's EU-membership, degree of democracy and Protestantism.

Yet, in both samples the level of income, satisfaction with the financial situation, level of interpersonal trust and a country's extent of corruption affect an individual's perception of corruption. In both samples, societal values do not have an impact on the dependent variable. Consequently, higher levels of income, interpersonal trust and a higher satisfaction with the financial situation lead to lower levels in the perception of corruption. In this context, I assume that people who have high levels of interpersonal trust and are financially secure and do not depend on procuring money in addition to their monthly income can be expected to live in countries with low levels of corruption.

Summing up, the analysis illustrates that in all models country-specific characteristics influence the extent of corruption stronger than individual characteristics, values, norms and attitudes.

5 Summary and Discussion of Findings

To discover the factors that affect the extent of corruption in European states and to answer the research question: “*What causes corruption in European states over time and across and within countries?*” I have designed a model at the micro and macro level that allows for panel-analyses as well as cross- and within-national comparison, the so called “bathtub model of corruption”. The model takes several theoretical approaches, namely economic and sociological ones such as rational-choice, sociological and historical institutionalism, as well as cultural approaches into account. Following this model, the extent of corruption in Europe can be explained by a number of national and individual characteristics. The indicators for explaining the causes and variations of corruption at the country level are categorized into economic, political, socio-cultural and historical factors. Besides a number of country-specific attributes such as a country’s inflation rate, degree of democracy or women’s inclusion in parliaments, personal characteristics of individuals also have an impact on the extent of corruption – although to a lesser extent than country characteristics.

At the micro level, the indicators that are included in the analysis are categorized into socio-demographic characteristics such as gender and age, values and norms such as societal values, and attitudes such as an individual’s satisfaction with financial situation and justification of bribery. The conducted panel and multilevel analyses include certain models (e.g. economic, political, socio-cultural, historical, random intercept and random slope models) and a final European-specific model at the country level as well as a multilevel model considering both country and individual level. In the following chapter, these results are summarized and closely examined, compared with the findings of the non-European sample, and critically discussed.

5.1 Macro Models of Corruption

The empirical analysis performed at the macro-level follow a panel-data research design that enables researchers to run regression analyses that regard both the spatial and temporal dimension of data. The indicators for the explanation of the extent of corruption at the country level are categorized into economic, political, socio-cultural and historical factors. Economic factors include a country’s rate of inflation, unemployment rate, civil service wages and a country’s level of international integration. Political factors include a country’s degree of democracy, government centralization, political competition, public spending ratio and percentage of female members in parliaments. The socio-cultural factors capture a country’s dominant religion (Catholicism, Orthodox, Protestantism, Islam), the degree of ethno-

linguistic fractionalization, the degree of urbanization and a society's level of education. Assuming that corruption has historical roots and is therefore path-dependent, I have also included historical variables such as the durability of democracy, the communist past of a society, and a country's history of corruption in the analysis. After analyzing how these group-variables are related to corruption, I have included significant variables in an overall model presenting the factors that foster or hinder the growth of corruption for European states at the country level. I have continued my analysis in this way to avoid an over-identification and excessive burden of the collected data. For this reason, the high explained variance of the European-specific model ($r^2 = 0.94$), and non-European-specific model ($r^2 = 0.95$) (see table 12), have to be interpreted carefully.

To measure corruption at the country level, I used the Corruption Perception Index (transformed) from Transparency International that has been recognized as one of the most reliable indicators of corruption, as well the most widely-used (e.g. Rose-Ackerman, 1999; Treisman, 2000; Sandholtz and Koetzle, 2000). The CPI-scales are adjusted to a range of 0 to 10, where 0 indicates the lowest and 10 the highest level of corruption.

I am aware of the limitations of using these macro-indices and have discussed them comprehensively in chapter 3.3. On the basis of data availability, my investigation includes 37 European countries over a period of 16 years (1995-2010). To filter out the specific European determinants of corruption, I have run all calculations with an additional non-European sample of 41 countries. Through descriptive analyses, I have demonstrated that the extent of corruption varies widely across European countries and time and that there are significant differences between certain states. For instance, countries such as Sweden and the Netherlands received very low degrees of corruption by Transparency International, while states such as Romania or the Ukraine are still exposed with high scores of corruptive activities. Taking a closer look at the patterns of the development of corruption in recent years, it is striking that both new and established democracies in Europe show varying levels of corruption. Even though the extent of corruption is still higher in Central, Eastern and Southern Europe than in the Northern countries, corruption is not a problem that only young democracies are confronted with. Examining the patterns of corruption development over time, it is also striking that the extent of corruption in European states is continuously rising. While in 1995 the average score was 2.91 among European states, the level declined to 5.58 in 2010. As an expectation to this trend, corruption levels have significantly worsened in Western European countries such as Spain, Greece and Portugal. However, although corruption still seems to be part of social norms and traditions in much of Central and Eastern Europe, there are some countries in these regions such as Albania, Estonia, Latvia or Lithuania, where the degree of corruption has improved in recent years. As my study

reveals, this can be attributed to their integration in the European Union and improvements in their democracy scores.

By running several linear regression models with panel-corrected standard errors for estimating variance in four models, each including economic, political, socio-cultural, and historical variables at the macro level. I was able to illustrate that a variety of these factors appear as causes of corruption, obviously with varying emphases.

Based on the economic model of corruption, factors such as the rate of inflation, the unemployment rate, and international integration measured by the EU, WTO, and OECD-membership explain corruption in Europe. While the rate of inflation and unemployment foster the extent of corruption, membership in international organizations tends to hinder the growth of corruption in European states. In terms of the relationship between the extent of corruption and a country's rate of inflation, I have provided evidence that higher inflation is associated with higher levels of corruption in Europe. For instance, panel estimates of the economic model show that as one moves up one unit on the variable rate of inflation, the extent of corruption is expected to increase by around 0.37 points. Considering the variable rate of inflation as an adequate proxy for a country's economic development I can conclude that by improving their economic conditions countries are very likely to improve their corruption scores.

My findings also shed light on relationships that have rarely been studied before, such as the corruption-unemployment-nexus. While the relationship between the extent of corruption and the unemployment rate is significantly positive in the economic model, it does not remain robust in the overall European-specific model. However, with regard to the variable inflation and a country's economic development in general, I can conclude that societies that show low rates of unemployment and therefore better economic conditions tend to have lower incident rates of corruption. Additionally, the relationship between corruption and a country's unemployment rate is significantly positive in the non-European sample

Contrary to previous studies such as those of van Rijckeghem and Weder (2001) and van Veldhuizen (2012), my investigation shows that the relationship between the extent of corruption and the level of civil service wages is significant neither in the European nor in the non-European states. Therefore, according to my research, raising civil service wages does not seem an adequate tactic for reducing corruption (e.g. Gong and Wu, 2012). The utility function of civil servant pay in impeding corruption is more nuanced than it has been suggested, as improvement in salaries cannot effectively reduce corruption in a country where plenty of corruption opportunities exist (e.g. Gong and Wu, 2012.). However, an increase in wages in general implies an improvement of a country's economic development. This economic enhancement, in turn, would lead, in an indirect way, to reductions of a country's corruption levels.

Furthermore, my findings indicate, that especially after becoming a member in the European Union, the corruption scores of several countries such as Cyprus, the Czech Republic, Estonia, Latvia, Lithuania, Poland, Slovakia and Slovenia have significantly improved. A similar relationship is observed between the extent of corruption and a country's WTO-membership. Since their admission to the EU and WTO, most of the post-communist countries such as Albania, Croatia, Estonia, Georgia, Latvia, Lithuania and the Ukraine seem to experience fewer incidences of corruption as evidenced by lower corruption scores (Corruption Perception Index, 2011). It remains unclear whether membership in the EU over that in the WTO, or vice versa, is the more important contributor to the decrease of corruption after a country's admission to such an organization. However, international integration has been shown to tend to prevent corruption. These findings confirm my assumed hypothesis and further support the work of such researchers as Sandholtz and Gray (2003) and Kostadinova (2012). Following rational-choice and cultural approaches, I have revealed that on the one hand, a country's involvement in international organizations affects the extent of corruption in that country by offering economic incentives. On the other hand, international integration seems to affect a country's level of corruption in a normative way, by creating norms and values that stigmatize corrupt conducts. This also corroborates cultural approaches that assume that culture interacts with corruption through formal and informal institutions. More specifically, from a cultural perspective, corruption norms are conceived of as a specific form of social norms that dictate the extent to which individuals engage in, and expect others to engage in, corruption (e.g. Elster, 1989; Banuri and Eckel, 2012). In particular, countries that are more integrated into Western international networks are more exposed to both economic and normative pressures against corruption. They are more tied into international networks of exchange, communication, and organization. Thus, to reduce a society's level of corruption, the international community should promote its integration into international organizations such as the EU or OECD. This also implies that rules such as the Copenhagen Criteria, which define whether a country is eligible to join the European Union or not, seem to have a significant influence on a country's level of corruption. In this context, the establishment of the rule of law in a country is not compatible with widespread levels of corruption, and if countries attempt to join the EU, they have to minimize corrupt activities as far as possible. Therefore, the admission of countries into organizations with high anti-corruption standards such as the European Union seems to be an overall efficient anti-corruption instrument because international pressure tends to produce behavioral changes in countries regarding their corruption levels. This also confirms Kostadinova's assumption that "the desire to join the European Union was a much more effective driving force for implementation of anticorruption policies. [...] Ironically, many people in the admittedly more corrupt Romania and Bulgaria think that only the Union can save them from corrupt

politicians” (Kostadinova, 2012, p. 240). Similarly to this, the relationship between the extent of corruption and WTO- and OECD-membership¹¹⁹ are also negatively significant in the non-European sample, although the linkage between the extent of corruption and WTO-membership does not remain robust in the overall model. Yet, this indicates that international integration generally plays a more important role in the reduction of corruption.

In terms of the political model of corruption, factors such as the degree of democracy, a country’s anti-corruption policy, and the percentage of women in parliaments are influential in explaining the levels of corruption in both European and non-European states. In this model, the degree of democracy is the most important contributor to the reduction of corruption levels. In other words, more advanced democratic structures and institutions lead to lower levels of corruption. This is attributed to the fact that in democratic states, principles such as equality, fairness, transparency, checks and balances, and accountability are more strongly fostered than in authoritarian regimes that are characterized in particular by strong hierarchies. This corruption-democracy-nexus confirms economic and institutional considerations that attribute the emergence of corruption to a lack of competition in institutions that provide public officials with incentives and opportunities to nurture bribes (e.g. Klitgaard, 1988; Rose-Ackerman, 1997). Accordingly, corruptive behavior does not arise due to low morale, but rather by a bad arrangement of rules and institutions that cannot prevent illegal and harmful human actions. Therefore, specific components of democracies and democratization processes include necessary conditions for honest governments because their institutions tend to include corruption-restraining mechanisms. My results again confirm cultural approaches that claim democratic societies and polities are often committed to norms and values of justice and equal opportunities that are in opposition to corruption norms (e.g. Uslaner, 2006).

Following institutional approaches that assume that institutions and organizations affect the degree of corruption in individual behavior through rules, norms or other social frameworks, I have included an anti-corruption policy variable in my analysis. My findings referring to anti-corruption policies do not confirm the assumed relationship that anti-corruption policies reduce the extent of corruption, but verify the alternative hypothesis, implying a positive linkage between both variables. This result indicates that the effectiveness of a country’s

¹¹⁹ Moreover, the OECD has the OECD Anti-Bribery Convention that establishes legally binding standards to criminalize bribery of foreign public officials in international business transactions and provides for a host of related measures that make this effective. The OECD member countries and six non-member countries - Argentina, Brazil, Bulgaria, Colombia, Russia, and South Africa - have adopted this Convention. The Convention itself establishes an open-ended, peer-driven monitoring mechanism to ensure the thorough implementation of the international obligations that countries have taken on under the Convention. This monitoring is carried out by the OECD Working Group on Bribery which is composed of members of all State Parties OECD (2013).

anti-corruption efforts can be easily disputed. As a matter of fact, my results reveal that anti-corruption strategies can also cause the opposite effect as new regulations can create new opportunities for corruption or even reveal options for corrupt actions (e.g. Anechiarico and Jacobs, 1996; Gong and Wu, 2012). In this context, Persson *et al.* (2012, pp. 16–17) have also indicated that “increased transparency will risk increasing the level of corruption since this will make people even more aware of the problem, encouraging even former noncorrupt actors to take part in the corrupt game.” For instance, anti-corruption programs are often used by political rulers to justify the replacement of democratically elected governments. Therefore, my results confirm the analyses of researchers focusing on Eastern Europe that have found that donor-sponsored anti-corruption campaigns undermine new democracies by encouraging politicians to accuse each other of corruption, rather than debate policy (Krastev, 2004). Moreover, it is striking that countries such as Denmark, Germany or Switzerland, which have not yet ratified the Criminal Law Convention on Corruption or Civil Law Convention on Corruption, the two binding policies against corruption of the Council of Europe, show low levels of corruption. Contrary to this, countries that have already ratified both conventions, such as Belarus and the Czech Republic, have higher levels of corruption. Nonetheless, states such as Iceland, Ireland and the United Kingdom that have not yet ratified either of the conventions have witnessed a decline in the extent of corruption. Due to a lack of consistency in such trends, researchers should reflect on the impact and effectiveness of anti-corruption conventions and institutions such as GRECO, an institution within the European Union, which takes a central role in the fight against corruption in Europe. I assert that stronger implementation and obligations of anti-corruption strategies may lead to a decrease in the extent of a country’s corruption levels. For instance, GRECO should further intensify its monitoring processes concerning the upholding of anti-corruption standards in European countries.

The hypothesis that high degrees of government centralization lead to greater extents of corruption is not initially confirmed in the economic model for European states. Rather, my results demonstrate that federal states such as Bosnia and Herzegovina, Italy, Moldova and the Ukraine show higher corruption levels. This contradicts previous research such as that of Shleifer and Vishny (1993) or Gurgur and Shah (2005) who assert that decentralization of power create competition in the distribution of public goods that may, in turn, reduce the extent of corruption. This suggests that federal structures of the government system do not support greater accountability in the public sector and therefore tend to increase the extent of corruption. Contrary to this, my findings corroborate the assumptions of Weingast (1995), Goldsmith (1999), and Kunicová and Rose-Ackerman (2005) who have provided evidence that federal or decentralized states tend to be more corrupt than unitary countries. This could be substantiated by the fact that in contrast to centralized countries, a higher number of

opportunities and loopholes exist in federal or decentralized states that enable actors to behave corruptly. Therefore, federal or decentralized systems make it easier to hide corrupt actions and daunt whistleblowers, while centralized states with more hierarchy, power and control mechanisms can monitor individuals' (corrupt) behaviors more efficiently. This assumption contradicts the rational-choice model of Klitgaard (1988) suggesting that corruption increases when agents have monopolized power over clients and display great discretion, as well as when accountability of agents to the principal is weak. However, in contrast to the European sample, in the non-European sample the connection between the extent of corruption and a country's degree of government centralization indicates a significantly negative relationship. Consequently, federal structures lower corruption levels in non-European states. However, when controlled for economic, socio-cultural and historical indicators, this relationship does not remain robust in the overall models of both samples. These ambiguous results require further research on the relationship between the degree of government centralization and a country's corruption levels.

Surprisingly, the variables of the degree of political competition and public spending ratio are not significant in the European sample, which contradicts previous research such as the analyses of Rose-Ackerman (1999) and Montinola and Jackman (2002) which indicated a negative effect of political competition on corruption. This refutes my assumptions, regarding rational-choice approaches, that competition between politicians and bureaucrats may reduce corruption. However, while the relationship between the extent of corruption and the degree of political competition is not significant in the European sample, the relationship is significantly positive in the non-European sample, suggesting that high levels of political competition foster a country's extent of corruption. However, this relationship does not remain stable in the overall model of the non-European states. This finding could be attributed to the fact that the significant relationship between the degree of democracy and the extent of corruption leverages the connection with political competition. This implies that the freedom of information and association characteristic of democracies help the monitoring of public officials, thereby limiting their opportunities for corrupt behavior. Moreover, possible turnovers of power in political systems also imply that politicians cannot always credibly promise that particular laws and regulations will continue in the future (e.g. Montinola and Jackman, 2002). Consequently, political competition rather seems to be an inherent element of democracies whose effect is overlaid by the significant relationship between democracy and corruption.

My hypothesis that a large government sector, measured by a country's public spending ratio, creates incentives for corrupt action is also refuted and contradicts the analyses of Tanzi (1994/1999) and Goel and Nelson (1998). Both studies have indicated a positive relationship between the degree of public spending ratio and corruption. Thus, it may be

assumed that a high public spending ratio can be a result as well as a cause of corrupt behavior. However, in contrast to the European sample, the relationship between the extent of corruption and the variable public spending ratio is significantly negative in the non-European sample. This implies that higher degrees of a public spending ratio would lead to lower corruption levels. However, when controlling for additional variables in the overall model, this relationship does not remain robust. Therefore, a country's public spending ratio is not a predictor of the extent of corruption.

My findings also reveal that a higher percentage of women in parliaments alleviates corruptive behavior in European states. This relationship is initially confirmed by the political model and also remains stable in the final overall model. This result is in accordance with the findings of Swamy *et al.* (2001) who have illustrated that higher female labour participation leads to less corruption in general. This could be explained by two assumptions: On the one hand, women are less involved in corrupt transactions than men because male politicians tend to possess more senior positions than female politicians. Moreover, women are less integrated in well-established networks in which corruption often flourishes (Alemann, 2004). According to this rationalization, however, it can be assumed that if women were to ascend to even higher positions and become part of these networks, or build new ones, their behavior could also change to adopt more corrupt practices. The safety of their senior positions might overshadow any fear of accepting or offering bribes.

On the other hand, I assume that this negative relationship is caused by other aspects of liberal democracy that accompany the protection and equality of women's political rights (e.g. Norris *et al.*, 2002a; Sung, 2003). Accordingly, it might be the fairer systems, which are created within democratic systems, and not women's greater degree of integrity that explain why corruption is lower in countries where more women are in parliaments. This assumption reflects the interplay between a country's level of democracy and the number of women in parliaments, where more democratic systems have a higher percentage of women in parliaments. In other words, gender equality may be conducive to democracy by promoting a less hierarchical cultural milieu for decision making (Norris *et al.*, 2002b).

A third explanation of the relationship between the extent of corruption and the percentage of women in parliament is argued by Gottfredson and Hirschi (1990) and Paternoster and Simpson Sally (1996) claiming that women seem to be more honest or are more moral and risk-averse than men by nature. However, this claim should be carefully considered further by behavioral or psychological studies. It should be further noted that although the relationship of corruption and the percentage of women in parliaments is significantly negative in the political model of the non-European sample, it is not significant in the overall model. This could be related to cultural rather than gender-based explanations suggesting

that gender differences are less universal and more culture-specific (e.g. Alatas *et al.*, 2009; Alhassan-Alolo 2007).

The findings of the socio-cultural model illustrate that religion is a strong predictor of corruption levels in Europe.¹²⁰ The variables a society's percentage of Orthodox and Protestants have a significant influence on the extent of corruption in European states. As Dreher *et al.* (2007) has theorized, religion may shape social attitudes towards social hierarchy and family values and thus, in turn, affect corrupt practices. My findings confirm this and indicate that societies with a higher percentage of individuals of Orthodox faith show higher levels of corruption, while the relationship in Protestant societies such as Denmark, Sweden or Norway seems to be opposite. In terms of cultural approaches, I attribute this relationship to the fact that compared to Orthodox, Catholic or Muslim societies, Protestant societies show less hierarchy and are strongly characterized by egalitarian norms and values. Therefore, they are less prone to tolerance towards power abuses and corrupt behavior (e.g. Paldam, 2001). Furthermore, the Protestant church has traditionally been separated from the state and has played a role of opposition to the abuses of the government (Treisman, 2000). The Puritan aspects of this religious tradition could also have a corruption-preventing effect on both providers and receivers of bribery (Skaaning, 2009). Moreover, Protestants tend to be less embedded in social networks that seem to be a breeding ground for corruption (Lambsdorff, 2002). These findings are similar in the non-European sample. Here, the relationship between Catholicism and corruption is also significantly positive, implying the same underlying argument. As a result, societies that indicate more egalitarian and individualistic features are more likely to show lower levels of corruption.

My results have also demonstrated that the percentage of Muslims, the degree of ethno-linguistic fractionalization and the level of education are not significant in explaining corruption in European states. It can be assumed that the variable percentage of Muslims does not determine corruption. In Europe, only a few countries show higher percentages of Muslims such as Albania, Bosnia and Herzegovina, and Macedonia. The average percentage is 6%, while the non-European sample shows an average level of approximately 25%. The current population developments in Europe already indicate that this situation will change dramatically (see also Koopmans, 2005; Bloemraad and Schönwälder, 2013). This, in turn, will also affect a country's degree of ethno-linguistic fractionalization, which is low in Europe, with a value of 0.28. In contrast, the average degree of ethno-linguistic

¹²⁰ However, data on religion has to be cautiously interpreted. For instance, the membership in religious communities does not necessarily imply that people also take part in the activities and institutions of their churches. In this context, studies reveal that Catholics, Orthodox people and Muslims go more frequently to churches than Protestants. For instance, in Germany a lot of people are official church members, but do not participate in church events (e.g. Pickel (2009)).

fractionalization in non-European states is almost twice as high, with a rate of 0.50. However, it is estimated that this degree will also increase in European states that are characterized by a growth in immigration and mobility. For instance, this effect also interrelates with the current economic crisis in Europe that began in late 2009 and has particularly affected countries such as Greece, Portugal, Ireland, Italy, and Spain. The unemployment rates haven't continuously risen in these countries leading, in turn, to certain waves of immigration within the European continent (e.g. Lantier, 2013). In contrast to European states, the variables percentage of Muslims and level of ethno-linguistic fractionalization are positively linked to the extent of corruption in non-European states. This indicates that the extent of corruption will be higher, the higher the percentage of Muslims and degree of ethno-linguistic fractionalization. However, in contrast to the variable ethno-linguistic fractionalization, the variable percentage of Muslims does not remain robust in the overall model.

In the socio-cultural model the degree of urbanization negatively influences the extent of corruption in European states, suggesting that high degrees of urbanization hinder the extent of corruption. This does not support the assumption that high degrees of urbanization lead to higher extents of corruption and contradicts the research of Billger and Goel (2009) and (Mocan, 2008) who revealed that living in larger cities increases the risk of exposure to bribery. Therefore, it could be hypothesized that corruption levels are higher in smaller cities and villages because social networks are more developed and relationships between individuals and government officials are more personal than in larger cities. These circumstances may make it easier to ask for bribes based on the maxim that "You scratch my back, I scratch your back." However, this relationship does not remain robust in the overall European-specific model. The relationship in the non-European sample is negatively significant and remains even robust in the overall model of corruption.

Surprisingly, level of education does not have any influence on the extent of corruption in European societies. This is contrary to the studies of Treisman (2000), Ahrend (2002), Ali and Isse (2003) and Glaeser and Saks (2006) that argue that corruption levels are lower in more educated and literate societies. In my study date, the average level of education for the period of 1995 to 2010 is approximately 53% and very high compared to the non-European sample of 33%. The findings of the non-European sample do reveal a significantly negative relationship between the level of education and the extent of corruption, implying that education leads to a decrease of corruption levels. In the overall model, however, the variable level of education has to be excluded because of multicollinearity. For this reason, further research should concentrate more closely on the corruption-education linkage. In this context, I also assume that the influence of education on corruption depends on a country's capacities of civil society to monitor and criticize government officials (e.g. Ahrend, 2002). If high education levels provide that these capacities are well-developed, the extent of

corruption will be because citizens can act as “watch-dogs” with the capacity to discover and understand the government’s activities. Furthermore, education can also be interpreted as a proxy for the effectiveness of a democracy, meaning that countries with high democratic institutions have higher levels of education that, in turn, lower a country’s level of corruption (e.g. Dreher *et al.*, 2007).

In sum, the findings of the non-European sample, as opposed to the European one, are rather in accordance with the assumed relationships between corruption and certain socio-cultural variables. In this sample, all socio-cultural variables are significant, implying that there are disparities among certain countries, and especially regions, world-wide.

The historical model of corruption indicates, with a value of over 90% (r^2), the highest explained variance of all models. It illustrates that the variable history of corruption and years of democracy in particular are significant in explaining corruption in European states. As assumed, there is a strong negative relationship between the durability of democratic systems and the extent of corruption. This complies with the empirical analyses of Treisman (2000), Blake and Martin (2006) and Pellegrini and Gerlagh (2008). For instance, Treisman (2000) has observed a significant impact of the distant past on the extent of corruption and has illustrated that a long duration of democracies seems to be necessary to significantly reduce corruption levels. This implies that democratic structures do not only decrease levels of corruption, but that this effect is also strengthened by the duration of democratic principles. In other words, the longer a democracy lasts, the less corrupt it is. In terms of sociological and historical institutionalism, this demonstrates that individuals are expected to get used to formal and informal democratic institutions and adapt their behavior to these structures (e.g. Harrison and Huntington, 2000).¹²¹ This also reconfirms that the relationship between institutions and actors is reciprocal and cyclical (Groenendijk, 1997; Scharpf, 2006). Thus, institutions explicitly affect the preferences and actions of individuals through rules, norms or other social frameworks and vice versa (e.g. March and Olsen, 1989; Hall and Taylor, 1996).¹²² After excluding the variable “history of corruption” this relationship also exists in the non-European sample. To conclude, democracies are not per se free of corruption and do

¹²¹ Moreover, the role of a society’s previous democratic experience in the process of political consolidation is discussed by certain scholars such as Huntington (2002). It has been indicated that longer and more recent democratic experiences are more favorable for the consolidation of a political system than shorter and remotes ones. Putnam (1993) suggests that democratic traditions serve as a reservoir for the next generations for the right patterns of beliefs and behaviors.

¹²² This is also consistent with an “institutional learning” approach (e.g. Rustow (1970)) that implies that people embrace the values into which institutions socialize them. Following this assumption, institutions need time to exert a socialization effect. Accordingly, Welzel (2013, p. 126) suggests that “democracy should shape values through its long-time endurance, not its momentary presence.”

not necessarily exhibit honest governments and politicians, but they have fewer problems with corruption reflecting the duration of democratic rule.

With regard to a country's history of corruption, the assumed relationship that corruption levels are higher, the higher the degree of corruption has been in the years before, is confirmed in both samples. This is also consistent with assumptions of historical institutionalism implying that corruption evolves over time and is determined by certain lasting traditions and values (e.g. Thelen, 1999). The findings also corroborate the arguments of Herzfeld and Weiss (2003), Kostadinova (2012) and Skaaning (2009) who have described corruption as cultural heritage and suggested that corrupt behavior is path-dependent. Moreover, it demonstrates that in societies with high levels of corruption, people have greater expectations and a higher estimated probability that, for instance, a given public official will engage in corrupt acts (Fisman and Miguel, 2007). These facts also indicate a cultural transmission of corruption, implying that individuals from societies in which corrupt transactions are quite common are more likely to engage in and expect others to engage in corrupt acts (Hauk and Saez-Marti, 2002; Barr and Serra, 2010). In the words of Persson *et al.* (2012, p. 16) this implies that "the important thing will be to change actors' belief about what 'all' other actors are likely to do so that most actors expect most other actors to play fairly."

Moreover, the correlation coefficient between history of corruption and communist past is scored by 0.70 in the European sample, whereas the coefficient is 0.18 in the non-European sample. This suggests that there is a strong relationship between post-communist states and the history of corruption in Europe. Consequently, reducing levels of corruption would imply a change of specific practices and habits that are deeply embedded in a society's culture and its institutions. In this context, the implementation of certain institutional control mechanisms at places that are known for corrupt practices such as registration offices or passport controls present a useful instrument to prevent corrupt transactions. In this context, the integration of commissioners into public institutions that help to minimize and manage misconducts is a very successful strategy for handling corruption. Moreover, whistleblowing, including reports of alleged dishonest or illegal activities occurring in public or private institutions, should generally be socially and ethically more established in a society. Individuals reporting illegal activities need stronger protections and do not have to follow bureaucratic chains of command to make reports (e.g. Collier, 2002).

However, the relationship between the extent of corruption and the variable "history of corruption" is very high. The coefficient is 0.82 and absorbs a lot of the explanatory power of the overall model. For this reason, the models are additionally calculated by excluding this variable. It demonstrates that the explained variance of the historical model (r^2) decreases to 73% and that a country's communist past has also a significant influence on the extent of its

level of corruption in the European sample. This indicates that a country's communist past fosters the growth of corruption levels and that post-communist countries seem to be still susceptible to corrupt practices. With regard to cultural approaches, this could particularly be attributed to the heritage of economic and political decision-making under communist rule that created structural incentives for engaging in corrupt behaviors and became such a widespread fact of life that they became rooted in the culture and social norms (e.g. Sandholtz and Taagepera, 2005). Furthermore, it can also be hypothesized that the higher average level of corruption in post-communist countries are not related with post-communism per se, but that these countries, as Treisman (2003, p. 22) suggested, have "bad governments, largely because they are poor and lack a post-war history of democracy." In sum, culture changes slowly and new bureaucracies and institutions are not created from scratch. People in general had internalized certain practices that after more than 20 years still exist (Skaaning, 2009). Furthermore, Paldam (2002) has found little evidence to bolster the belief that corruption is a persistent phenomenon and so deeply embedded in the culture of the society as to be unchangeable.

In the non-European sample, there is no relationship between the extent of corruption and a country's communist past, although this sample includes presently and post-communist countries such as Chile, Venezuela and Vietnam. Consequently, this variable seems to be a specific indicator of corruption only in European states.

Overall, a comparison of the historical models of the European and the non-European sample have illustrated that the variable communist past is an important explanatory factor of corruption. Both samples show that a country's history of corruption strongly fosters the growth of corruption and that the variable years of democracy reduce levels of corruption.

5.2 Micro Models of Corruption

To explain corrupt behavior at the individual level and provide a more thorough explanation of the extent of corruption, I ran several multilevel models that indicated level specific relations when intercepts and slopes varied for the level analysis. Multilevel models present an appropriate analytical procedure for analyzing corruption at certain levels. By allowing for residual components at each level, multilevel modeling takes the existence of hierarchical data structure into account (e.g. Hox, 2002).

To measure corruption at the individual level, I used the item “Extent of political corruption” from three waves of the World Values Survey (1994-1999; 1999-2004 and 2005-2008). The item is scaled on a four-point scale from 1 (“no public officials engaged in it”) to 4 (“almost all public officials are engaged in it”) (World Values Survey, 2013). Combined together, these polls provide data on 20 European societies.

Through descriptive analyses, I have first demonstrated that the extent of corruption vary widely across European societies. It is striking, that the findings are very similar to the extent of corruption at the country level. Consequently, I can conclude that higher perceptions of corruption can also increase the probability of an individual's corruptive behavior. Similar to the country level, there are also significant differences in the perception of corruption between West and East European states. The highest extent of perceived corruption are found in post-communist countries such as Macedonia (3.39), Lithuania (3.33), and the Ukraine (3.30), whereas the countries with the lowest extent of perceived corruption turn out to be again the Scandinavian countries such as Norway (2.01) and Finland (2.18). Additionally, levels of perceived corruption are not exceptionally lower in Southern Europe than in post-communist societies. On the whole, European societies are characterized by diverging values of perceived corruption extent.

To explain the differences among the respondents in their estimation I ran several multilevel models. According to economic and cultural approaches, I assumed that corruption is likely experienced differently depending on socio-demographic factors, social values, norms, and attitudes. To clarify the specific factors of corruption in European states and for comparative purposes, I estimated several multilevel models with an additional non-European sample. The major findings of the multilevel analysis can be summarized as follows: On average, the European models, i.e. the random intercept, random intercept and slope, and the final European-specific multilevel model, include 20 European countries and approximately 18.000 observations. The non-European models include nearly 21.000 observations in 20 societies.

The results of all European models have demonstrated that an individual's level of interpersonal trust, satisfaction with the financial situation, and the justification of bribery are

significant in the explanation of the extent of perceived corruption. While an individual's justification of bribery show a positive relationship with the extent of perceived corruption, the variables level of interpersonal trust and satisfaction with the financial situation are negatively related to the dependent variable.

In contrast to this, the relationship between societal values and the extent of corruption has only been significant in the random intercept model. An individual's employment status has indicated a positive relationship with the extent of perceived corruption in the random intercept and slope model, and the multilevel model. Furthermore, an individual's level of income negatively influences an individual's perception of corruption only in the final multilevel model. Yet, in all European models socio-demographic characteristics such as an individual's gender and age do not show a significant relationship with the perception of corruption.

I have demonstrated that interpersonal trust is constantly the strongest predictor of the extent of perceived corruption. This is also true for all non-European models and implies that people who have high levels of interpersonal trust show lower levels in the perception of corruption. This may be due to the fact that societies with high levels of interpersonal trust such as the Scandinavian countries have lower levels of corruption as well. Consequently, interpersonal trust is a significant predictor of the perception and the extent of corruption. This finding confirms the work of scholars of sociological approaches who argue that decisions about whether to engage in corrupt transactions are particularly influenced by social norms and cultural values (e.g. Husted, 1999; Getz and Volkema, 2001; Banuri and Eckel, 2012). Based on this result, my analysis indicates that trust seems to be a good control mechanism of corruption within a society. Generally, trust is a central component of social capital and a value that expresses the belief that others are part of your moral community (e.g. Uslaner, 2006; Putnam, 1993). Therefore, if corruption is perceived as an unethical and immoral behavior that is harmful for the community, then people are more likely to refrain from corrupt acts. Societies such as those in Sweden or Norway, for example, have high levels of interpersonal trust and are characterized by egalitarian values. Therefore, corrupt actions would imply that some individuals try to take advantages by using illegal instruments that do harm to other people in their society. However, from a rational-choice point of view, trust is simply based on the expectation that others behave predictably (Hardin, 2002). Therefore, trust is also the basis for cooperation with people who are not like yourself (Putnam, 1993; Uslaner, 2006). As a result, this finding is in line with the results of Paldam and Svendsen (2001), Uslaner (2006) and You (2004) who have found a strong negative relationship between corruption and interpersonal trust, implying that trusting societies have fewer people behaving corruptly.

In terms of the variable gender, the assumption that an individual's gender influences the probability of corruptive behavior could not be confirmed. This contradicts studies of Swamy *et al.* (2001) and Dollar *et al.* (2001). Both of these have demonstrated that women are less involved in corrupt transactions and are less likely to condone bribe-taking than men. Nevertheless, this result does not contradict the findings on the macro level that indicates a linkage between low levels of corruption and a high percentage of women in parliaments. Instead, it confirms the assumption that the impact of gender on the extent of corruption seems to be overestimated. Thereby, it supports the analyses of Sung (2003) and Alatas *et al.* (2009) who have argued that differences in corruptive behavior seem to be more culture-specific rather than caused by gender differences. However, the results of the non-European sample indicate a significantly positive relationship between an individual's gender and the perceived extent of corruption, implying that females are either more corruptly or are sensitive towards the perception of corrupt activities.

In terms of the variable an individual's age and the perception of corruption, my findings of the European sample have not confirmed previous research by Hirschi and Gottfredson (2000) and Torgler and Valev (2006a) suggesting that age is an important indicator of illegal activities. Both provide evidence that elderly people are less likely to view corruption as justifiable and illustrate that the age effect is robust across different social and cultural conditions. This corruption-age nexus is particularly justified by the argument that older people tend to be more tax compliant and less likely to be involved in criminal activities. Yet, the results of the non-European models, demonstrating a positive relationship between an individual's age and the extent of perceived corruption, are in accordance with the assumptions of Hirschi and Gottfredson (2000) and Torgler and Valev (2006a). In this context, I assume that elderly people seem to be more critical and sensitive toward the perception of corruption because they are more averse to illegitimate behavior, such as paying bribes. This could also be linked to the fact that individuals who are 60 years and older are less likely to get involved in corruptive transactions because they may have to deal with government rules and regulations less frequently than younger people (e.g. Mocan, 2008).

According to my expectations based on rational-choice approaches, the relationships between the extent of perceived corruption and an individual's employment status and level of income are significant, albeit not in all three multilevel European models. I assumed that unemployed people tend to engage in corruptive actions more frequently than individuals having a job. This implies that low or no income may create economic incentives to gain some extra-money in form of bribes. This nexus suggests that people with low incomes may have greater incentives to engage in corrupt activities because of corruptions' relatively high benefits. The results of the non-European sample also indicate a negative relationship

between an individual's level of income and the extent of perceived corruption. Consequently, this result is not similar to the finding of the variable civil service wages at the macro level, which did not indicate a significant linkage to the extent of corruption. In contrast to this, there is no relationship between an individual's employment status and the extent of perceived corruption in all non-European models.

In all models that are based on the European and non-European sample an individual's satisfaction with their financial situation have indicated a negative relationship with the extent of perceived corruption. This implies that people who are unsatisfied with their financial situation perceive a higher extent of corruption of public officials. As a result, my findings suggest that financial dissatisfaction leads to a more critical or even more attentive perception of the extent of corruption. In this context, I assumed that on the one hand, these people are more critical towards public officials and politicians because they are unsatisfied with their politics. Maybe they blame these officials for their personal situation or they feel unjustly treated by them. On the other hand, I hypothesize that people who are unsatisfied with their own financial situation have already engaged in corrupt transactions to strive for higher incomes and are also prepared to accept illegal payments. This would confirm the research of Torgler and Valev (2006a) who have provided evidence that people who are dissatisfied with their financial situation tend to be more willing to act illegally. Consequently, people are more experienced and are therefore more "qualified" to estimate corruption levels. These assumptions corroborate rational-choice approaches, implying that actors follow a rational-choice logic and are often motivated by material interests and commit or refrain from corrupt acts for tangible goods.

In sum, a comparison of the results of the European sample with the non-European sample indicates similarities in the variables an individual's satisfaction with the financial situation, level of interpersonal trust, and a country's extent of corruption. In terms of the significant relationship of a country's extent of corruption this implies that people living in countries with high levels of corruption perceive lower levels of corruption. At first sight, this seems to be a paradox. Nevertheless, this again demonstrates that both the extent of corruption and its perception are culturally influenced and determine individuals' behavior. It seems that people have greater expectations and a higher estimated probability that, for instance, a given public official will engage in corrupt acts in societies with high levels of corruption (Fisman and Miguel, 2007). These results also clearly demonstrate the cultural transmission of corruption, which implies that individuals from societies in which corrupt transactions are quite common are more likely to engage in corruption and expect others to engage in it as well (e.g. Hauk and Saez-Marti, 2002). This is in line with the insights offered by Persson *et al.* (2012) who describe corruption as a collective action problem. They argue that people behave in a

corrupt manner because they understand the situation as a collective action where it makes little sense to be “the only one” that refrains from using or accepting bribes.

Moreover, the results of the European-specific multilevel model that includes the significant variables of the macro level have demonstrated that the cross-level term, a country's international integration, and the degree of democracy are also common explanatory variables in terms of the extent of perceived corruption. While international integration, measured by EU-membership, and the degree of democracy are positively related to the perceived extent of corruption, the cross-level term have a negative impact on the perceived extent of corruption in European states. Consequently, people living in countries that are democratic and / or are members of the European Union seem to perceive higher levels of corruption or are more critical towards the extent of corruption. Among all variables of the European multilevel model the strongest relationship has been indicated by an individual's level of interpersonal trust and a country's EU-membership.

In contrast to the European sample, the variables gender and an individual's level of income show significant relationships in all models of the non-European sample. This implies that people outside of Europe with lower levels of income are more critical towards the perception of corruption. A comparison of the average level of income between European and non-European states indicates that average income levels are higher outside Europe.

Summing up, the analysis further illustrates the strong linkage between the micro and the macro level because countries in which people perceive high corruption levels (measured at the individual level) are often ranked by high levels of the Corruption Perception Index (measured at the macro level). A correlation coefficient of .81 between both indices strongly supports this linkage. In conclusion, cross-national differences in the perceived extent of corruption are not necessarily misinterpreted when they are understood as culture-biased extent of corruption.

5.3 Bathtub Model of Corruption

In this study, the bathtub model of corruption has served as a framework for analyzing the extent of corruption on different levels as well as across and within certain countries and across time. It combines the macro and micro level and considers corruption as individual behavior, taking country and personal characteristics in particular into account. Moreover, this model combines economic (e.g. rational-choice theory) and sociological approaches (e.g. cultural theories such as sociological and historical institutionalism) into an interdisciplinary framework and offers an integration and analysis of certain variables at different levels that influence the extent of corruption. For the purpose of identifying the factors that influence corruption, specific situations at each level of the model were filled by empirical data. In this analysis, rational-choice assumptions are especially examined by contextual conditions on the macro level (e.g. a country's rate of inflation, unemployment rate) and micro level (e.g. an individual's level of income, satisfaction with the financial situation) referring particularly to various resources. Cultural and institutional approaches are taken into account by variables such as international integration, a country's degree of democracy, religion, a country's communist past, societal values, or an individual's level of interpersonal trust.

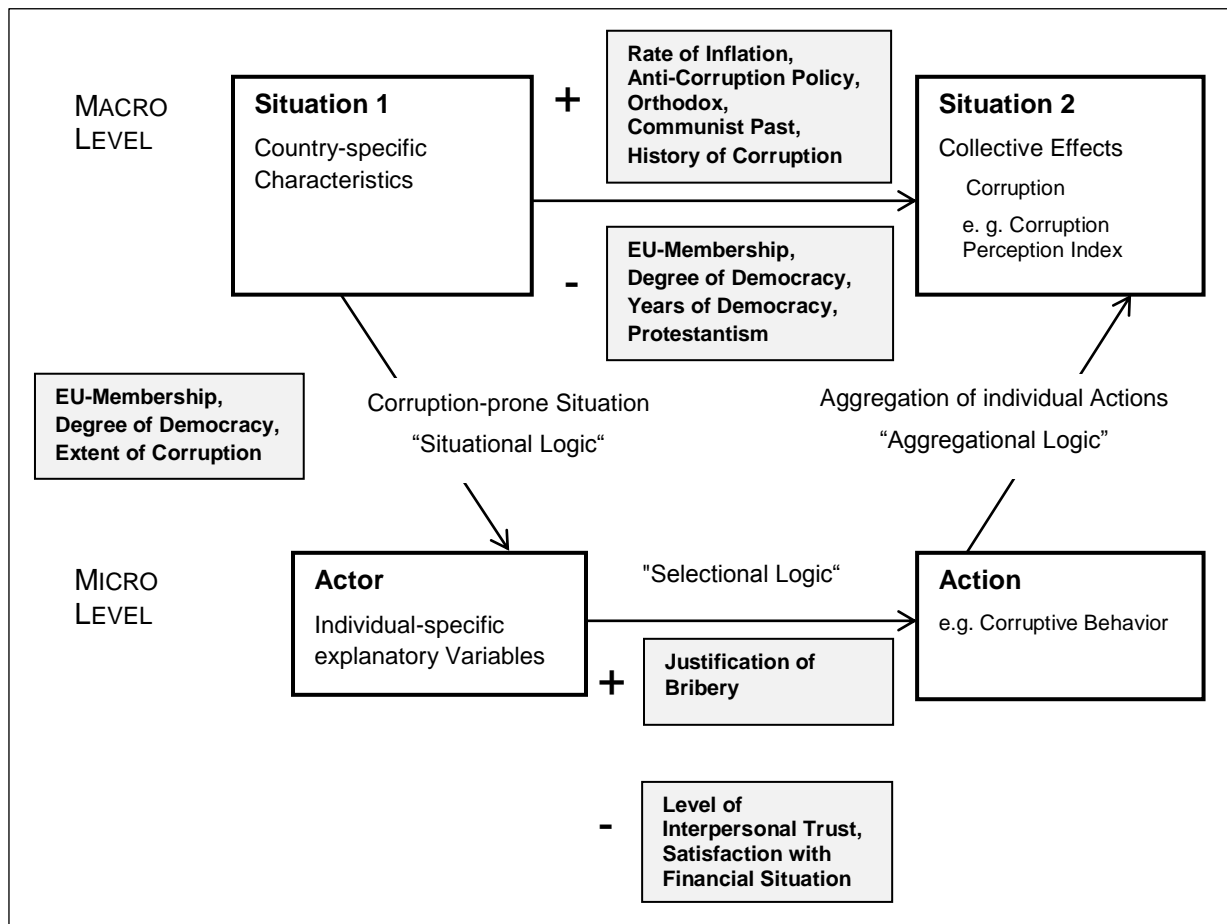
European-Specific Bathtub Model

Transferring the findings of the macro and micro models to the bathtub model of corruption, I have been able to illustrate that the various factors influence the extent and perception of corruption in European states in both longitudinal as well as in cross-national sections and at specific levels (see figure 56). At the macro-level (situation 1 of the model) these factors include the rate of inflation, international integration, a country's degree of democracy, anti-corruption policy, the percentage of women in parliaments, Orthodoxy, Protestantism, years of democracy, a society's communist past, and history of corruption. While the rate of inflation, a high percentage of Orthodox, a country's anti-corruption policy, communist past and history of corruption are more likely to enhance corruption over time, the integration in international organizations, a country's degree of democracy, the percentage of women in parliaments and a high number of democratic years significantly decrease corruption levels for the period between 1995 and 2010. In terms of the bathtub model, these characteristics of European countries shape a certain "situational logic" (Esser, 1993a) by creating specific social frameworks for the actions of individuals. This implies that individuals, in turn, act under these particular social structural and institutional conditions and behave according to a specific social logic at the micro level. Thus, an individual's action is a consequence of a particular "logic of selection" (Esser, 1993b, p. 8).

At the micro-level, an actor's decision was analyzed on the basis of rational-choice and cultural theories that describe an individual's corrupt behavior either as rational or as decisions that are culturally dependent and influenced by certain norms and values. Therefore, individuals follow a certain logic of selection and decide to engage in corruptive activities either by virtue of rationally- or socially-based motives. At the individual level, corruption was measured by the World Values Surveys item "extent of political corruption". According to the results of the micro models, the variables an individual's level of interpersonal trust, satisfaction with the financial situation and the justification of bribery are significant in the explanation of the extent of corruption. While an individual's justification of bribery indicates a positive relationship to the perceived extent of corruption, an individual's level of interpersonal trust and an individual's satisfaction with the financial situation show negative relationships. However, this does not necessarily mean that people with high degrees of justification of bribery are more likely to behave in a corruptive manner. Rather, it could also imply that these people perceive the extent of corruption as more widespread than others. In this sense, they are more critical and sensitive when it comes to the extent of corruption in a given country. However, a correlation between the Corruption Perception Index (transformed) and the aggregated item "Extent of political corruption" of the World Values Survey has shown a high coefficient of 0.82, indicating the linkage between the country and the individual level offered by the bathtub model of corruption. This also suggests that both indices seem to measure the same phenomenon: the extent of corruption. Moreover, the multilevel analysis reveals that the micro and macro level are linked by the following variables: a country's EU-membership, the degree of democracy, and a country's extent of corruption. All three variables are expected to influence corruption scores at both country and individual level. Following the bathtub model, these variables represent the causal influences for macro factors that work through disaggregated effects at the micro level. While a country's EU-membership and the degree of democracy seem to lower corruption, the extent of corruption fosters the extent and perception of corruption. Finally, the aggregation of the individual actor's (corrupt) actions leads to situation 2 on the macro-level ("collective effects"), where corruption is measured by the transformed Corruption Perception Index ("logic of aggregation"). According to the model, the aggregation of the individual actor's actions can either reproduce social structures and behavioral patterns or modify them. In other words, individual (corrupt) behavior reproduces certain structures and patterns that, in turn, affect corruption levels in the future. Thus, levels of corruption are explained at the macro level via the aggregated individual actions at the micro level. This includes that phenomena of the macro level influence system outcomes through their effect on individuals' orientations and behavior at the micro level (actor's action). Thereby, macro-sociological phenomena such as corruption are reconstructed as unintended

consequences of individual behavior in respective situations (e.g. Coleman, 1990). This illustrates again the strong path-dependence of corruption.

Figure 56: The Bathtub Model of Corruption for European Countries



Non-European-Specific Bathtub Model

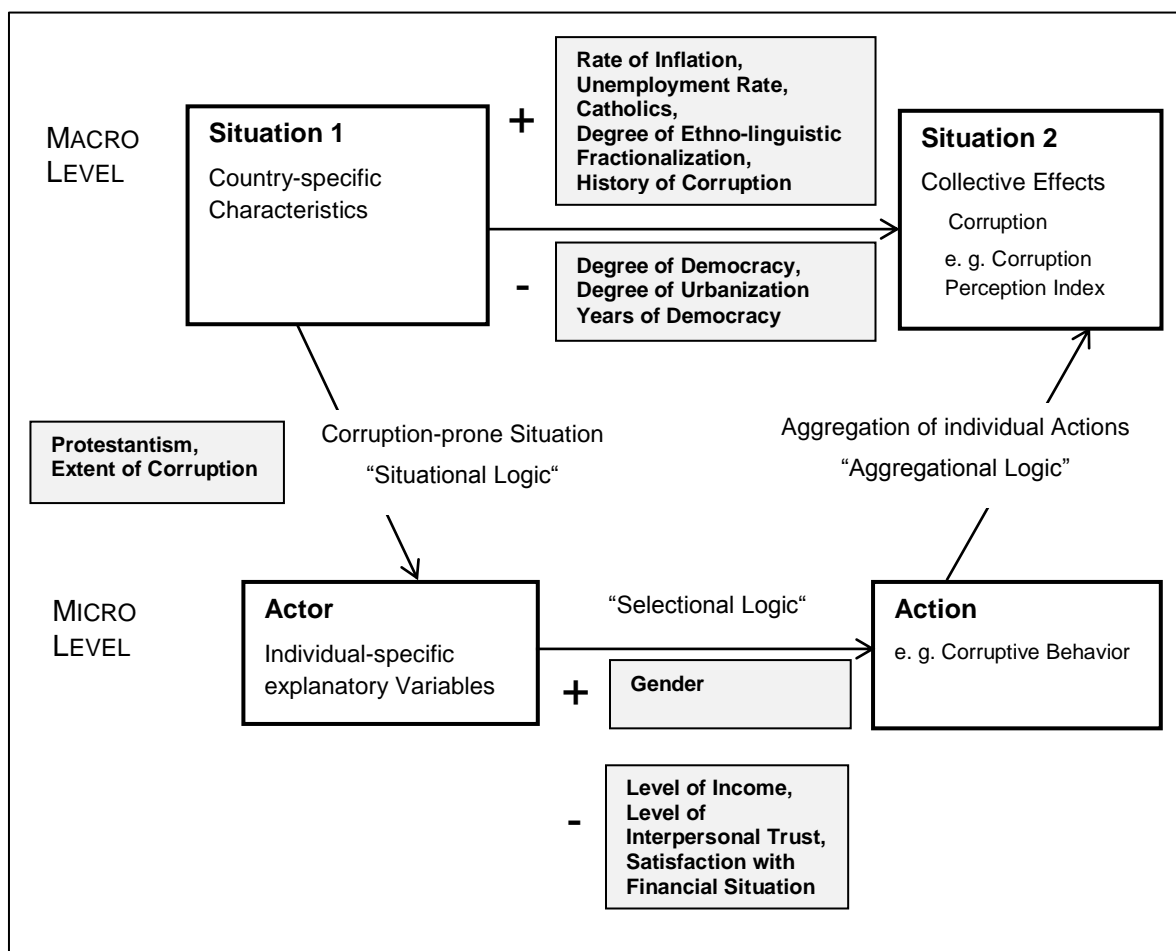
A comparison of the bathtub model of corruption for European and non-European states demonstrates similarities in explaining corruption, but also includes region-specific factors that affect the extent of corruption at the country and individual level.

When I transfer the findings of the macro and micro models to the bathtub model of corruption for the non-European sample, various factors influence the extent of corruption in European states in both longitudinal as well as in cross-national sections and at specific levels (see figure 66). At the macro-level (situation 1 of the model) these factors include a country’s rate of inflation, the unemployment rate, degree of democracy, percentage of Catholics and Orthodox, a society’s degree of ethno-linguistic fractionalization, degree of urbanization, years of democracy, and history of corruption influence corruption at the macro level. Whereas a country’s rate of inflation, unemployment rate, percentage of Catholics and Orthodox, and a society’s degree of ethno-linguistic fractionalization foster corruption levels,

degrees and duration of democracy, and high degrees of urbanization hinder the growth of corruption levels (see figure 57). According to the bathtub model, individuals, in turn, act and behave according to a specific social logic at the micro level under these social structural and institutional conditions. At the micro-level, an actors' decision to commit or refrain from corrupt acts depends on the following individual's socio-demographic characteristics such as gender, level of income, social norms such as interpersonal trust and attitudes such as an individual's satisfaction with the financial situation. The multilevel analysis reveals that the micro and macro level are linked and causally influenced by the variable Protestantism, which is expected to lower corruption scores at both the country and individual level. Moreover, the extent of corruption also has an effect on the occurrence and perception of corruption at both levels.

Finally, the aggregation of the individual actors' (corrupt) actions in non-European states leads to situation 2 on the macro-level ("collective effects") that is measured by the Corruption Perception Index and can, in turn, reproduce or modify social structures and behavioral patterns.

Figure 57: The Bathtub Model of Corruption for Non-European Countries



Summary of both Bathtub Models

A comparison of both bathtub models indicate that the rate of inflation, Orthodoxy and the history of corruption foster corruption in both European and non-European samples, while the degree and duration of democracy significantly decrease corruption levels at the macro level. Yet, both samples differ at the country level in the variables unemployment rate, anti-corruption policy, Catholics, degree of ethno-linguistic fractionalization, women in parliaments, and a country's communist past.

The comparison of the results of the European with those of the non-European states at the micro level demonstrates that an individual's satisfaction with the financial situation, level of interpersonal trust and a country's extent of corruption affect the individual's perception of corruption in both samples. Therefore, higher levels of interpersonal trust and satisfaction with the financial situation lead to lower levels in the perception of corruption. However, both samples differ at the individual level in the variables justification of bribery, an individual's gender, and level of income. Moreover, in the European sample, EU-membership and the degree of democracy have a strong significant effect on the perception of corruption. In the non-European sample, on the other hand, Protestantism has an influence on the perception of corruption.

Consequently, I conclude, that an area-specific model of the factors that is unique to European countries determine the extent of corruption. This model can be attributed to historical factors such as the democratic experience of each country, the post-communist past of certain European countries, cultural norms such as interpersonal trust, and religious aspects. Yet, both models have substantial similarities, suggesting that there are factors that affect corruption in general such as international integration, a country's degree of democracy, and an individual's level of interpersonal trust. Addressing corruption more effectively means to understand these factors in a better way.

6 Conclusion and Research Prospects

Generally, previous corruption research has consisted of two branches. On the one hand, researchers have focused on the effects of corruption and have indicated that it is detrimental to economic, social and political development (e.g. Mauro, 1997; Rose-Ackerman, 1999; Richey, 2010; Uslaner, 2012). On the other hand, corruption studies have concentrated on the causes of corruption that particularly hinder or foster its occurrence (e.g. Seldadyo and Haan, 2006). This study is linked to the latter branch of corruption research.

First, a literature review on the causes of corruption has demonstrated that an overall theory to offer a framework for the analysis of corruption does not yet exist and is still needed. Therefore, I have integrated certain theoretical perspectives from different disciplines such as the principal-agent-approaches, and sociological and historical institutionalism to build a solid foundation for analyzing the causes of corruption. I have demonstrated that all of these approaches have great power in explaining corruption in European states.

Secondly, it became apparent that empirical analyses of corruption seem to have generally developed separately from theoretical approaches and either neglect important explanations such as cultural considerations or fail to combine them. This inquiry has attempted to build a bridge between these certain perspectives of corruption as well as theoretical and empirical research developments.

Thirdly, corruption has often been framed and measured by certain macro-level indices, although it takes place between individuals at the micro level. To shed light on the linkage between macro and micro levels, I have considered corruption as a multilevel phenomenon that takes place on different levels of analysis in an interdisciplinary manner through different perspectives and methods. In this context, the bathtub model of corruption has served as a framework for analyzing the extent of corruption on different levels as well as across and within certain countries and across time and provides a contribution to current theoretical discussions and developments.

It has been demonstrated that on the one hand the prevailing research focus has been dominated by highly aggregated large-n analyses (e.g. Goel and Nelson, 2010; Littvay and Donica, 2011) that tend to neglect significant region-specific characteristics and differences and variations within countries and therefore could lead to biased analyses of corruption from a comparative perspective. On the other hand researchers have concentrated on certain case-studies that particularly investigated individual cases of corruption and rarely provide generalizable results (e.g. Pujas and Rohdes, 2009; Miller *et al.*, 2009). In order to overcome these limitations and find a middle ground, it is of great importance to investigate area-specific factors of corruption that influence its extent and to focus on individual regions such

as Europe rather than on global samples. In this context, due to the detected intra- and inter-European variation and continuously increasing corruption scores in certain countries, European countries presented excellent cases to examine corruption. Contrary to other regions in the world such as Africa, Europe has remained largely unexplored. In order to uncover specific European indicators of corruption, I ran all my calculations with an additional non-European sample that represents countries around the world and have compared all of my findings with the results of the European country sample.

This study is an extension of previous empirical studies such as Littvay and Donica (2011) or O'Connor and Fischer (2012). When analyzing corruption, I also contribute *inter alia* to the current research by including new variables that have not yet been taken into account in analyses of corruption. The variables extended the list of indicators and include the role of anti-corruption strategies, the degree of urbanization and a society's history of the past, the individual's level of income, the individual's satisfaction with the financial situation and the justification of bribery.

The major findings of these empirical investigations can be summarized as follows: As demonstrated, the factors that affect the extent of corruption over time and across European countries include a wide range of variables: Whereas a country's rate of inflation, anti-corruption policy, a high percentage of Orthodox, the communist past and the history of corruption enhance corruption over time, the integration in the European Union, a country's degree of democracy, the percentage of women in parliaments, and a high number of democratic years, in contrast, significantly decrease corruption levels for the period of 1995-2010. A comparison of these results with the non-European sample reveals some dissimilarities. In the non-European sample, a country's rate of inflation, unemployment rate, the percentage of Catholics and Orthodox, a society's degree of ethno-linguistic fractionalization and history of corruption tend to foster corruption levels. While high degrees of democracy, a high number of democratic years and high degrees of urbanization hinder the growth of corruption levels.

This comparison does, however, indicate that in both samples the rate of inflation, percentage of Orthodox, and the history of corruption foster corruption, while the degree of democracy and a high number democratic years significantly decrease corruption levels in both samples. However, some variables foster corruption in one sample, whereas the same variable reduced corruption in the other. The following differences in variables could be made out comparing the European and non-European states: In the European countries, anti-corruption policy, and communist past foster corruption levels, while EU-membership significantly lowers those levels. In contrast, the unemployment rate, percentage of Catholics and the degree of ethno-linguistic fractionalization foster corruption in non-European states, while the degree of urbanization additionally reduces corruption.

The comparison of the results of the European and the non-European states at the micro level has demonstrated that an individual's level of interpersonal trust and satisfaction with the financial situation, and a country's extent of corruption affect the individual's perception of corruption in both samples. While interpersonal trust and an individual's satisfaction with the financial situation decrease the extent of perceived corruption, a country's extent of corruption increases its perception.

Both samples differ in the variables justification of bribery, an individual's gender and level of income. Moreover, in the European sample, EU-membership and the degree of democracy have a significant effect on the perception of corruption. In the non-European sample, however, Protestantism influences the perceived extent of corruption.

Consequently, I conclude that there is a model of factors that influence the extent and perception of corruption that only applies to European countries. Furthermore, my study reveals that there are certain general factors that have an impact on corruption, regardless of specific regions and areas such as the degree and duration of democracy. While previous corruption research has focused predominantly on macro variables, this study particularly takes micro variables into consideration. In this context, I have identified that corruption is likely experienced differently depending on certain socio-demographic aspects, values, norms, and attitudes. This displays that not even structural components matter, but that corruption exists, persists, and varies significantly by culture. The channels through which culture and corruption interact are manifold. As suggested, these channels include formal and informal institutions such as interpersonal trust (e.g. Elster, 1989; Banuri and Eckel, 2012). Together these findings reveal that participating is not just about profit and people do not act for purely material reasons such as money or immaterial resources such as power and prestige. It is also about culture and traditions that generally determine an individual's decision to commit or refrain from corrupt acts.

Although it is not directly intended to give policy recommendations with this work, some implications for policy do follow from my results. Particularly, my analysis indicates that enhancing an individual's economic situation is an adequate way of reducing and preventing corruption, or as Uslaner (2010, p. 246) suggests: "The key to reducing corruption seems to involve making people less dependent upon it." Only a society where relatively few people live in poverty offers the requisites for equal economic, political and social participation and therefore equality. More precisely, a highly unequal distribution of key values such as income, wealth, education and knowledge are equivalent to inequality in the distribution of key political resources and hence unfavorable to competitive politics (e.g. Lipset, 1953; Dahl, 1991). Therefore, in addition to the level of economic development of a country, the distribution of material resources is regarded as important for the prospects and benefits of

democracy that in turn hinders corruption development.¹²³ However, as my study has indicated, democracy does not necessarily guarantee honest governments and corruption-free societies. In contrast, the duration of democracy is the decisive element that improves corruption levels in the long-term. In sum, by providing the institutional component of people power, democracy leads to a higher levels of transparency and enables the civil society and social engagement of groups including non-governmental organizations, media and the press, to call attention to corruption, sensitize the population and act as watch-dogs (e.g. Ahrend, 2002). As studies have indicated, in mature democracies these social organizations and movements have become a constant source of influence on government, keeping elected officials under permanent pressure in terms of accountability and responsiveness (e.g. McAdam *et al.*, 2001; Welzel, 2013). In this context, Collier (2002, p. 27) has also revealed that “an empowered civil society playing a vital role in elite accountability emerges as the foundation to building commitment rules.” Social empowerment¹²⁴, especially through mass citizen participation, is therefore essential in the fight of corruption. A strong civil society cultivates anti-corruption commitment rules that, in turn, lead to self-enforcing mechanisms where the ruling elites make it their duty not to behave corruptly and civil society takes this promise as their corresponding right. Civil society is therefore the chief manifestation of a vital democracy and a main source of governmental accountability and responsiveness (e.g. Putnam, 1993; Collier, 2002). However, Johnston (2012, p. 342) points out that “any nation relying on democratic processes to check corruption must face the possibility that the new order will create corruption risks all its own, and that voters will be all too willing to re-elect leaders of dubious integrity who nonetheless ‘deliver the goods’. The key is not the formal hardware of democracy, but rather fairness, loyalty, legitimacy, and credible accountability – the values that make democracy worth pursuing, and corruption worth worrying about, in the first place.” In this context, “values-based corruption control” is required which is based on the notion that values, social sanctions, and widely shared conceptions of right and wrong should play an important role, alongside laws and punishments, in guiding the uses of public power and resources. Banuri and Eckel (2012, p. 7) suggests that “For a government that seeks to inhibit corruption, the goal is to devise formal institutions that can reinforce existing social norms.” Consequently, fighting corruption consists of the combination of formal democratic institutions that provide transparency and accountability, but also include monitoring and sanctions mechanism against corrupt actors. Preventing corruption implies fostering informal institutions such as interpersonal trust.

¹²³ The link between economic development and democracy is considered “one of the most powerful and robust relationships in the study of comparative national development” (Diamond (1992, p. 110)).

¹²⁴ “Social empowerment means “strengthening civil society in order to enhance its political and economic vitality, providing more orderly paths of access and rules of interaction between state and society, and balancing economic and political opportunities” (Johnston (1998, p. 85)).

Turning the tables, good governance and government performance can, in turn, help to improve the democratic situation and enhance citizens' trust in political institutions because citizens who perceive clean and honest governments, higher levels of fairness, satisfaction, and brightening economic prospects develop higher trust in institutions (e.g. Tavits, 2008; Moreno, 2002; Manzetti and Wilson, 2007).

Overall, my analysis provides a diagnostic as well as broad, yet coherent framework of the factors that influence corruption in Europe. This framework can be used as a template for future analyses such as case studies with stronger focus, for instance, on the underlying mechanisms of corruption. However, one should keep in mind, that "Corruption can only be contained, but never eliminated", as Kreuzer (1996, p. 110) suggests.

Limitations and Implications for Future Research

When interpreting the results of this study, it is important to keep in mind the limitations of current corruption research. First, evidence shows that corruption is still a shadowy and highly complex field of research whose definitions, methods and measurement are limited. It is of particular importance to be aware of potential restrictions to analyses, especially of statistical methods. In this context, future research on corruption has to find alternative, more precise definitions of corruption that take into account cultural specificities which, as my findings indicated, play an important role in the extent of corruption. Improving measurement accuracy is essential for advancing research on the causes of corruption.

Second, my analysis underlines the importance of interdisciplinary studies. As shown, the combination of different approaches and qualitative and quantitative methods and several theories and perspectives (e.g. economic and sociological theories) presents a further step in analyzing and explaining corruption. Although rational-choice approaches or cultural and institutional theories can significantly explain the extent of corruption, further corruption research needs a stronger focus on anthropological and psychological considerations (e.g. Rothstein and Torsello, 2013). Our knowledge regarding the relationship between age, gender, honesty or risk aversion has to be deepened. With regard to this, experimental approaches have a great potential and serve a useful purpose to elicit causes of corruption. As a complementary mode of investigation, they can help to identify specific factors that foster or hinder corruptive behaviour of individuals (e.g. Armantier and Boly, 2008; Alatas *et al.*, 2009; Banuri and Eckel, 2012).

Third, prospectively, it is also important to have a closer look at the individual countries and specific areas of societies. Quantitative research on corruption should take multilevel approaches more closely into account and focus strongly on the individual level. In fact, corruption occurs between individuals and does not take place at the macro level. Moreover,

further research is needed regarding corruption at the institutional and organizational level of analysis in public organizations and institutions that still remained uncovered.

Scientists have to focus on discovering the underlying mechanisms of corruption. This particularly implies a concentration of research on country-specific cultures, values and attitudes. Consequently, future research should strongly focus on the research of the third sector that has emerged as a central player in the battle against corruption by taking active positions against officials' ethical violations and by keeping the anticorruption discourse alive (e.g. Kostadinova, 2012).

Thanks to greater availability of data, there are a range of further variables that could be analyzed in the research of corruption. In addition to quantitative analyses, a qualitative focus should be applied in order to create a more in-depth approach to discover the determinants of corruption. In particular, nested analyses are very qualified for further research. Case studies that enable researchers to elicit the mechanism behind corruptive behavior within the broader European sample should be conducted. In particular, case comparison is vital to theory development, and qualitative approaches to comparison are well suited for the task. In this way, almost as a by-product of contextualized comparisons, new variables can be discovered and introduced as parts of new explanatory variables and hypotheses. Although statistical approaches achieve systematic comparisons, they cannot discover new variables (e.g. George and Bennett, 2005; Mahoney, 2005). That's why quantitative analyses have limitations and should not be overstrained – especially concerning phenomena such as corruption. Furthermore, scientists in the field of corruption should focus on specific areas and regions and avoid using world-samples, that, as my findings have illustrated, neglect or bias certain country-characteristics such as traditions and values as central features in the explanation of corruption.

In sum, research on corruption remains a challenging enterprise that needs to be pursued further.

7 References

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Appendix

Appendix A: Literature Overview

Author (year)	Dependent variable(s); operationalization, number of observations (n)	Independent Variable(s)	Level of Analysis	Main Results	Limitations
Husted (1999)	Corruption (CPI 1996) n=36	Economic (national wealth, income distribution), political (government size) and cultural variables (power distance, individualism-collectivism, masculinity-femininity, uncertainty avoidance)	Macro Level	Level of economic development with most significant correlation; significant interaction in collectivist and high power-distance countries; size of government, distribution of income and individualism are not significant	Cross-sectional analysis; Only macro level; Small n-sample; World-sample
Treisman (2000)	Corruption (CPI 1996, 1997, 1998; Index by Business International for the early 1980s) n=54-85	Economic (GDP per capita, natural resource endowments), political (democracy, federal structure, legal system) cultural variables (ethno-linguistic division, colonial traditions, religious affiliation)	Macro Level	Countries with Protestant traditions, histories of British rule, more developed economies, and (probably) higher imports were less corrupt; federal states are more corrupt; current degree of democracy was not significant, but long exposure to democracy shows lower corruption	Cross-sectional analysis; Only macro level; Certain indicators are missing (e.g. education); World-sample
Sandholtz and Koetzle (2000)	Corruption (CPI 1996) n= 50	Political-economic structure (average income, state control of the economy, strength of democratic institutions, experience with democratic rule; degree of integration into the international economy) cultural	Macro Level	Corruption is higher the lower the average income level, the greater the extent of state control of the economy, the weaker are democratic norms and institutions, the lower the degree of integration in the world economy, and the	Cross-sectional analysis; Only macro level; World-sample

		variables (Protestantism, British colonial experience)		lower the share of the population with Protestant religious affiliation	
Getz and Volkema (2001)	Corruption as mediator variable (CPI 1997) n=50-163	Economic (GDP per capita, consumer increase, bureaucracy) and cultural variables (power distance, uncertainty avoidance, collectivism, masculinity)	Macro Level	Negative relationship between economic adversity and wealth is mediated by corruption; Economic adversity is positively related to corruption; corruption is inversely related to wealth; Uncertainty avoidance moderated relationship between economic adversity and corruption, whereas power distance and uncertainty avoidance are positively associated with corruption	Cross-sectional analysis; Only macro level; Does not include political variables; World-sample
Montinola and Jackman (2002)	Corruption (Index by Business International for 1980-83; n=66); CPI for 1980-85; 1988-92) n=51	Political (democracy, government size) and economic variables (GDP/ per capita, OPEC-membership)	Macro Level	Political competition reduces corruption; Corruption is lower in dictatorships than in countries that have partially democratized; government size does not systematically affect corruption, but membership of OPEC does; corruption is more pervasive in low-income countries	Cross-sectional analysis; Only macro level; Does not include socio-cultural variables Decaying data (1980/90s); World-sample
Paldam (2002)	Corruption (CPI 1999) n=100	Economic variables (level and growth of real income per capita, the inflation rate, economic freedom index) and political variables (democracy)	Macro Level	Economic transition from poor to rich strongly reduces corruption, while periods of high inflation increase corruption; Countries with much state regulation have large potential for rent seeking, show high levels of corruption; Democracy decreases corruption	Cross-sectional analysis; Only macro level; Only economic variables and democracy; World-sample
Alt and Lassen	Corruption (1999 State house reporters`	Socio-demographic and cultural variables (urbanism, education,	Micro Level	Political institutions have influence on prevalence of corruption in	Cross-sectional analysis; Only micro

(2003)	perception of corruption) n= 45	income), political and economic variables (size of government, bureaucracy, rent-seeking, exposure to competition, regulatory burden and intrusiveness, observability, transparency, trust, electoral institutions)		American states; larger governments are associated with higher degrees of political corruption	level; Focus on American states; Small n-sample; World-sample
Xin and Rudel (2004)	Corruption (CPI 1999, 2001) n=84-95	Economic (GDP per capita), political (state strength = democracy and government expenditures), socio-demographic and cultural variables (population size, political culture)	Macro Level	Bureaucratic arrangements supplying officials great discretion and little accountability, poverty, large populations, small public sectors, and earlier historical experiences with autocratic rules may increase corruption	Cross-sectional analysis; Only macro level; World-sample
Shen and Williamson (2005)	Corruption (CoC 2002, CPI 2004) n=91	Cultural (ethno-linguistic fractionalization), political (democracy, press freedom, state strength) and economic variables (energy consumption, economic freedom)	Macro Level	Democracy and press freedom has a positive effect on perceived level of corruption control; state strength has a direct positive effect; openness of the economy has a positive effect; ethno-linguistic fractionalization has both direct and indirect negative effects	Structural equation-based model (cross-sectional-analysis); Only macro level; World-sample
Atkinson and Seiferling (2006)	Corruption (item: "How widespread do you think bribe taking and corruption is in this country?" from 3. wave of World Values Survey (1995-1998)) n=38.063 observations	National economic (national wealth, personal income) and cultural variables (religion)	Macro and Micro Level	Micro Level: religion influences the perception of corruption; education and income with negative effect; better educated and wealthier citizens of any state have a tendency to underestimate the prevalence of corruption. Macro Level: religious group with significant effect on individual perceptions of corruption; in	Only a few independent variables (wealth and culture); World-Sample

	within 33 countries			Protestant countries, corruption is perceived as relatively low; in wealthier countries the more educated are inclined to perceive less corruption.	
Seldadyo and Haan (2006)	Corruption (Control of Corruption Index 2004) n=193	Economic (e.g. GDP, trade), socio-demographic (e.g. education, inequality) bureaucratic, regulatory (e.g. labor market regulation), political (e.g. political liberty, federalism), religious and geo-cultural variables (e.g. latitude, Scandinavian legal origin)	Macro Level	“Regulatory capacity” consisting of certain variables (rule of law, judicial independence and impartial court, government effectiveness, GDP per capita, political stability, regulatory quality, bureaucratic quality, law and order, labor market regulation, international trade, internal conflict, and secondary school enrolment) as most robust determinant of corruption; other robust determinants: population density (–), Scandinavian legal origin (–), ethnic tension (+), socialism legal origin (+), portion of population with no religion (+), ethnic conflict (+), illiteracy rate (–), government wage (+), sound money (area of Fraser index); (+), latitude (–), fuel export (+), primary school enrollment (+), external debt (–), presidential (–), and portion of female in labor force (–).	Cross-sectional analysis; Only macro level; World-Sample
Glaeser and Saks (2006)	Corruption (convictions from the U.S. Justice Department Report to Congress on the Activities and Operations of the	Education and economic characteristics (e.g. gross state product, government employment, income, income inequality, integrity index, local governments, racial heterogeneity, economic freedom (government size and	Micro Level	States with higher levels of education, wealth and more balanced distribution of that wealth show lower degrees of corruption. In contrast, ethnic heterogeneity and unequal earnings promote corruption; weak negative relationship between corruption	Only micro level; Focus on American states

	Public Integrity Section; 1989, 1999, 2002 reports, additional information on the number of convictions by state annually from 1976 to 2002) n=10000	regulation), small business survival index, state legislators per capita, tax revenue, unionized workers, urban population share,		and economic development in a state.	
Shabbir and Anwar (2007)	Corruption (CPI 2004) n=41	Economic (economic freedom, globalization, level of education, distribution of income and average level of income) and non-economic factors (press freedom, democracy and share of population affiliated with particular religion)	Macro Level	Economic determinants are negatively related to corruption except distribution of income noneconomic determinants are not significantly explaining the variations in the level of corruption	Cross-sectional-analysis; Only macro level; Focus on developing countries
Mocan (2008)	Corruption (International Crime Victim Survey, CPI, Business International, International Country Risk Guide, 1994-1996) n=50	Economic (unemployment rate); political (strength of country's institutions), socio-demographic variables (gender, income, education, marital status, city size)	Micro and Macro Level	Highly educated and high-income individuals have higher exposure to being asked for a bribe by a government official; Males are more frequent targets of bribery; Living in larger cities also increases the risk of exposure to bribery; Strength of institutions in the country reduces the extent of corruption as well as a decrease in the unemployment rate.	Cross-sectional-analysis; Small n-sample; World-Sample
Billger and Goel (2009)	Corruption (CPI, 2001-2003) n=99	Economic (economic prosperity, economic freedom), political (democracy, government size) and socio-cultural (degree of urbanization) variables	Macro Level	Larger governments and greater economic freedom do not reduce corruption, but higher degrees of democracy decrease it	Only a few indicators; Only macro level; Cross-sectional analysis; World-Sample

Goel and Nelson (2010)	Corruption (CPI 1995-1997; 1998-2000; 2001-2003) n=100	Historical (as years of national independence), geographical (e.g. physical land area, urbanization), political (democracy; size and scope of government) variables	Macro Level	Size and scope of government significantly determine the degree of corruption; historical institutional inertia in older countries and new rent-seeking opportunities in younger nations can encourage corruption, while certain geographic factors may decrease corruption	Cross-sectional analysis; Only macro level; Neglect of economic variables; World-Sample
Littvay and Donica (2011)	Corruption (International Country Risk Guide, 1984-2004) n=186	Economic (GDP, trade openness, fuel exports, mineral exports, government wages), political (democratic performance, stability, common law, federalist government structure, government invention) and a few socio-cultural variables (ethnic tension, percent Protestants, British colonial past)	Macro Level	Poor democratic and economic performances as well as red tape are associated with high levels of corruption; highly paid government officials and trade openness increase corruption while oil production not; British colonies are more corrupt; British colonial experience is a meaningless independent variable of corruption; ethnic diversity, or even stable levels of ethnic tensions have less of an impact on corruption that changes in ethnic tension levels; government stability in a country is associated with short term surges of corruption that diminishes in the long	ICRG as dependent variable; Only macro level; Includes only a few socio-cultural variables; World-Sample
O'Connor and Fischer (2012)	Corruption (CPI 1995-2008; Internet Center for Corruption for the periods 1980 to 1985 and 1988 to 1992) n=59	Societal Values (self-expression, rational values); wealth; political institutions (degree of democracy; government size)	Micro and Macro Level	Self-expression societal values, wealth, and government size significantly influence the level of corruption. "Within societies", wealth is only a marginally significant predictor of corruption – in contrast to "between countries."	Includes only one economic variable (GDP); Small n-sample; World-Sample

Appendix B: Sources of Corruption Perception Index

B.1: Corruption Perceptions Index 2010



Corruption Perceptions Index 2010 *Sources of Information*

The 2010 Corruptions Perceptions Index (CPI) draws on corruption-related data from 13 different expert and business surveys carried out by 10 independent and reputable institutions. This document briefly explains the nature of each source, its scoring process, country coverage, and timeline.

African Development Bank (AfDB) - Country Policy and Institutional Assessment 2009

About:

AfDB's 2009 Country Policy and Institutional Assessment (CPIA) assess the quality of a country's institutional framework in terms of how conducive it is for fostering the effective use of development assistance. The current CPIA strives to achieve a maximum level of uniformity and consistency across all regional member countries surveyed. Also, and in order to comply with the Paris and Rome declarations on Aid Effectiveness, Harmonization and Alignment, the AfDB has modified the questionnaire and guidelines for its CPIA to be in line with those of the World Bank and the Asian Development Bank, thus increasing the comparability and synergy among systems. Donors agreed to modify (and simplify) the performance-based allocation (PBA) formula¹ used from the Eleventh General Replenishment of the African Development Fund onwards.

Who provides the assessment?

The CPIA is performed by a group of country economists with vast experience in policy analysis. The knowledge of these experts is complemented with that of local contacts that provide both quantitative and qualitative insights. Peer discussions are also used to monitor the quality of the findings.

Guidelines used:

The AfDB follows the International Development Association's (IDA) country policy and institutional assessment questionnaire and guidelines² which are also used by the World Bank and the Asian Development Bank in their respective CPIAs. Despite a high correlation coefficient of 0.9³ slight differences persist among the different systems mainly due to the small yet inevitable degree of subjectivity that remains in the assessment (i.e. performance cannot be entirely reduced to quantitative values). In line with the international agreements on aid harmonization and alignment, maintaining similar performance evaluation standards remains a primary challenge in scoring project performance.

What questions are reflected in the 2010 CPI?

¹ This is in reaction to several parallel changes in the PBA system under the Asian Development Fund's AsDF-11 and the International Development Association's IDA-15. See AfDB's "Country Policy and Institutional Assessment Questionnaire and Guidelines for 2009", <http://www.afdb.org/en/documents/project-operations/country-performance-assessment-cpa/country-policy-and-institutional-assessment-cpia/>

² The International Development Association is a member of the World Bank Group.

³ Though the ADB uses the World Bank/IDA guidelines, as developed for their "Country Policy and Institutional Assessment" (CPIA), they do not use the CPIA directly.

Of particular interest for the CPI was the "Transparency, Accountability, and Corruption in the Public Sector" portion of the IDA questionnaire, which is described below:

"This criterion assesses the extent to which the executive can be held accountable for its use of funds and the results of its actions by the electorate and by the legislature and judiciary, and the extent to which public employees within the executive are required to account for the use of resources, administrative decisions, and results obtained. Both levels of accountability are enhanced by transparency in decision-making, public audit institutions, access to relevant and timely information, and public and media scrutiny. A high degree of accountability and transparency discourages corruption, or the abuse of public office for private gain. National and sub-national governments should be appropriately weighted. Each of three dimensions should be rated separately: (a) the accountability of the executive to oversight institutions and of public employees for their performance; (b) access of civil society to information on public affairs; and (c) state capture by narrow vested interests."⁴

How were these questions scored?

The CPIA is a two-phase process involving i) the rating of a small representative sample of countries drawn from all regions (the benchmarking phase) and ii) the rating of the remaining countries using the benchmarking phase results as guideposts. Countries, therefore, are scored in relation to their current status and the criteria and benchmark countries. The ratings should not reflect any improvement or deterioration in terms of the previous year's results. The rating scale ranges from 1 (very weak for two years or more) to 6 (very strong for three years or more) allowing for intervals of 0.5 (e.g. 3, 3.5, 4, 4.5, etc.). Each rating must be justified in the Country Worksheet Form and scorers must take the size of the country's economy and its degree of sophistication into consideration when implementing the guidelines.

Number of countries/territories covered: 53 African countries/territories.

Website

<http://www.afdb.org/en/documents/project-operations/country-performance-assessment-cpa/country-policy-and-institutional-assessment-cpia/>

Timeline

Compiled: 2009. Published: 2010.

Asian Development Bank - Country Performance Assessment Exercise 2009

About:

In order to determine how resources are allocated – through the Asian Development Fund (ADF) – the Asian Development Bank (ADB) operates a performance-based allocation (PBA) policy. Since 2006, Country Performance Assessments were reserved for developing member countries with populations of over 1 million, post-conflict countries and those deemed to be "weakly performing" (ie. countries consistently rated in the fourth or fifth quintile in recent studies).

Who provides the assessment?

The ADB study was conducted by a small group of country specialists with relevant experience in analysing countries' performance. This group is comprised of local contacts

⁴ AfDB Group, "The 2009 Country Policy and Institutional Assessments (CPIA) 2009 CPIA Questionnaire" (Abidjan: AfDB, 2009),34.

that conduct quantitative assessments and work with staff members based at headquarters. Peer discussions are also used to monitor the quality of the findings.

Guidelines used:

Pursuant to PBA policy, the ADB follows the International Development Association's (IDA) country policy and institutional assessment questionnaire and guidelines.⁵

What questions are reflected in the 2010 CPI?

The ADB studies a DMC's institutional and policy framework for supporting sustainable growth, poverty reduction and an effective use of concessional assistance. The performance of each assessed country is structured along the following criteria:

1. the quality of its macroeconomic management
2. the coherence of its structural policies
3. the degree to which its policies and institutions promote equity and inclusion
4. quality of its governance and public sector management, and
5. the performance of the ADF project portfolio in the country.⁶

More specifically for the CPI, the focus on "Transparency, Accountability, and Corruption in the Public Sector" is especially relevant, as explained by the guidelines:

"This criterion assesses the extent to which the executive can be held accountable for its use of funds and the results of its actions by the electorate and by the legislature and judiciary, and the extent to which public employees within the executive are required to account for the use of resources, administrative decisions, and results obtained. Both levels of accountability are enhanced by transparency in decision-making, public audit institutions, access to relevant and timely information, and public and media scrutiny. A high degree of accountability and transparency discourages corruption, or the abuse of public office for private gain. National and sub-national governments should be appropriately weighted. Each of three dimensions should be rated separately: (a) the accountability of the executive to oversight institutions and of public employees for their performance; (b) access of civil society to information on public affairs; and (c) state capture by narrow vested interests."⁷

How were these questions scored?

Scores vary between 1 (lowest) and 6 (highest) and are computed by assessing the extent of corruption among politicians and public officials, more specifically in the context of conflicts of interest, policies unfairly favouring a certain interest group or modified as a result of corruption, ineffective audits and public resources used for private gain.

Number of countries/territories covered: 28 Asian countries/territories.

Website:

<http://www.adb.org/ADF/PBA/annualreport.asp>

Timeline: Compiled: 2009. Published: 2010.

Bertelsmann Stiftung – Transformation Index BTI 2010

About:

The 2010 edition of the Transformation Index (BTI) assesses the political, economic and

⁵ The International Development Association is a member of the World Bank Group.

⁶ Asian Development Bank, "Annual Report on the 2009 Country Performance Assessment Exercise" (Manila: ADB, 2010).

⁷ Asian Development Bank, "Country Policy And Institutional Assessments: 2010 Assessment Questionnaire" (Manila:ADB, 2010).

social transformation in 128 developing and transformation countries around the world.⁸ The BTI consists of a Status Index and a Management Index. The former measures and ranks countries in relation to the state of their democracy and market economy, while the latter measures and ranks them relative to their respective leadership's management performance. The scores are based on detailed country reports which assess 52 questions divided into 17 criteria.

Who provides the assessment?

Assessments are provided by two experts per country. The 128 countries are divided into seven regional groups which are each managed by a regional coordinator.

Guidelines used:

Country assessments consist of two sections: the written assessment of the state of transformation and management performance in a country (country report) and the numerical assessment of the state of transformation and management performance (country ratings). The assessments are then blindly reviewed by a second country expert who also provides a second independent rating of the country. Another stage of edits and adjustments then follow with an intra-regional review stage followed by an inter-regional review and ratings aggregation.

What questions are reflected in the 2010 CPI?⁹

The following questions were used as part of the CPI:

- To what extent are there legal or political penalties for officeholders who abuse their positions?"
 - [10-9] As a rule, corrupt officeholders are prosecuted rigorously under established laws.
 - [8-6] As a rule, corrupt officeholders are prosecuted under established laws but also slip through political, legal or procedural loopholes.
 - [5-3] Corrupt officeholders are not prosecuted adequately under the law but occasionally attract adverse publicity.
 - [2-1] Officeholders can exploit their offices for private gain as they see fit without fear of legal consequences or adverse publicity.
- "To what extent can the government successfully contain corruption?"
 - [10-9] All integrity mechanisms are reasonably effective. They are actively supported by the government.
 - [8-6] Most integrity mechanisms are functioning, albeit partly with limited effectiveness. The government provides almost all integrity mechanisms.
 - [5-3] Some integrity mechanisms are implemented. Often, they remain ineffective; their operation is impeded by private interests. The government's motivation and capacity to implement reforms is mixed.
 - [2-1] Portions of the state are controlled by private interest groups; reform is impeded by private interests, rendering most integrity mechanisms nonexistent or ineffective.

How were these questions scored?

According to BTI, "scores are assigned on a scale of 1 to 10 with ten being the highest score. The ratings scale is also subdivided into four response options, each of which describes an empirical assessment that corresponds to a particular rating. ...

"Scores are aggregated by calculating their arithmetic mean. First, we calculate scores for the 17 criteria individually, then we calculate the means of the criteria scores for each dimension—democracy, market economy, management—respectively. Status Index scores

⁸ BTI countries must satisfy three criteria in order to be included in the index: i) they have not yet achieved a fully consolidated market economy and democracy, ii) have populations of above two million (with the exception of seven nations chosen as interesting cases) and iii) are recognised as sovereign states.

⁹ Bertelsmann Stiftung, "BTI 2010 Manual for Country Assessments" (Gütersloh, 2009).

represent the mean value of the democracy and market economy scores. Both values are, however, displayed separately in the table. Management Index scores represent the mean value of four management criteria that are weighted by a 7th criterion, Level of Difficulty. We believe good governance under difficult conditions should be appreciated more than an equivalent performance under promising conditions.”¹⁰

Number of countries/territories covered: 128 countries/territories.

Website:

<http://www.bertelsmann-transformation-index.de/english>

Timeline: Produced: November 2008-May 2009. Publishing date: December 2009.

Economist Intelligence Unit – Country Risk Service and Country Forecast 2010

About:

The Economist Intelligence Unit (EIU) was established in 1946 as the research body for The Economist magazine. Since, it has grown into a global research and advisory firm that produces business intelligence for policy makers worldwide. 650 full-time and contributing analysts work in and on over 200 countries.

Who provides the assessment?

The EIU relies on teams of experts based primarily in London (but also New York, Hong Kong, Beijing and Shanghai) who are supported by a global network of in-country specialists. Each country analyst covers at most two or three countries. The economic and political reports produced by EIU analysts are subjected to a rigorous checking process before publication.

Guidelines used:

Economist Intelligence Unit country experts assign their corruption scores as part of a broad assessment of country risk. The scores are assigned on the basis of all latest available information. The country experts' analysis and scores are checked by a regional risk manager who ensures consistency in the scoring of countries in the region. A global risk director is in turn responsible for ensuring consistency across regions.

What questions are reflected in the 2010 CPI?

The following questions illustrate the type used by the EIU in their survey:

- Are there clear procedures and accountability governing the allocation and use of public funds?
- Are public funds misappropriated by ministers/public officials for private or party political purposes; are there special funds for which there is no accountability; are there general abuses of public resources?
- Is there a professional civil service or are large numbers of officials directly appointed by the government?
- Is there an independent body auditing the management of the public finances?
- Is there an independent judiciary with the power to try ministers/public officials for abuses?
- Is there a tradition of a payment of bribes to secure contracts and gain favours?

How were these questions scored?

¹⁰ Bertelsmann Stiftung, "BTI 2010 Manual for Country Assessments" (Gütersloh, 2009).

EIU asks its panel of country experts to assess the incidence of corruption and defines corruption as the misuse of public office for personal (or party political) financial gain. Scores are Integers between 0 (denoting a "very low" incidence of corruption) and 4 (denoting a "very high" incidence).

Number of countries/territories covered: 135 countries/territories

Website: www.eiu.com

Timeline: Produced: 2010. Published: September, 2010

Freedom House - Nations in Transit 2010

About:

The Nations in Transit (NIT) country reports, produced by Freedom House, measure democratisation in 29 nations and administrative areas throughout Central Europe and the Newly Independent States (NIS). The reports focus on democratic progress and setbacks and the 2010 edition of the NIT is an assessment of events occurring in 2009.

Each report focuses on the following thematic areas: national democratic governance, electoral process, civil society, independent media, local democratic governance, judicial framework and independence and corruption.

Who provides the assessment?

The NIT surveys were produced by Freedom House staff and consultants. The latter were recommended by relevant authorities and are regional or country specialists. A range of sources were used in compiling the report, including multilateral lending institutions, nongovernmental organizations, and other international organizations, local newspapers and magazines, and select government data.

Guidelines used:

Freedom House generates these ratings to appraise the level of democracy or authoritarianism in a studied country as opposed to being absolute indicators of a country's political condition.

What questions are reflected in the 2010 CPI?

The following NIT corruption-related questions were used for the purposes of the CPI:

1. Has the government implemented effective anticorruption initiatives?
2. Is the country's economy free of excessive state involvement?
3. Is the government free from excessive bureaucratic regulations, registration requirements, and other controls that increase opportunities for corruption?
4. Are there significant limitations on the participation of government officials in economic life?
5. Are there adequate laws requiring financial disclosure and disallowing conflicts of interest?
6. Does the government advertise jobs and contracts?
7. Does the state enforce an effective legislative or administrative process—particularly one that is free of prejudice against one's political opponents—to prevent, investigate, and prosecute the corruption of government officials and civil servants?
8. Do whistle-blowers, anticorruption activists, investigators, and journalists enjoy legal protections that make them feel secure about reporting cases of bribery and corruption?
9. Are allegations of corruption given wide and extensive airing in the media?

10. Does the public display a high intolerance for official corruption?¹¹

How were these questions scored?

Numerical ratings are assigned to each of the 29 NITs as a result of collaboration between report authors and a panel of academic advisors. Ratings run from 1 (highest rating) to 7 (lowest rating) and follow a quarter-point scale. They are assigned according to the practical effects of the state and civil society on a citizen's individual freedoms and rights as opposed to being a rating of governments per se.¹²

The ratings process is described as follows:

1. Authors of individual country reports suggested preliminary ratings in all seven categories covered by the study.
2. The U.S. and Central Europe & Eurasia academic advisers evaluated the ratings and made revisions.
3. Report authors were given the opportunity to dispute any revised rating that differed from the original by more than 0.50 point.
4. Freedom House refereed any disputed ratings and, if the evidence warranted, considered further adjustments. Final editorial authority for the ratings rested with Freedom House.¹³

Number of countries/territories covered: 29 countries/territories from Eastern Europe and Central Asia.

Website: <http://www.freedomhouse.org/template.cfm?page=551>

Timeline: Compiled: January 1, December 31 –2009. Published: 2010.

IHS Global Insight – Country Risk Ratings 2010

About:

IHS Global Insight (IGI) is a leading analysis and forecasting company with clients in finance, government and industry. It provides a wide range of online services covering macroeconomics, country risk and individual sectors. Parent company IHS provides both analytical and technical data services and focuses primarily on the areas of security, energy, environment and product lifecycle. The firm has around 4,000 staff worldwide based in numerous countries.

IGI has a number of different risk services. The CPI contribution is drawn from the Country Risk Ratings system. This has been in operation since 1999 and provides six-factor analysis of the risk environment in 204 countries (Political, Economic, Legal, Tax, Operational and Security). The corruption assessment supplied to TI forms *part* of the Operational risk.

Who provides the assessment?

The assessments are made by over 100 in-house country specialists, who also draw on the expert opinions of in-country freelancers, clients and other contacts.

Guidelines used:

The ratings reflect IHS Global Insight analysts' expert perceptions of the comparative level of the problem in each country. The ratings assess the broad range of corruption, from petty bribe-paying to higher-level political corruption. The figures are not quantitative - they do not equate to a probability or frequency assessment. Rather they provide a qualitative ranking

¹¹ Freedom House, "Nations in Transit Methodology 2010" (Online publication: Freedom House, 2010).

¹² Freedom House, "Nations in Transit Methodology 2010" (Online publication: Freedom House, 2010).

¹³ Freedom House, "Nations in Transit Methodology 2010" (Online publication: Freedom House, 2010).

between the least corrupt countries (1.0) and the most corrupt (5.0). Even in the least corrupt countries there will be isolated examples of the practice. In countries at the bottom of the ranking, corruption will be endemic in almost every transaction and interaction between individuals and businesses and the state.

What questions are reflected in the 2010 CPI?

The IGI rating focuses on a broad range of corruption activities. This includes bribe-paying to obtain:

- Business permits
- Favourable legal judgements
- A blind eye from the polic;
- A blind eye from regulators (for instance, with regards to labour laws, environmental policies, competition/antitrust framework)
- Favourable policy decisions from central and local government
- Favourable planning decisions
- Government tenders
- Inter-company bribery, and
- Facilitation payments to individuals within a company in order to swing procurement decisions.

How were these questions scored?

The ratings provided range from 1.0 (minimum corruption) to 5.0 (maximum). The minimum interval is 0.5. Once the analyst has supplied initial ratings these are reviewed and benchmarked by IHS Global Insight's global risk specialists.

Number of countries/territories covered: 201 countries/territories.

Website: www.ihsglobalinsight.com/

Timeline: Compiled: September 2010. The Country Risk Rating system is continuously maintained. The ratings reflect the current situation.

International Institute for Management Development – World Competitiveness Yearbook 2009*About:*

The International Institute for Management Development (IMD) produces the World Competitiveness Yearbook (WCY) which measures the competitiveness of nations and, in doing so, both ranks and examines how a nation's socio-political and economic climate affects corporate competitiveness. The survey reviews 57 countries using 329 criteria in order to obtain a multifaceted image of the competitiveness of nations. For the purpose of the survey, "competitiveness" is defined as follows: "Competitiveness of nations is a field of economic knowledge, which analyzes the facts and policies that shape the ability of a nation to create and maintain an environment that sustains more value creation for its enterprises and more prosperity for its people."¹⁴

The WCY is a hybrid survey given that statistical data determines two-thirds of a country's final ranking, with the rest dependent on results from opinion surveys. The statistical data is generated from 3,960 contributing executives, amounts to over 500 pages and is collected in collaboration with 54 Partner Institutes around the world to assure the validity and relevance of the data.¹⁵

Who provides the assessment?

The WCY is a survey of senior business leaders who, together, reflect a cross-section of a nation's corporate community. IMD calls upon local and foreign enterprises operating in a given economy, and surveys both nationals and expatriates, so as to add an international perspective on local environments.

What questions are reflected in the 2010 CPI?

The methodology of the WCY divides national environments into four main factors: Economic Performance, Government Efficiency, Business Efficiency and Infrastructure. For the purpose of the CPI, TI used the following question: "Bribing and corruption: Exist or Do Not Exist".

Participants are asked to answer this in the context of the country in which they work and have resided for the past year, based on their previous international experience. This is done so that the study accurately reflects their familiarity and knowledge of the particular environment in which they work.

How were these questions scored?

"The data collected from the survey questions are converted from a 1 – 6 scale (from which the respondents choose the most appropriate answer) to a 0 – 10 scale. This enables us to quantify issues related to competitiveness for which hard data is unavailable or to measure intangible factors which are also important to a country's competitiveness."¹⁶

Number of countries/territories covered: 57 countries/territories.

Website: www.imd.ch/wcy

Timeline: Compiled: January-April 2009. Published: May 2009.

¹⁴ <http://www.imd.ch/research/publications/wcy/upload/FAQs.pdf>

¹⁵ *ibid.*

¹⁶ IMD, "The IMD WCY Executive Opinion Survey 2009" (Lausanne: IMD, 2009).

International Institute for Management Development – World Competitiveness Yearbook 2010*About:*

The International Institute for Management Development (IMD) publishes annually the World Competitiveness Yearbook (WCY) which measures the competitiveness of nations and, in doing so, both ranks and examines how a nation's socio-political and economic climate affects corporate competitiveness. The survey reviews 58 countries using 327 criteria in order to obtain a multifaceted image of the competitiveness of nations. For the purpose of the WCY, "competitiveness" is defined as follows: "Competitiveness of nations is a field of economic knowledge, which analyzes the facts and policies that shape the ability of a nation to create and maintain an environment that sustains more value creation for its enterprises and more prosperity for its people."¹⁷

The WCY is a hybrid report given that statistical data determines two-thirds of a country's final ranking, with the rest dependent on results from opinion surveys. The survey data is generated from more than 4,000 contributing executives, amounts to over 500 pages and is collected in collaboration with 54 Partner Institutes around the world to assure the validity and relevance of the data.¹⁸

Who conducted the survey?

The WCY is a survey of senior business leaders who, together, reflect a cross-section of a nation's corporate community. IMD calls upon local and foreign enterprises operating in a given economy, and surveys both nationals and expatriates, so as to add an international perspective on local environments. Despite the potential for a home-country bias that comes with opinion surveys conducted by residents of their own country, the CPI would be incomplete if it simply was North-dominated and lacked local knowledge and input.

What questions were used?

The methodology of the WCY divides national environments into four main factors: Economic Performance, Government Efficiency, Business Efficiency and Infrastructure. For the purpose of the CPI, TI used the following question: "Bribing and corruption: Exist or Do Not Exist".

Participants are asked to answer this in the context of the country in which they work and have resided for the past year, based on their previous international experience. This is done so that the study accurately reflects their familiarity and knowledge of the particular environment in which they work.

How are scores assigned?

"The rankings for the survey questions are obtained from the average value for each country. The data are converted from a 1 – 6 scale (from which the survey respondents choose the most appropriate answer) to a 0 – 10 scale. The standard deviation values are then calculated for the responses to determine the rankings. This enables us to quantify issues related to competitiveness for which hard data is unavailable or to measure intangible factors which are also important to a country's competitiveness."¹⁹

Website

www.imd.ch/wcy

Number of countries/territories covered: 58 countries/territories.

Timeline

Compiled: January-April 2010. Published: May 2010.

¹⁷ <http://www.imd.ch/research/publications/wcy/upload/FAQs.pdf>

¹⁸ *ibid.*

¹⁹ IMD, "The IMD WCY Executive Opinion Survey 2010" (Lausanne: IMD, 2010).

Political & Economic Risk Consultancy Ltd. – Asian Intelligence 2009*About:*

Political and Economic Risk Consultancy (PERC) publishes an annual regional corruption review, whose first editions date back over twenty years when they began to survey local and expatriate businessmen and women.

Who provides the assessment?

The PERC survey is an executive opinion survey conducted via face-to-face interviews, postal correspondence and emails. At least 100 executives responded in each of the countries surveyed, save in Cambodia, where only 55 replies were collected. On the whole, however, 1,750 replies on the 16 countries and territories surveyed contributed to the study. Respondents were asked to assess corruption in the country in which they worked or, if they were expatriates, for their home country. Local and expatriate responses were also separated for comparison.

What questions were used in the 2010 CPI?

The survey asked about the perception of political corruption in the respondent's home country. Other questions were also posed, namely pertaining to the extent that respondents perceived corruption to hurt the overall business environment, to infect certain national institutions like the banking and court systems, and questions concerning society's tolerance of the problem were also included. These questions strove to address various facets of how corruption affects both the public and private sectors.

How were these questions scored?

The PERC report included a graph illustrating the results from the mean of the three survey questions, ie. one rating the problem of corruption among national-level political leaders, one for city, state and other local-level political leaders, and one for civil servants. Scores were computed on a scale of 0-10 where zero was the highest possible score and ten was the lowest result. The final scores included in the graph are simple averages from the three questions, except for the US score which was calculated as follows: "for the total US score we took the average of the 88 replies we received from executives living and working in Chicago, Illinois and included that average with the 107 replies we received from other cities in the US."²⁰

Number of countries/territories covered: 16 countries/territories from the Asia-Pacific region plus the United States

Website: www.asiarisk.com

Timeline: Compiled: March 2009 (except Cambodia – December 2008 to January 2009).
Published: April 2009.

²⁰ PERC, "Asian Intelligence" No. 776 (Hong Kong: PERC, 2009).

Political & Economic Risk Consultancy Ltd. - Asian Intelligence 2010*About:*

The Political and Economic Risk Consultancy (PERC) publishes an annual regional corruption review, whose first editions date back over twenty years when they began to survey local and expatriate businessmen and women.

Who conducted the survey?

The PERC survey is an executive opinion survey conducted via face-to-face interviews, postal correspondence and emails. At least 100 executives responded in each of the countries surveyed. On the whole, 2,174 replies on the 16 countries and territories surveyed contributed to the study. Respondents were asked to assess corruption in the country in which they worked or, if they were expatriates, for their home country. Local and expatriate responses were also separated for comparison.

What questions were used?

The survey asked about the perception of political corruption in the country in which the respondents were working as well as their home country. Other questions were also posed, namely pertaining to the extent that respondents perceived corruption to hurt the overall business environment, to infect certain national institutions like the banking and court systems, and concerning society's tolerance of the problem were also included. These questions strove to address various facets of how corruption affects both the public and private sectors.

How are scores assigned?

The PERC report included a graph illustrating the results from the mean of four survey questions, ie. one rating the problem of corruption among national-level political leaders, one for city, state and other local-level political leaders, one for civil servants at the national level, and one for civil servants at the local level. Scores were computed on a scale of 0-10 where zero was the highest or best possible score and ten was the lowest or worst possible result. The final scores included in the graph are simple averages from the four questions.

Number of countries/territories covered: 16 countries/territories

Website

www.asiarisk.com

Timeline

Compiled: December 2009 and end February 2010.
Published: March 2010.

World Bank - Country Policy and Institutional Assessment 2009

About:

The World Bank developed its Country Policy and Institutional Assessments (CPIA) to help steer the allocation of International Development Association (IDA) lending resources. "The assessments consist of a set of criteria representing the different policy and institutional dimensions of an effective poverty reduction and growth strategy. The criteria have evolved over time, reflecting lessons learned and mirroring the evolution of the development paradigm."²¹

Who provides the assessment?

The assessment is prepared by country teams with relevant experience in analysing countries' performance that include staff located in the field offices and in the Bank's headquarters. Country teams submit rating proposals for each criterion accompanied by written justifications. To ensure the robustness of the scores across countries and regions the proposals are then subject to a two step review. First they are vetted by the respective Regional Chief Economist, and then subject to a Bank wide review by technical specialists in each of the areas covered in the CPIA. During the CPIA process country authorities are involved at two stages. The first is when the ratings proposals are being prepared and before they are submitted for Bank-wide review. The objective of this step is to ensure that country teams have taken into account all the relevant available information when preparing their write-ups and the associated rating proposals. The guidance provided to the teams makes clear that these interactions with country authorities are part of a process of consultation, not a negotiation over the ratings. The second stage takes place at the end of the CPIA process when country teams communicate to the authorities the results of the Bank's assessment.

Guidelines used:

The World Bank follows the International Development Association's (IDA) country policy and institutional assessment questionnaire and guidelines, which it developed.²²

What questions are reflected in the 2010 CPI?

The CPIA surveys countries on the following themes: i) economic management, ii) structural policies, iii) policies for social inclusion/equity and iv) governance. More specifically for the CPI, this translates into the following focal point: Transparency, Accountability, and Corruption in the Public Sector. This point is explained by the guidelines as follows:

"This criterion assesses the extent to which the executive can be held accountable for its use of funds and the results of its actions by the electorate and by the legislature and judiciary, and the extent to which public employees within the executive are required to account for the use of resources, administrative decisions, and results obtained. Both levels of accountability are enhanced by transparency in decision-making, public audit institutions, access to relevant and timely information, and public and media scrutiny. A high degree of accountability and transparency discourages corruption, or the abuse of public office for private gain. National and sub-national governments should be appropriately weighted. Each of three dimensions should be rated separately: (a) the accountability of the executive to oversight institutions and of public employees for their performance; (b) access of civil society to information on public affairs; and (c) state capture by narrow vested interests."²³

How were these questions scored?

²¹ World Bank, "Country Policy and Institutional Assessments: 2010 Assessment Questionnaire" (Washington: WB, 2010).

²² The International Development Association is a member of the World Bank Group.

²³ World Bank, "Country Policy And Institutional Assessments: 2010 Assessment Questionnaire" (Washington: WB, 2010).

The CPIA is a two-phase process involving i) the rating of a small representative sample of countries drawn from all regions (the benchmarking phase) and ii) the rating of the remaining countries using the benchmarking phase results as guideposts. The benchmark set is reviewed every year to balance continuity with the need to refresh the sample. For a given country, its policy and institutional performance is scored against the criteria. The rating scale ranges from 1 (low) to 6 (high) and allows for half point intermediate ratings (eg. 3.5). Each score must be justified in a Country Worksheet Form. The final scores are determined following an extensive Bank-wide review. The steps followed in the second phase are similar to those in the benchmarking phase. The review is based on written submissions and informed by the scores of the benchmark countries, available external indicators and other relevant supporting documentation. Both during the benchmarking phase and in the second stage of the CPIA process, country team proposals are reviewed first by the regional Chief Economist and then subject to a Bank-wide review.

Number of countries/territories covered: 75 of the poorest countries as defined by the World Bank.

Website: <http://go.worldbank.org/S2THW1X60>

Timeline: Compiled: Fall 2008 & Spring 2009. Published: 2010.

World Economic Forum – Executive Opinion Survey 2009-10*About:*

As part of the World Economic Forum's "Global Competitiveness Report 2009-10" which profiled 133 economies, the Executive Opinion Survey (EOS) 2009 transforms the yearly report into an executive appraisal of a nation's economic environment and its ability to sustain economic growth. Its data is the result of polling over 12,000 business executives from around the world.

The EOS 2009, and the Global Competitiveness Report more generally, strive to produce a clearer picture of the current and future health of a country's economic and corporate environment as well as its relationship to the global economy.

Who provides the assessment?

The EOS is an opinion survey which collects local views on the performance of the country in which one works as opposed to an expert assessment survey guided by outsiders. More specifically, the survey focuses on gauging the current business environment in which the one operates.

What questions are reflected in the 2010 CPI?

The EOS 2009 is divided into thematic sections and the CPI uses data from the Corruption, Ethics and Social Responsibility portion of the EOS 2009 study – namely, the following questions:

- In your country, how commonly do the following firms pay bribes to public servants or public officials?
- In your country, how common is it for firms to make undocumented extra payments or bribes connected with the following:
 - a. Imports and exports?
 - b. Public utilities (e.g. telephone or electricity)?
 - c. Annual tax payments?
 - d. Awarding of public contracts and licences?
 - e. Obtaining favourable judicial decisions?

How were these questions scored?

Scores range from 1 to 7 with the extremities signifying that the respondent agrees with opposing opinions. The answer on one extreme supports the statement in question and the answer on the other extreme rejects it. Scores falling between the extremities express the following reactions to the opinions: largely agree with the opinion A, somewhat agree with opinion A, indifferent to either opinion, somewhat agree with the opinion B, and largely agree with opinion B.

Number of countries/territories covered: 133 countries.

Website:

<http://www.weforum.org/en/initiatives/gcp/Global%20Competitiveness%20Report/PastReports/index.htm>

Timeline: Compiled: January-May 2009. Published: 2009.

Executive Opinion Survey 2010-11 – World Economic Forum*About:*

As part of the World Economic Forum's (WEF) "Global Competitiveness Report 2010-11" which profiles 139 economies, the Executive Opinion Survey (EOS) allows for the annual Global Competitiveness Report to portray an executive appraisal of a nation's economic environment and its ability to sustain economic growth. Its data is the result of polling over 13,000 business executives from around the world.

The EOS, and the Global Competitiveness Report more generally, strive to produce a clearer picture of the current and future health of a country's economic and corporate environment as well as its relationship to the global economy.

Who conducted the survey?

The EOS is an opinion survey which collects national views on the performance of the country in which business executives operate as opposed to an expert assessment survey guided by outsiders. More specifically, the survey focuses on gauging the current business environment in which the one operates.

Using such surveys as a source for the CPI ensures a balance between both survey types and helps to avoid a purely North-based assessment and enriches the CPI by offering it more balanced and accurate results.

What questions were used?

The EOS is divided into thematic sections and the CPI uses data from the Corruption, Ethics and Social Responsibility section of the EOS study – namely, the following questions:

- In your country, how commonly do the following firms pay bribes to public servants or public officials?
- In your country, how common is it for firms to make undocumented extra payments or bribes connected with the following:
 - a. Imports and exports?
 - b. Public utilities (e.g. telephone or electricity)?
 - c. Annual tax payments?
 - d. Awarding of public contracts and licences?
 - e. Obtaining favourable judicial decisions?

How are scores assigned?

Scores range from 1 to 7 with the extremities signifying that the respondent agrees with opposing opinions. The answer on one extreme supports the statement in question and the answer on the other extreme. Scores falling between the extremities express the following reactions to the opinions: largely agree with the opinion A, somewhat agree with opinion A, indifferent to either opinion, somewhat agree with the opinion B, and largely agree with opinion B. The CPI computes the World Economic Forum scores using a simple average method and without distinguishing between administrative and political corruption.

Website

<http://www.weforum.org/gcr>

Timeline

Compiled: January-May 2010. Published: 2010.

B.2:



Corruption Perceptions Index 2010

Sources of information

Number	1	2	3
Abbreviation	ADB	AFDB	BTI
Source	Asian Development Bank	African Development Bank	Bertelsmann Foundation
Name	Country Performance Assessment Ratings	Country Policy and Institutional Assessments	Bertelsmann Transformation Index
Year published	2010	2010	2009
Internet	http://www.adb.org/Documents/Reports/Country-Performance-Assessment-Exercise/default.asp	http://www.afdb.org/pls/portal/url/ITEM5008432D529957FAE040C00A0C3D3A86	http://www.bertelsmann-transformation-index.de/english
Who was surveyed?	Country teams, experts inside and outside the bank	Country teams, experts inside and outside the bank	Network of local correspondents and experts inside and outside the organisation
Subject asked	Transparency, accountability, and corruption in the public sector	Transparency, accountability, and corruption in the public sector	The government's capacity to punish and contain corruption
Number of replies	Not applicable	Not applicable	Not applicable
Coverage	28 countries (eligible for ADF funding)	53 countries	128 less developed and transition countries

Number	4	5	6
Abbreviation	CPIA	EIU	FH
Source	World Bank (IDA and IBRD)	Economist Intelligence Unit	Freedom House
Name	Country Policy and Institutional Assessment	Country Risk Service and Country Forecast	Nations in Transit
Year published	2010	2010	2010
Internet	http://go.worldbank.org/S2THW11X60	www.eiu.com	http://www.freedomhouse.hu/index.php?option=com_content&task=view&id=196
Who was surveyed?	Country teams, experts inside and outside the bank	Expert staff assessment	Assessment by experts originating from or resident in the respective country
Subject asked	Transparency, accountability, and corruption in the public sector	The misuse of public office for private (or political party) gain: including corruption in public procurement, misuse of public funds, corruption in public service, and prosecution of public officials	Extent of corruption as practiced in governments, as perceived by the public and as reported in the media, as well as the implementation of anti-corruption initiatives.
Number of replies	Not applicable	Not applicable	Not applicable
Coverage	77 countries (eligible for IDA funding)	135 countries	29 countries/territories

Number	7	8	9
Abbreviation	GI	IMD	
Source	Global Insight	IMD International, Switzerland, World Competitiveness Center	
Name	Country Risk Ratings	IMD World Competitiveness Yearbook	
Year published	2010	2009	2010
Internet	http://www.globalinsight.com	www.imd.ch/wcc	
Who was surveyed?	Expert staff assessment	Executives in top and middle management in domestic and international companies	
Subject asked	The likelihood of encountering corrupt officials, ranging from petty bureaucratic corruption to grand political corruption	Category Institutional Framework - State Efficiency: "Bribing and corruption exist/do not exist"	
Number of replies	Not applicable	3960	
Coverage	201 countries	57 countries	58 countries

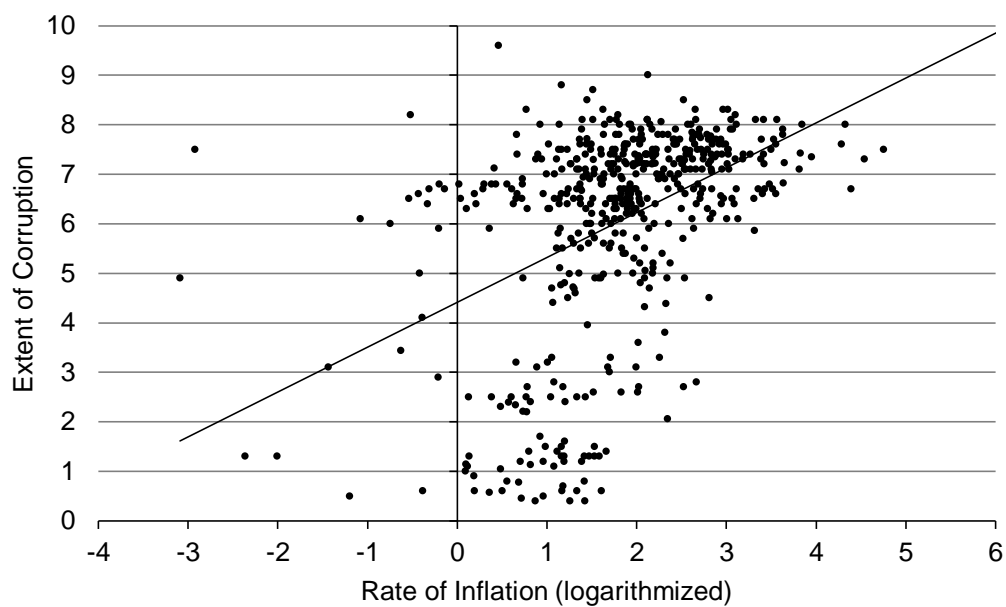
Number	10	11
Abbreviation	PERC	
Source	Political & Economic Risk Consultancy	
Name	Asian Intelligence Newsletter	
Year published	2009	2010
Internet	www.asiarisk.com/	
Who was surveyed?	Expatriate business executives	
Subject asked	How serious do you consider the problem of corruption to be in the public sector?	
Number of replies	1750	2174
Coverage	16 countries	16 countries

Number	12	13
Abbreviation	WEF	
Source	World Economic Forum	
Name	Global Competitiveness Report	
Year published	2009	2010
Internet	www.weforum.org	
Who was surveyed?	Senior business leaders, domestic and international companies	
Subject asked	Undocumented extra payments or bribes connected with 1) exports and imports, 2) public utilities, 3) tax collection, 4) public contracts and 5) judicial decisions are common/never occur	
Number of replies	More than 12,000	More than 13,000
Coverage	133 countries	139 countries

Appendix C: Figures Non-European Countries

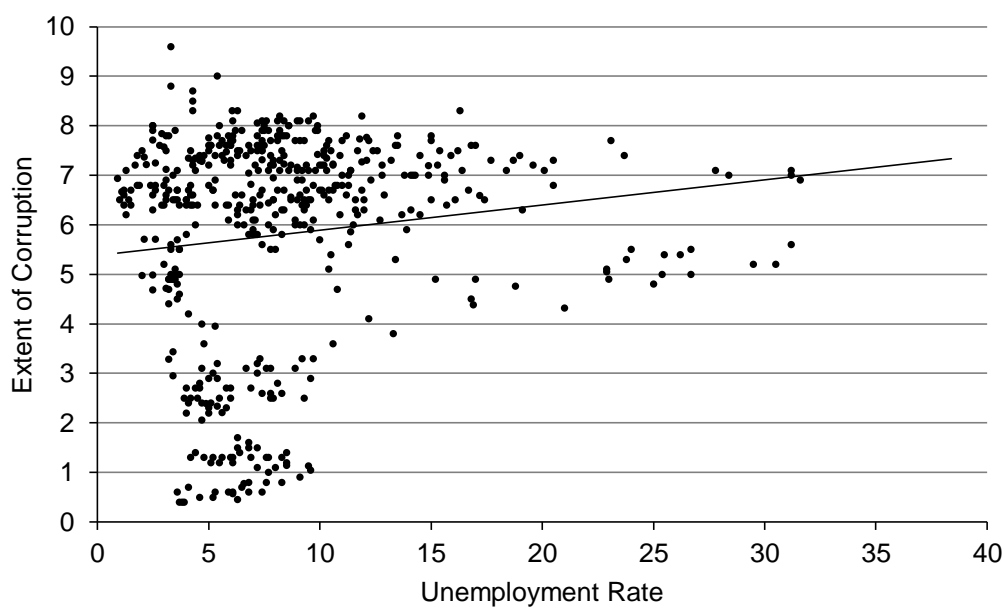
C.1. Macro Level

C.1.1: Correlation between the Extent of Corruption and Rate of Inflation (logarithmized) (Non-European Countries)



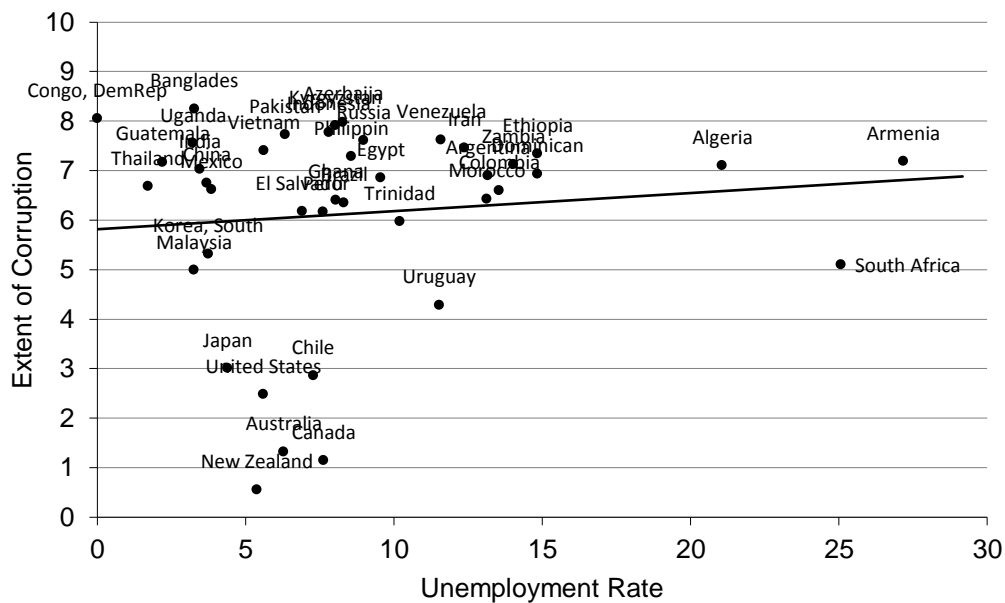
Note: Dependent Variable: Extent of Corruption: Corruption Perception Index transformed:
0= low corruption; 10=highest level of corruption.
Rate of Inflation (logarithmized) is measured by the increase in the price level (GDP deflator, annual %).

C.1.3: Correlation between the Extent of Corruption and Unemployment Rate (Non-European Countries)



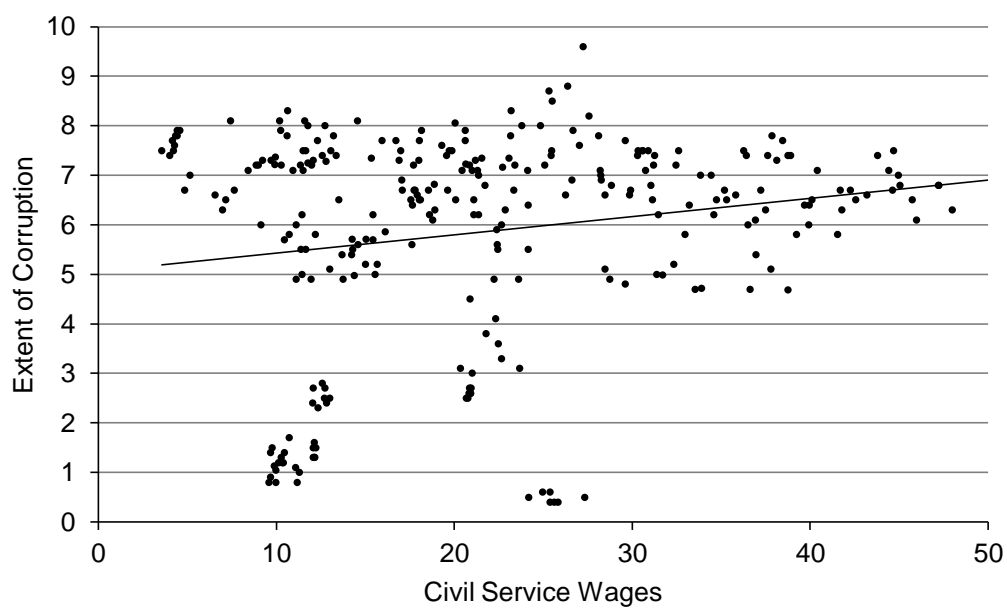
Note: Dependent Variable: Extent of Corruption: Corruption Perception Index transformed:
0= low corruption; 10=highest level of corruption.
Unemployment Rate (percentage) is measured by the share of the labor force that is without work but available for and seeking employment.

C.1.4: Correlation between the Extent of Corruption and Unemployment Rate across Non-European Countries (Average)



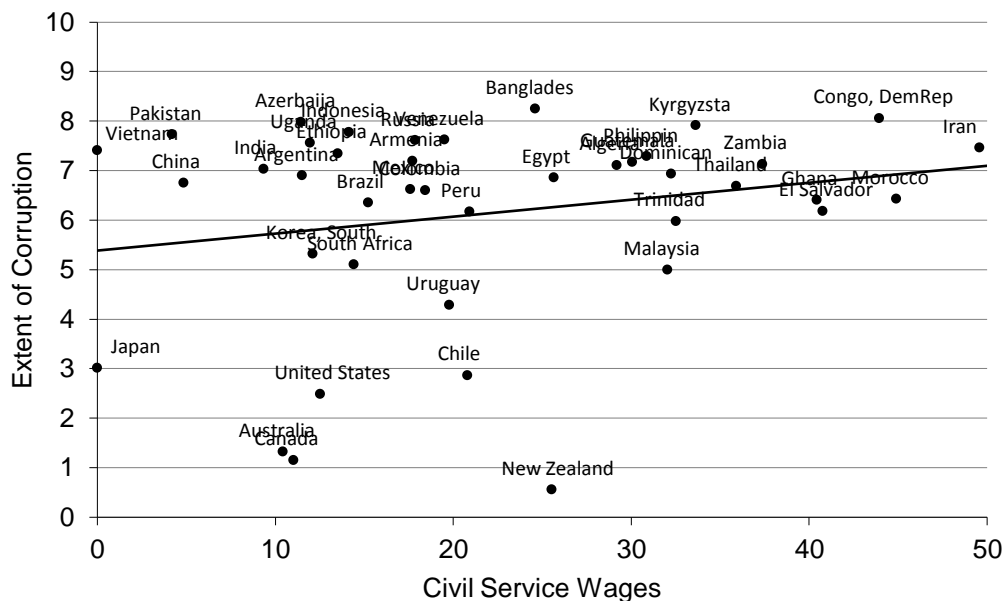
Note: Dependent Variable: Extent of Corruption: Corruption Perception Index transformed: 0= low corruption; 10=highest level of corruption.
 Unemployment Rate (percentage) is measured by the share of the labor force that is without work but available for and seeking employment.

C.1.5: Correlation between the Extent of Corruption and Civil Service Wages (Non-European Countries)



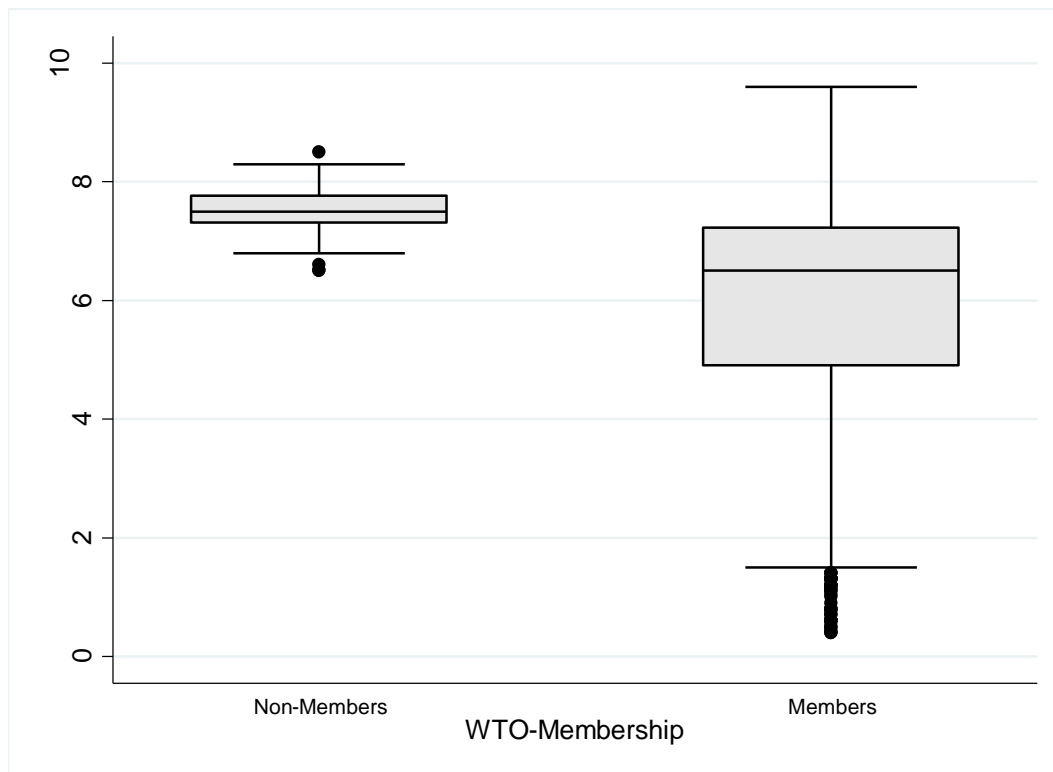
Note: Dependent Variable: Extent of Corruption: Corruption Perception Index transformed:
0= low corruption; 10=highest level of corruption.
Civil Service Wages are measured by the government expenditure on wages and employer contributions (% of expense).

C.1.6: Correlation between the Extent of Corruption and Civil Service Wages across Non-European Countries (Average)



Note: Dependent Variable: Extent of Corruption: Corruption Perception Index transformed: 0= low corruption; 10=highest level of corruption.
 Civil Service Wages are measured by the government expenditure on wages and employer contributions (% of expense).

C.1.7: Boxplots of the Extent of Corruption and WTO-Membership (Non-European Countries)

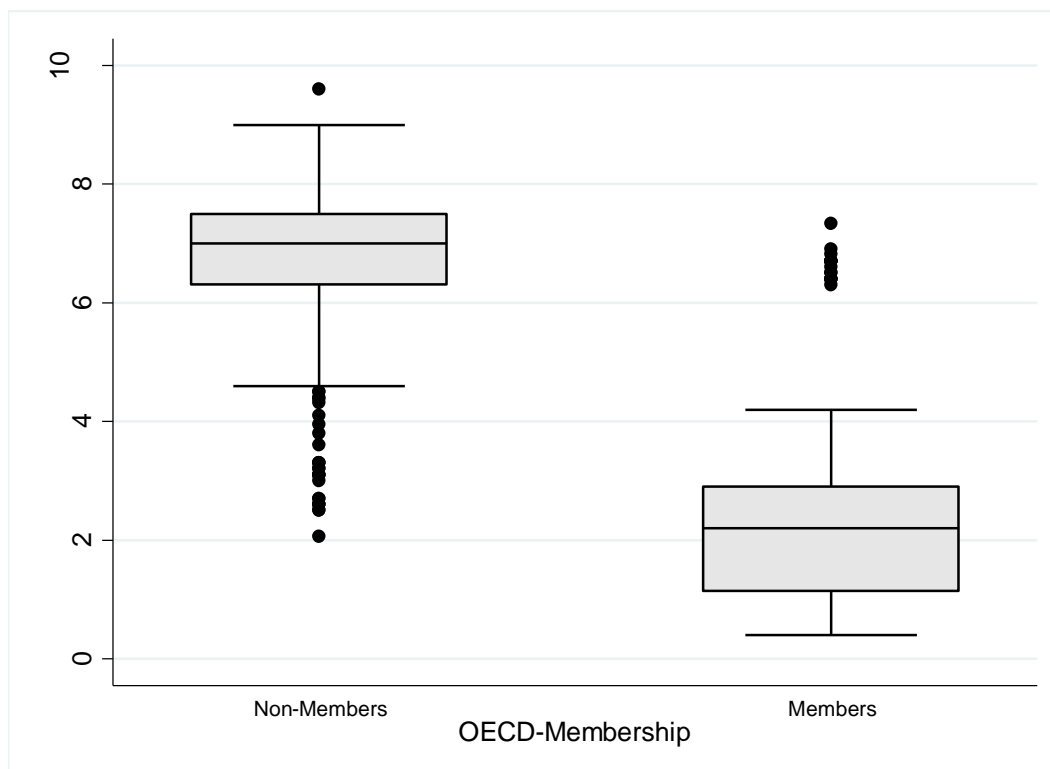


Note: Dependent Variable: Extent of Corruption: Corruption Perception Index transformed:

0= low corruption; 10=highest level of corruption.

WTO-Membership is measured by 1 = WTO-Member and 0 = Non-WTO-Member.

C.1.8: Boxplots of the Extent of Corruption and OECD-Membership (Non-European Countries)

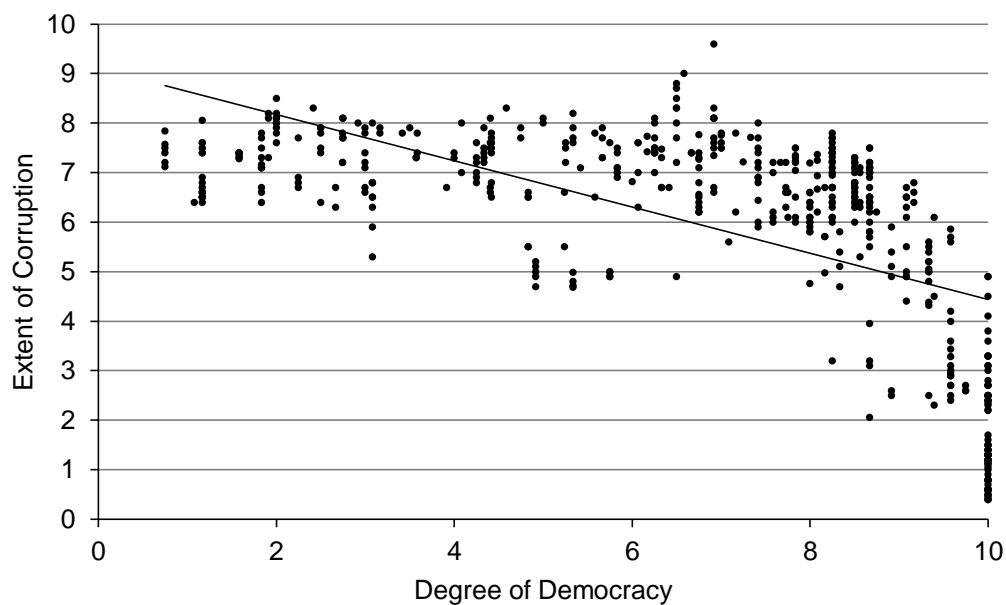


Note: Dependent Variable: Extent of Corruption: Corruption Perception Index transformed:

0= low corruption; 10=highest level of corruption.

OECD-Membership is measured by 1 = OECD-Member and 0 = Non-OECD-Member.

C.1.9: Correlation between the Extent of Corruption and the Degree of Democracy (Non-European Countries)

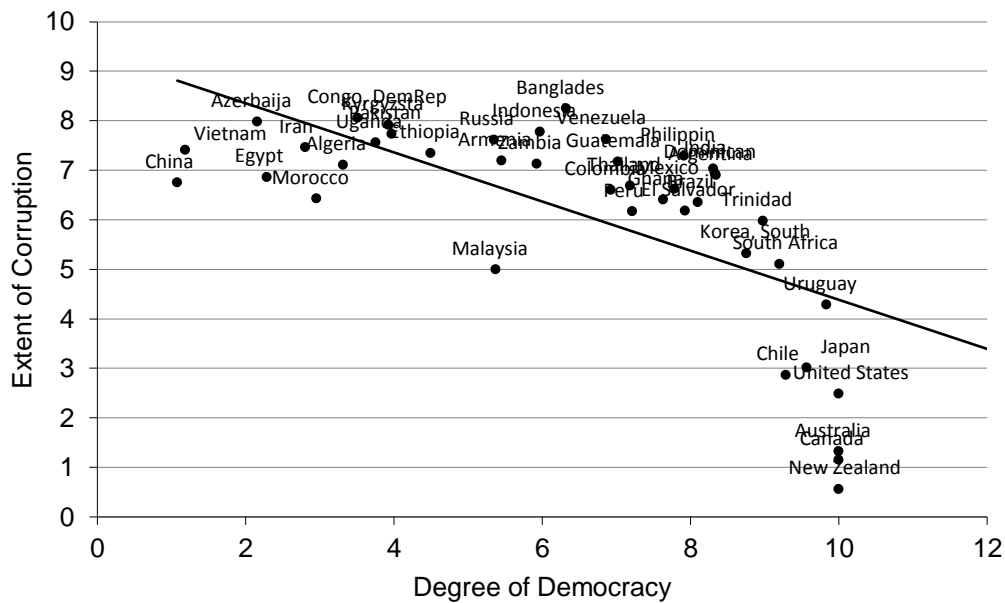


Note: Dependent Variable: Extent of Corruption: Corruption Perception Index transformed:

0= low corruption; 10=highest level of corruption.

Degree of Democracy is measured by an average of Freedom House and Polity IV scaled from 0 ("least democratic") to 10 ("most democratic").

C.1.10: Correlation between the Extent of Corruption and the Degree of Democracy across Non-European Countries (Average)

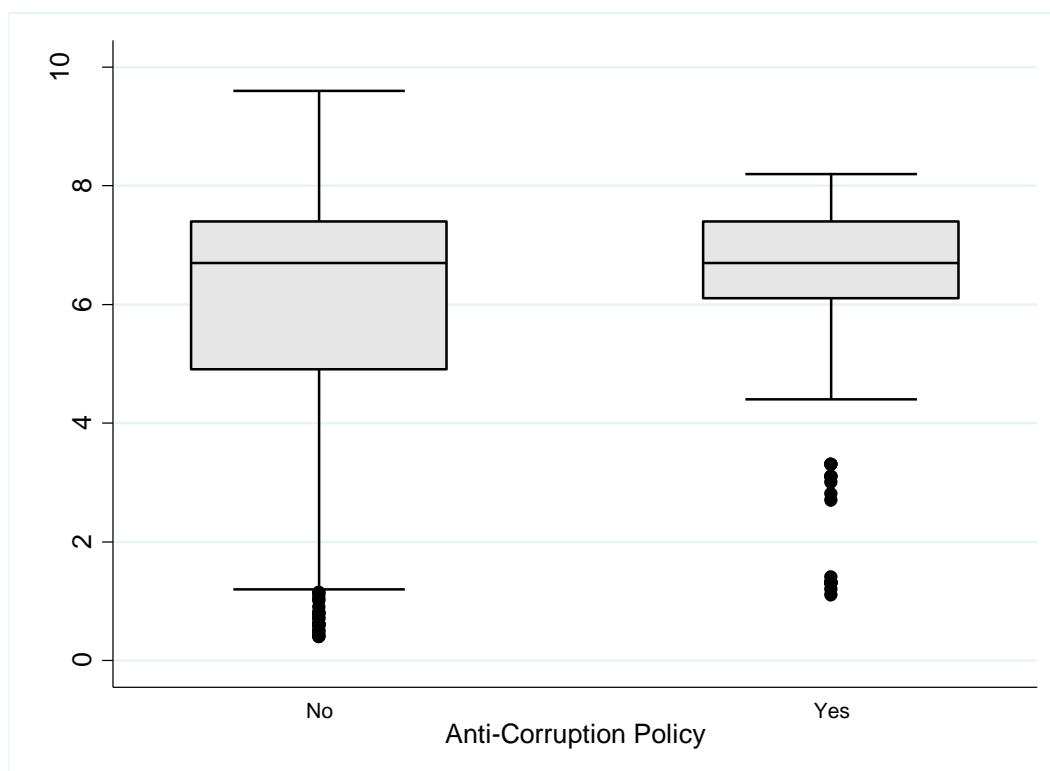


Note: Dependent Variable: Extent of Corruption: Corruption Perception Index transformed:

0= low corruption; 10=highest level of corruption.

Degree of Democracy is measured by an average of Freedom House and Polity IV scaled from 0 ("least democratic") to 10 ("most democratic").

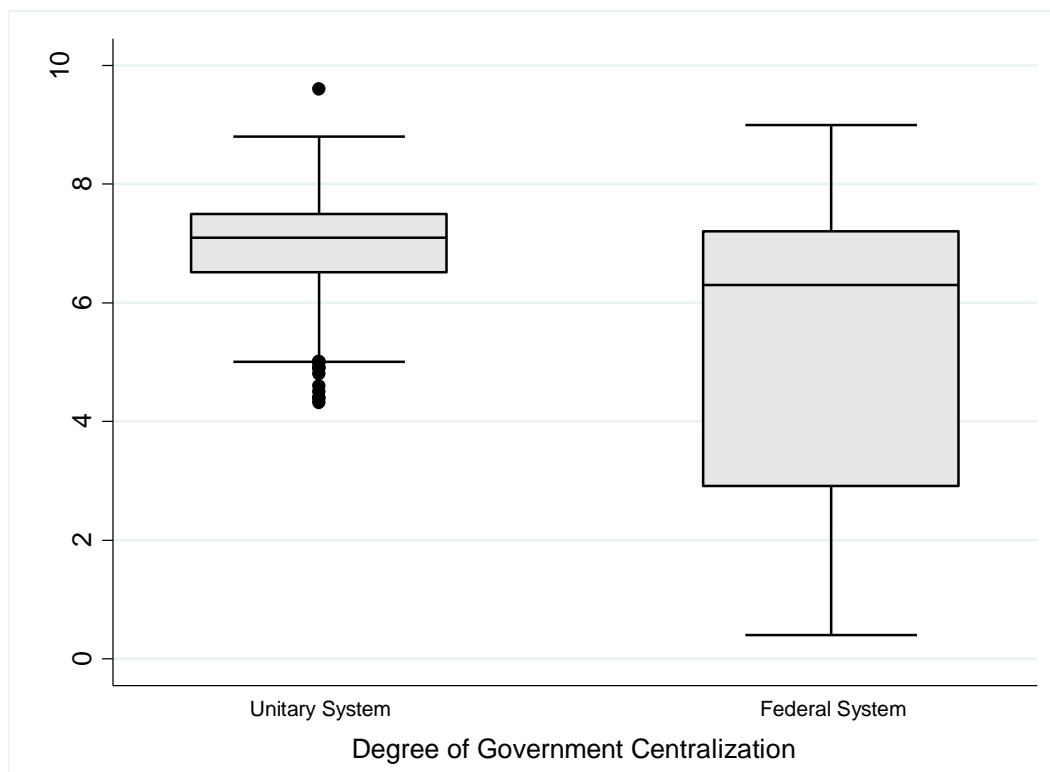
C.1.11: Boxplots of the Extent of Corruption and Anti-Corruption Policy (Non-European Countries)



Note: Dependent Variable: Extent of Corruption: Corruption Perception Index transformed: 0= low corruption; 10=highest level of corruption.

Anti-Corruption Policy is operationalized by a dummy variable: 1 = If the country is member of GRECO and additionally has ratified both conventions of the Council of Europe – the Criminal Law Convention on Corruption, Civil Law Convention on Corruption; 0 = if not.

C.1.12: Boxplots of the Extent of Corruption and the Degree of Government Centralization (Non-European Countries)

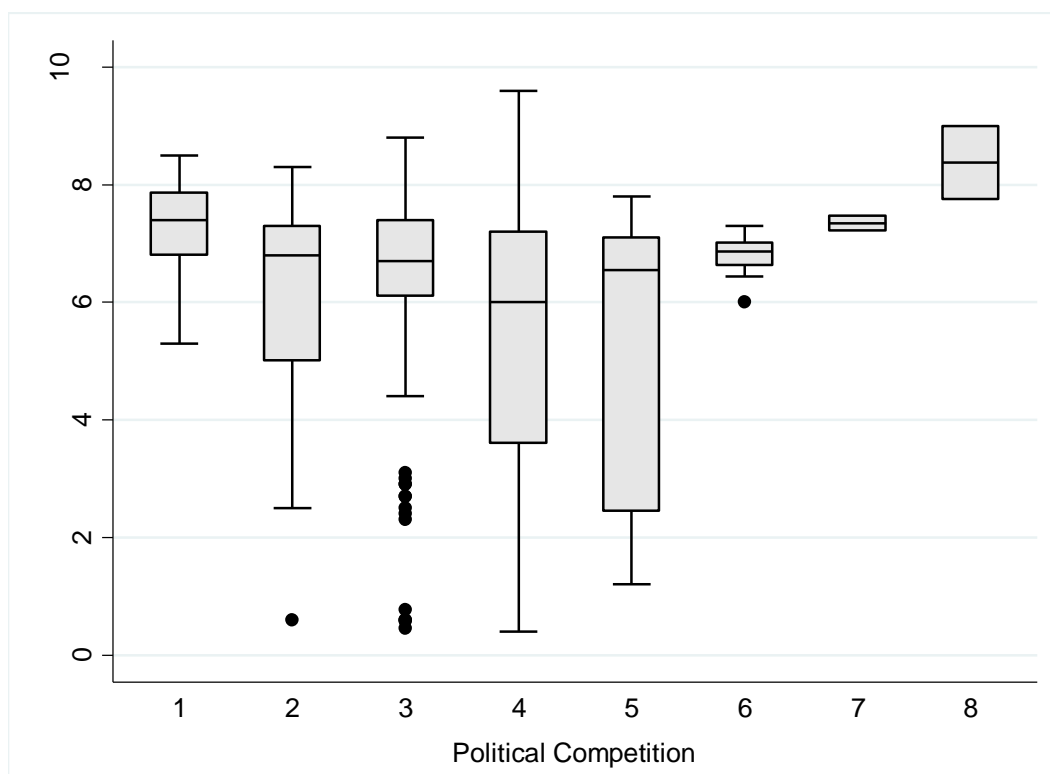


Note: Dependent Variable: Extent of Corruption: Corruption Perception Index transformed:

0= low corruption; 10=highest level of corruption.

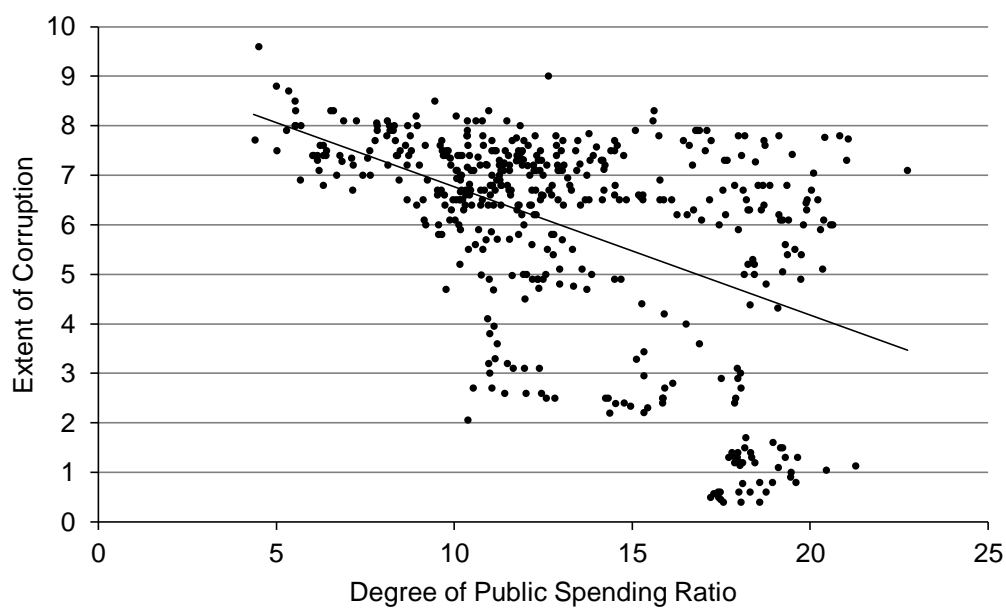
A country's Degree of Government Centralization is coded by 1= Unitary system; 2 = Confederation; 3 = Federal system.

C.1.13: Boxplots of the Extent of Corruption and Degree of Political Competition (Non-European Countries)



Note: Dependent Variable: Extent of Corruption: Corruption Perception Index transformed:
0= low corruption; 10=highest level of corruption.
Degree of Political Competition is scaled from 1 (low degree) to 9 (high degree).

C.1.14: Correlation between the Extent of Corruption and Degree of Public Spending Ratio (Non-European Countries)

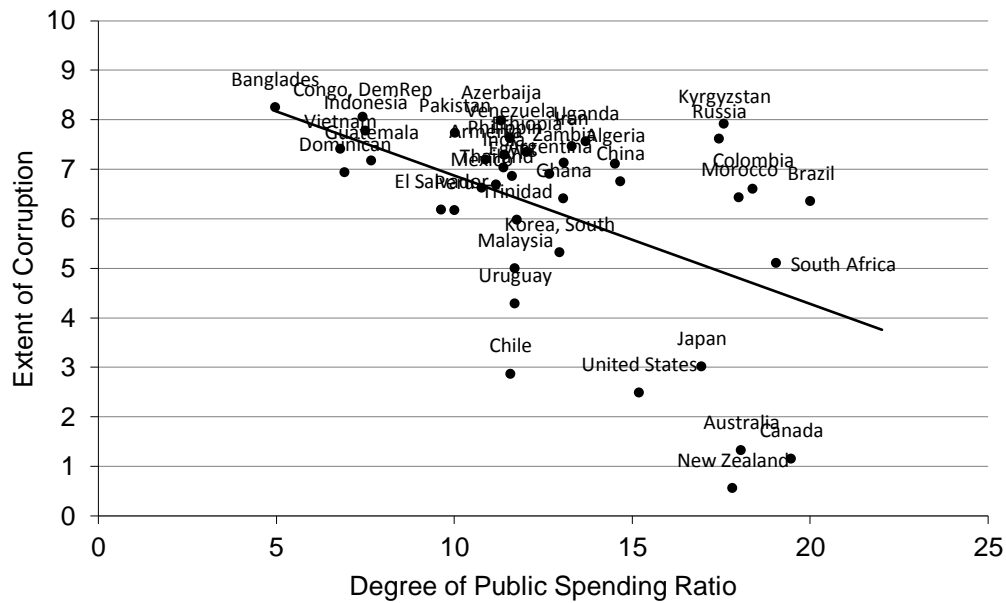


Note: Dependent Variable: Extent of Corruption: Corruption Perception Index transformed:

0= low corruption; 10=highest level of corruption.

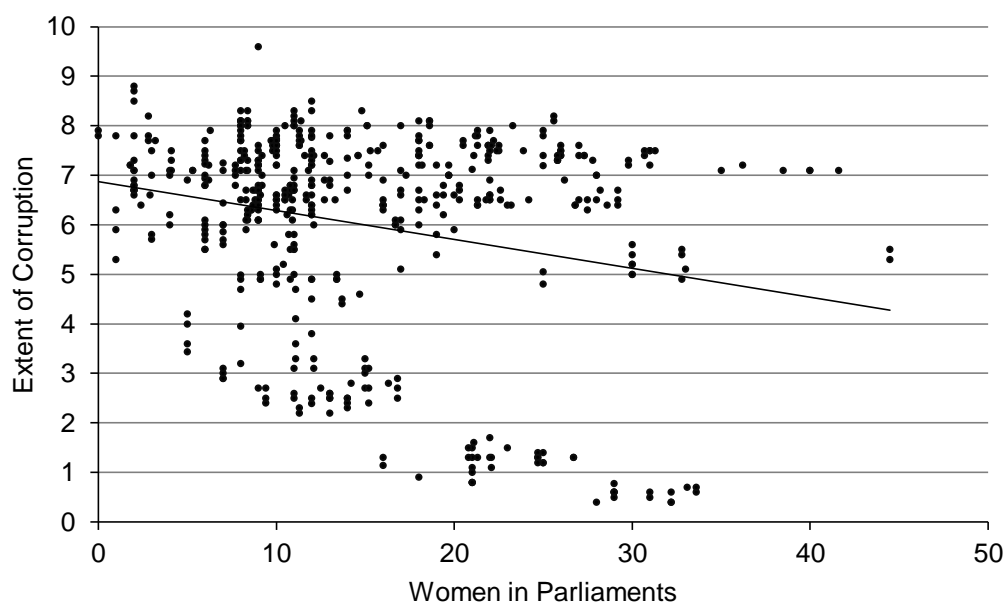
Degree of Public Spending Ratio is measured by government consumption expenditure (% of GDP).

C.1.15: Correlation between the Extent of Corruption and Degree of Public Spending Ratio across Non-European Countries (Average)



Note: Dependent Variable: Extent of Corruption: Corruption Perception Index transformed: 0= low corruption; 10=highest level of corruption.
 Degree of Public Spending Ratio is measured by government consumption expenditure (% of GDP).

C.1.16: Correlation between the Extent of Corruption and Women in Parliaments (Non-European Countries)

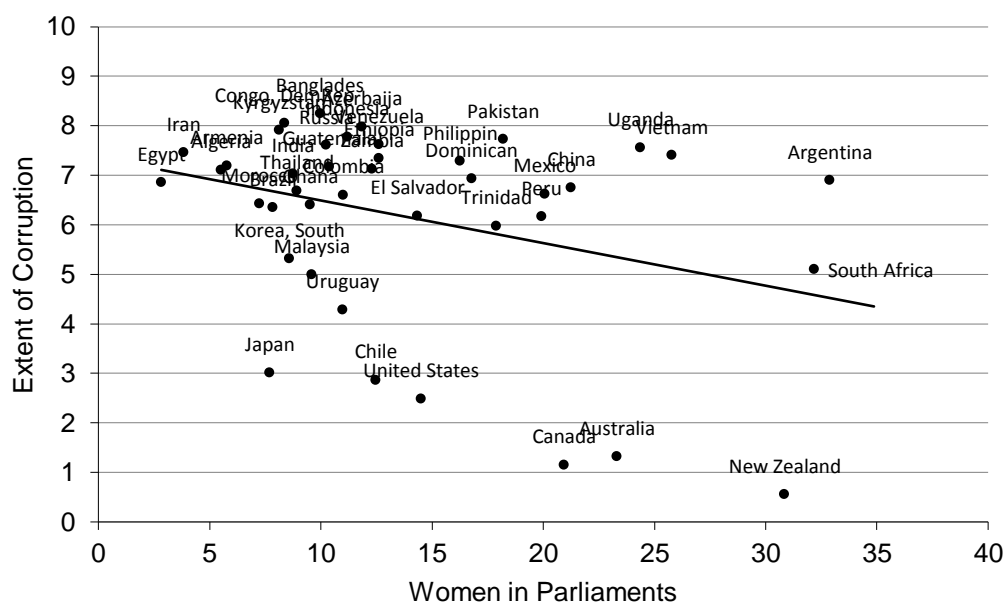


Note: Dependent Variable: Extent of Corruption: Corruption Perception Index transformed:

0= low corruption; 10=highest level of corruption.

The variable Women in Parliaments is measured by the percentage of parliamentary seats in a single or lower chamber held by women.

C.1.17: Correlation between the Extent of Corruption and Women in Parliaments across Non-European Countries (Average)

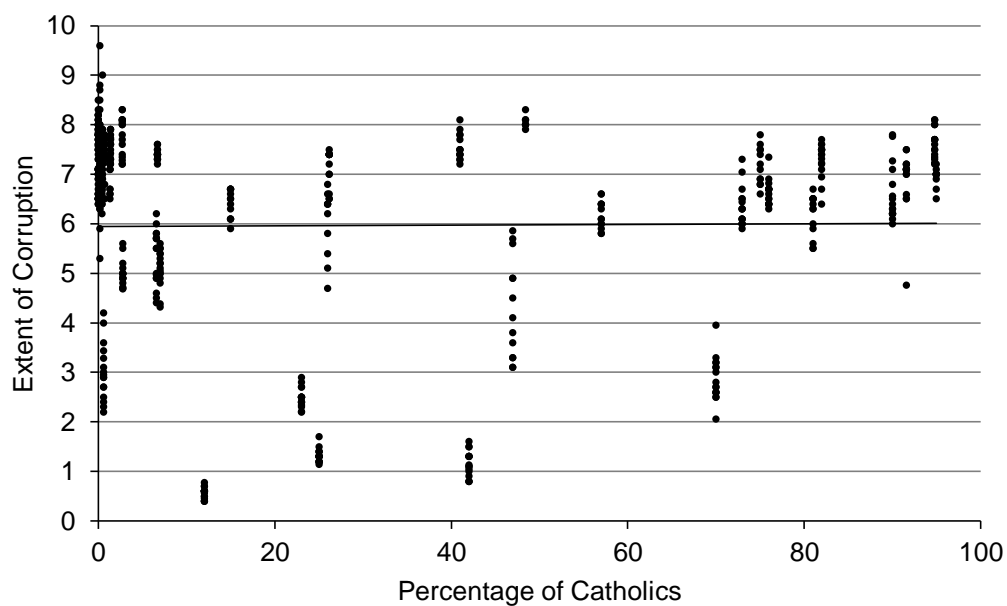


Note: Dependent Variable: Extent of Corruption: Corruption Perception Index transformed:

0= low corruption; 10=highest level of corruption.

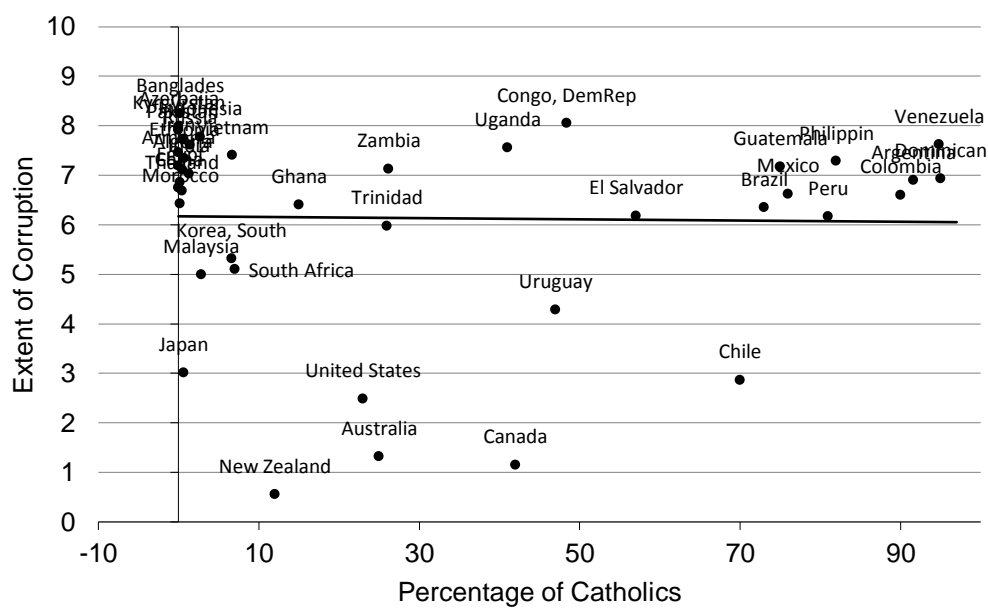
The variable Women in Parliaments is measured by the percentage of parliamentary seats in a single or lower chamber held by women.

C.1.18: Correlation between the Extent of Corruption and Percentage of Catholics (Non-European Countries)



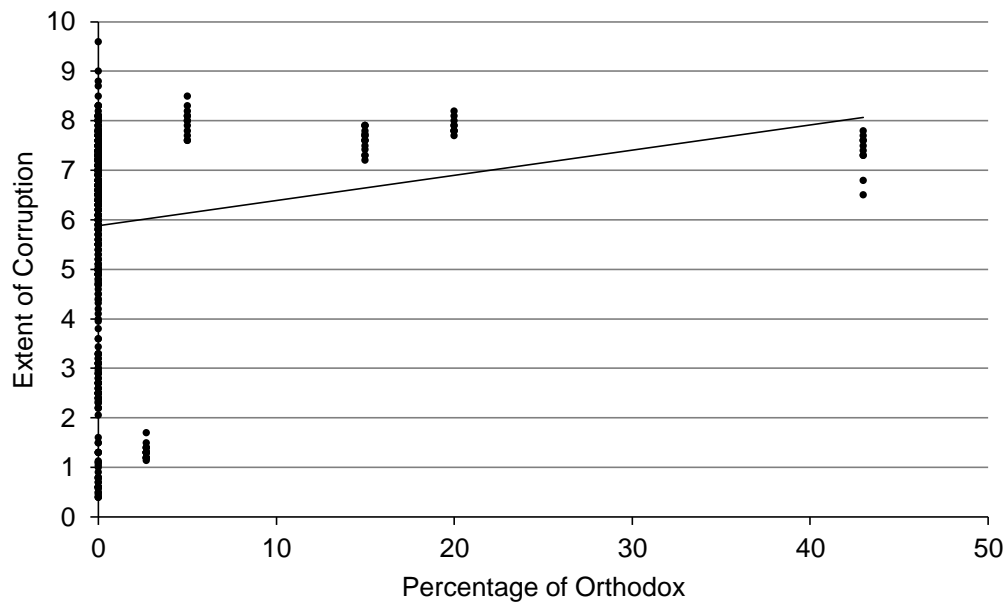
Note: Dependent Variable: Extent of Corruption: Corruption Perception Index transformed:
0= low corruption; 10=highest level of corruption.

C.1.19: Correlation between the Extent of Corruption and Percentage of Catholics across Non-European Countries (Average)



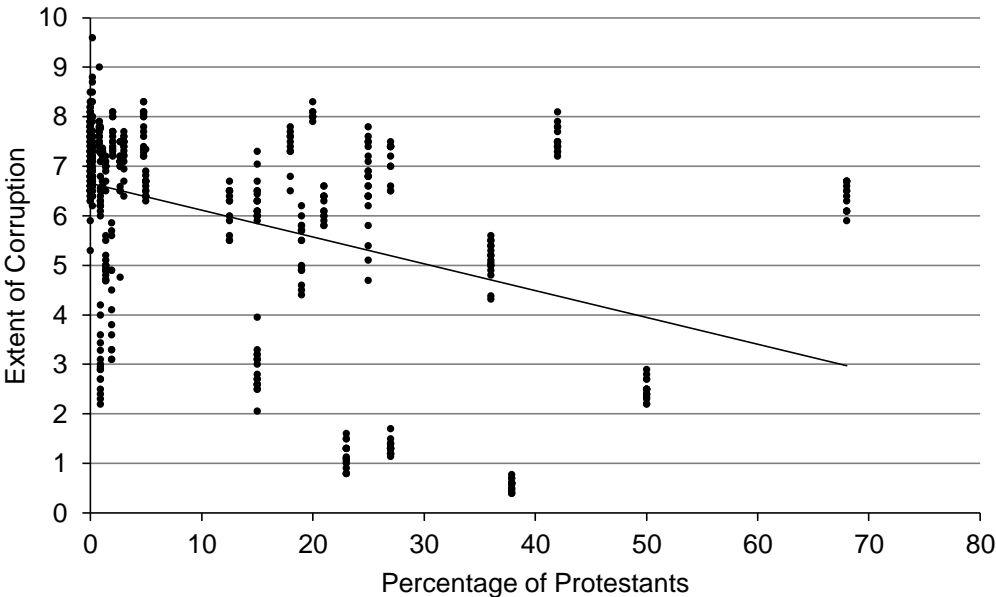
Note: Dependent Variable: Extent of Corruption: Corruption Perception Index transformed:
0= low corruption; 10=highest level of corruption.

C.1.20: Correlation between the Extent of Corruption and Percentage of Orthodox (Non-European Countries)



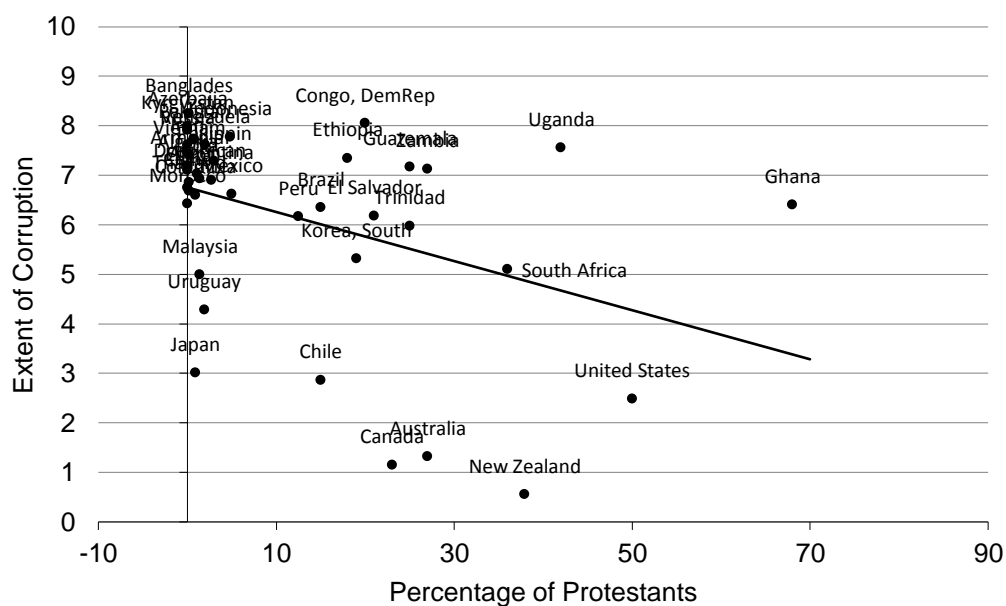
Note: Dependent Variable: Extent of Corruption: Corruption Perception Index transformed:
0= low corruption; 10=highest level of corruption.

C.1.22: Correlation between the Extent of Corruption and Percentage of Protestants (Non-European Countries)



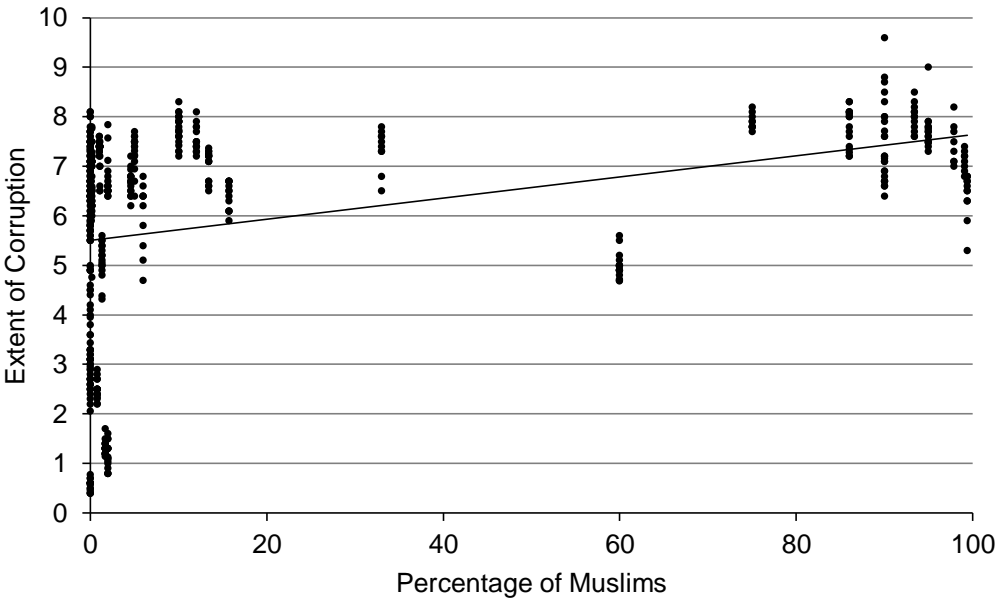
Note: Dependent Variable: Extent of Corruption: Corruption Perception Index transformed:
0= low corruption; 10=highest level of corruption.

C.1.23: Correlation between the Extent of Corruption and Percentage of Protestants across Non-European Countries (Average)



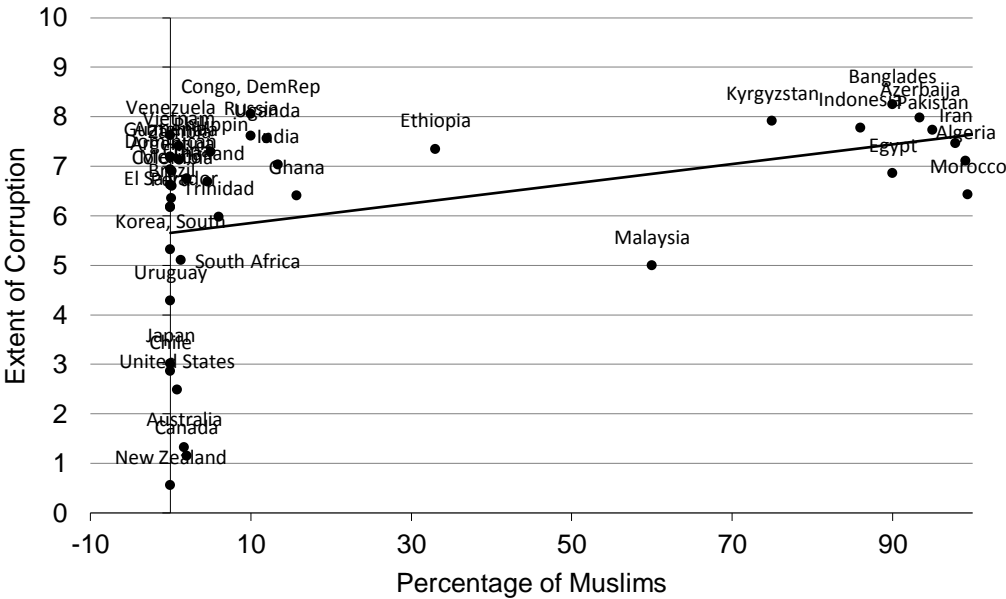
Note: Dependent Variable: Extent of Corruption: Corruption Perception Index transformed:
 0= low corruption; 10=highest level of corruption.

C.1.24: Correlation between the Extent of Corruption and Percentage of Muslims (Non-European Countries)



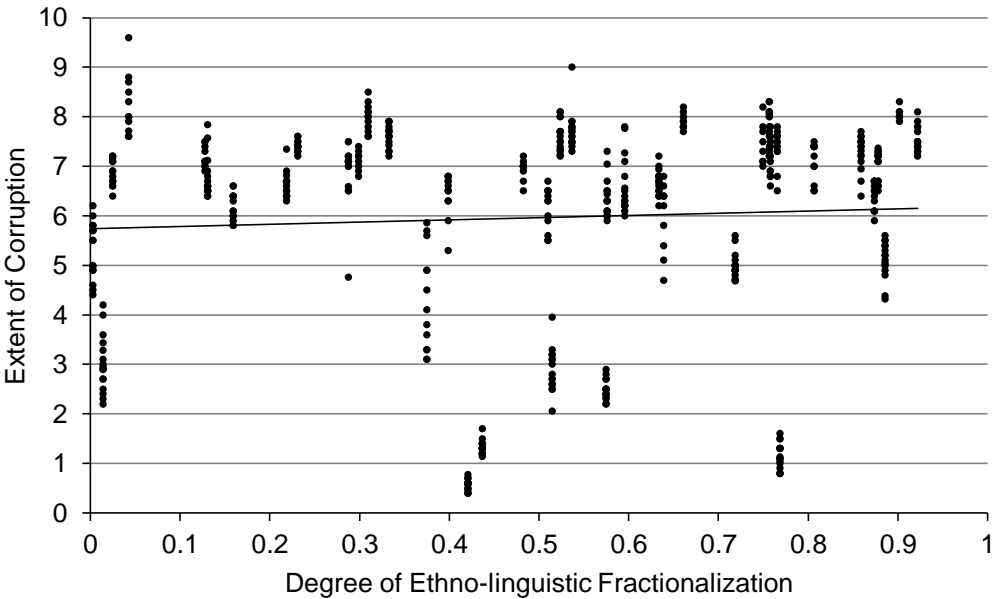
Note: Dependent Variable: Extent of Corruption: Corruption Perception Index transformed:
0= low corruption; 10=highest level of corruption.

C.1.25: Correlation between the Extent of Corruption and Percentage of Muslims across Non-European Countries (Average)



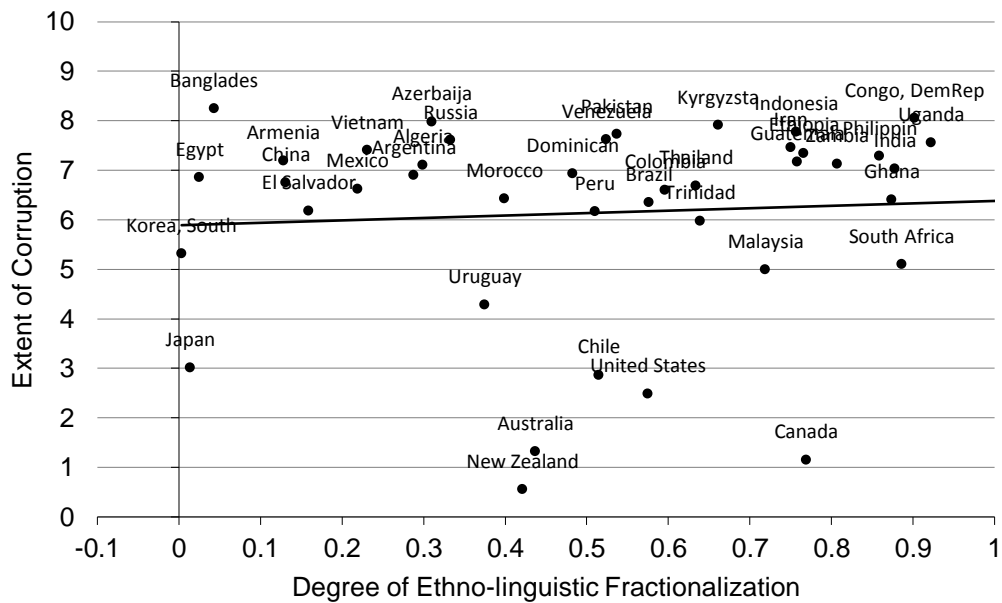
Note: Dependent Variable: Extent of Corruption: Corruption Perception Index transformed: 0= low corruption; 10=highest level of corruption.

C.1.26: Correlation between the Extent of Corruption and the Degree of Ethno-linguistic Fractionalization (Non-European Countries)



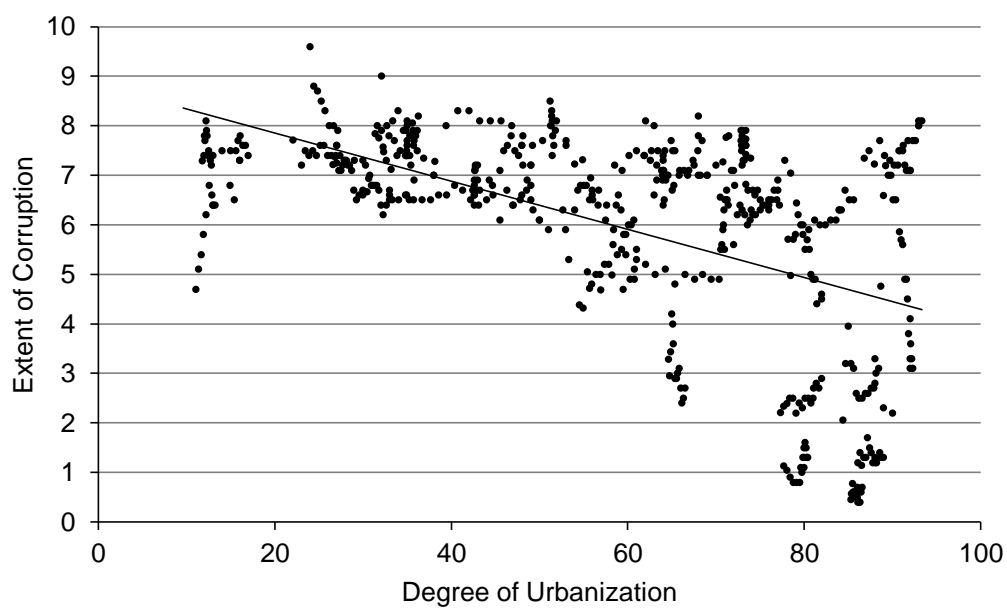
Note: Dependent Variable: Extent of Corruption: Corruption Perception Index transformed: 0= low corruption; 10=highest level of corruption.
Ethno-Linguistic Fractionalization is scaled to a range of 0 (low fractionalization) to 1 (high fractionalization).

C.1.27: Correlation between the Extent of Corruption and the Degree of Ethno-linguistic Fractionalization across Non-European Countries (Average)



Note: Dependent Variable: Extent of Corruption: Corruption Perception Index transformed:
 0= low corruption; 10=highest level of corruption.
 Ethno-Linguistic Fractionalization is scaled to a range of 0 (low fractionalization) to 1
 (high fractionalization)

C.1.28: Correlation between the Extent of Corruption and the Degree of Urbanization (Non-European Countries)

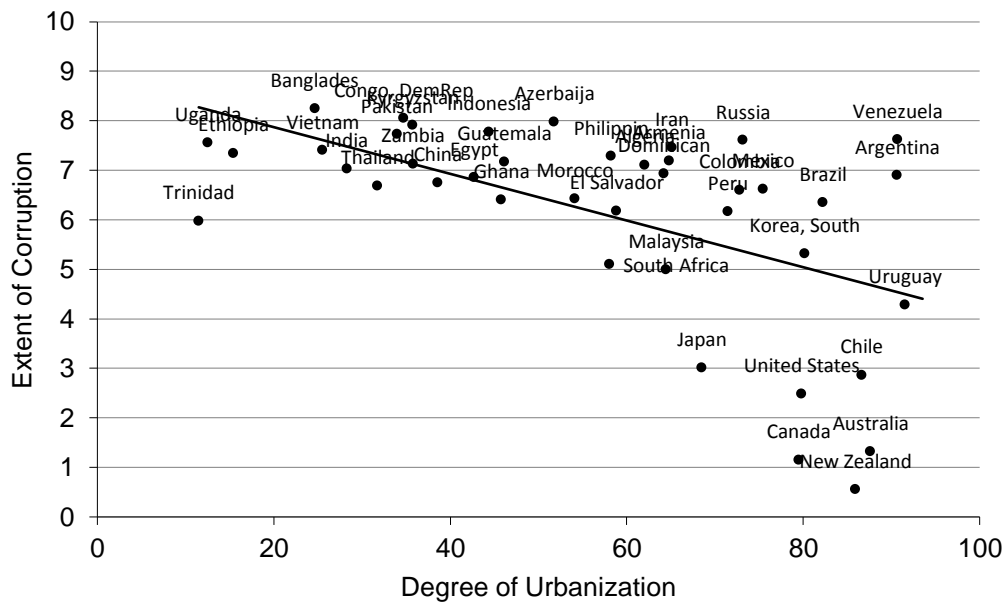


Note: Dependent Variable: Extent of Corruption: Corruption Perception Index transformed:

0= low corruption; 10=highest level of corruption.

The Degree of Urbanization is measured as the percentage of total population living in urban areas as defined by national statistical offices.

C.1.29: Correlation between the Extent of Corruption and the Degree of Urbanization across Non-European Countries (Average)

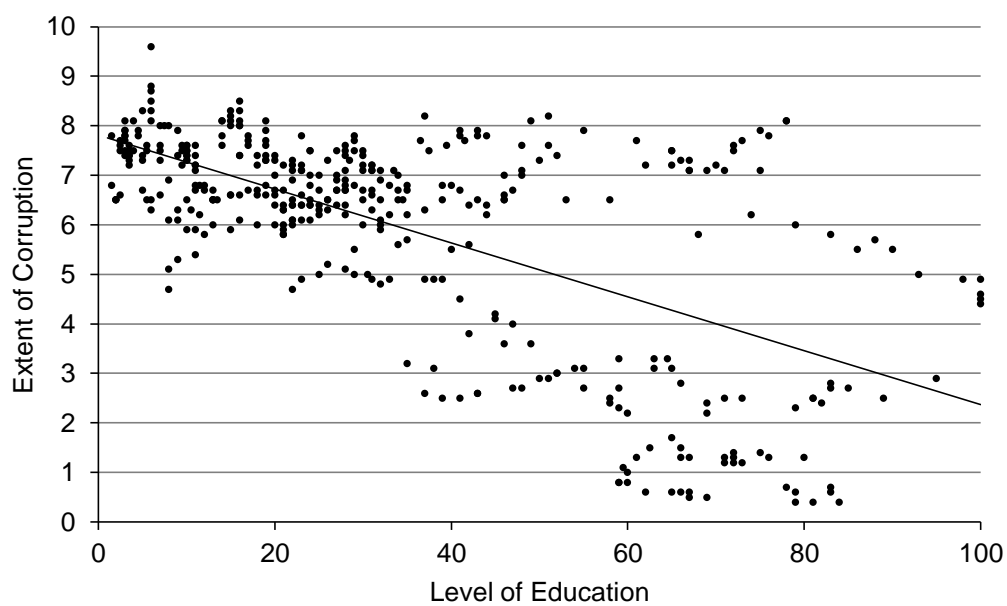


Note: Dependent Variable: Extent of Corruption: Corruption Perception Index transformed:

0= low corruption; 10=highest level of corruption.

The Degree of Urbanization is measured as the percentage of total population living in urban areas as defined by national statistical offices.

C.1.30: Correlation between the Extent of Corruption and Level of Education (Non-European Countries)

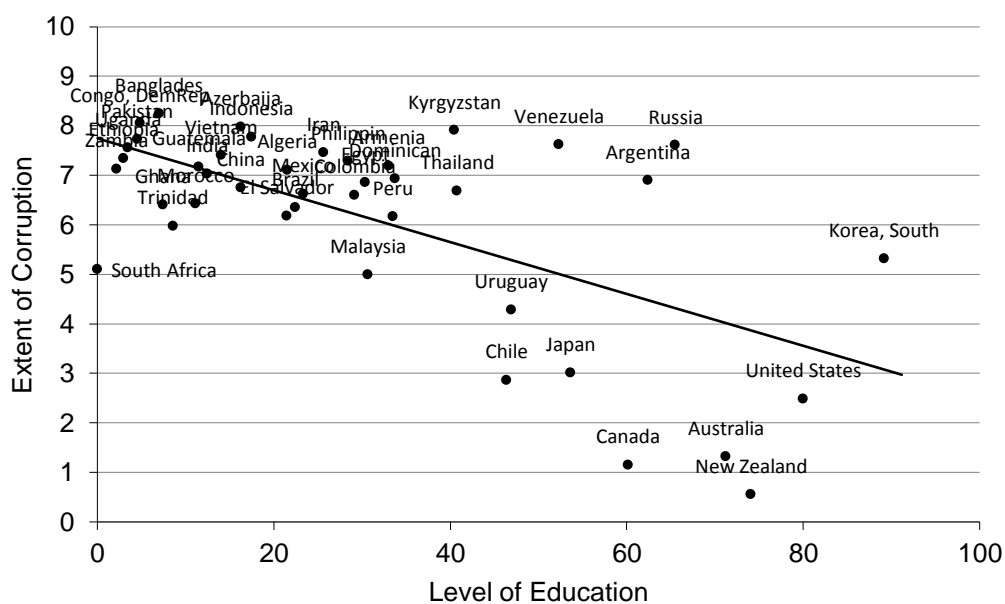


Note: Dependent Variable: Extent of Corruption: Corruption Perception Index transformed:

0= low corruption; 10=highest level of corruption.

Level of Educations is measured as the average score of female and male gross tertiary education enrollment (percentage).

C.1.31: Correlation between the Extent of Corruption and Level of Education across Non-European Countries (Average)

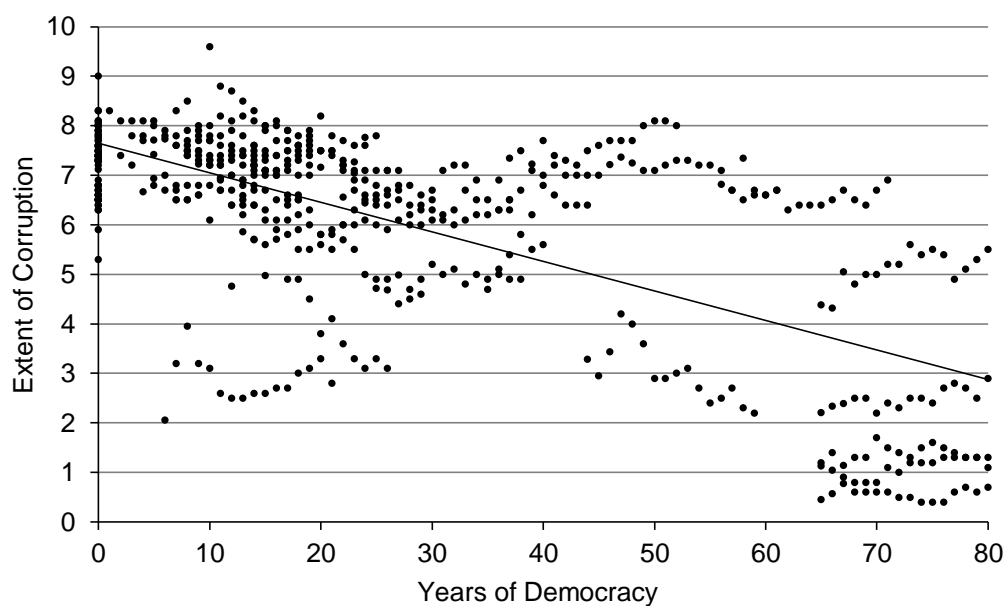


Note: Dependent Variable: Extent of Corruption: Corruption Perception Index transformed:

0= low corruption; 10=highest level of corruption.

Level of Educations is measured as the average score of female and male gross tertiary education enrollment (percentage).

C.1.32: Correlation between the Extent of Corruption and Years of Democracy (Non-European Countries)

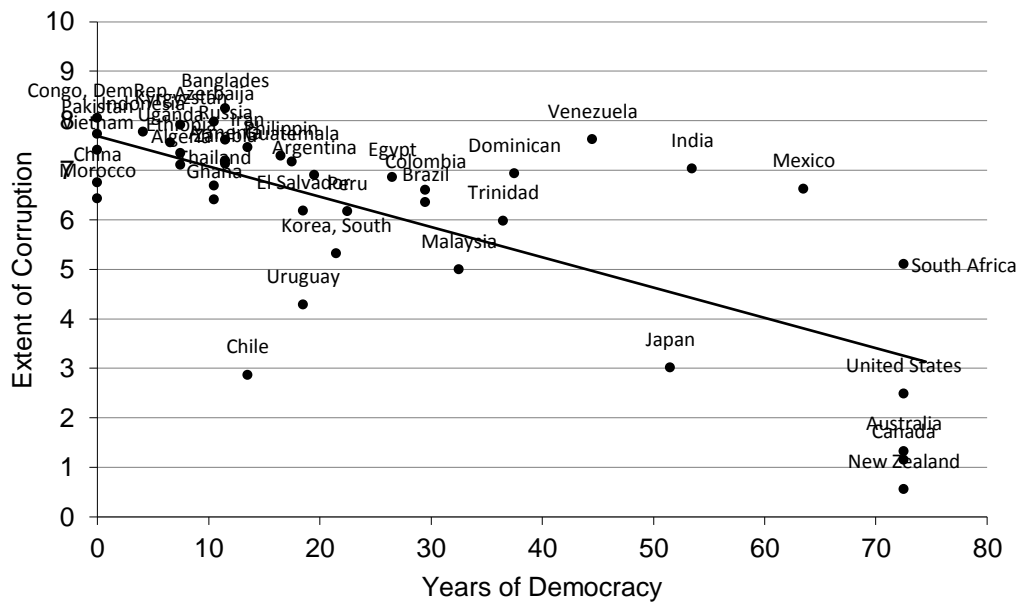


Note: Dependent Variable: Extent of Corruption: Corruption Perception Index transformed:

0= low corruption; 10=highest level of corruption.

Years of Democracy are measured by the number of consecutive years since 1930 when the system had been democratic.

C.1.33: Correlation between the Extent of Corruption and Years of Democracy across Non-European Countries (Average)

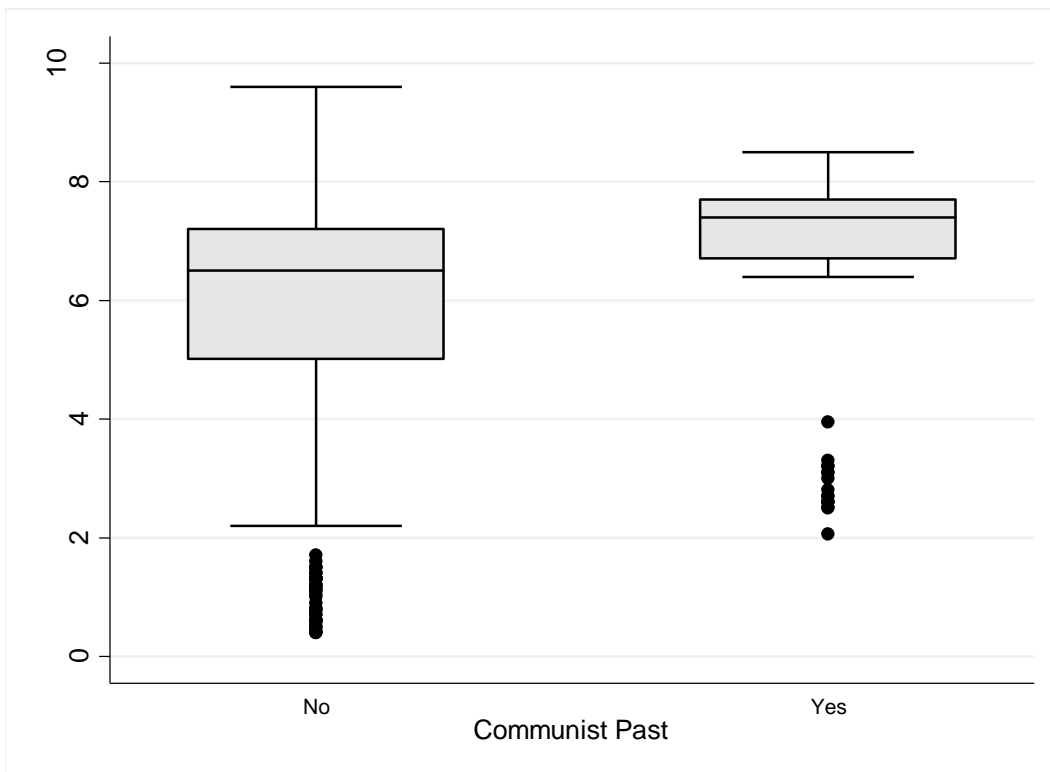


Note: Dependent Variable: Extent of Corruption: Corruption Perception Index transformed:

0= low corruption; 10=highest level of corruption.

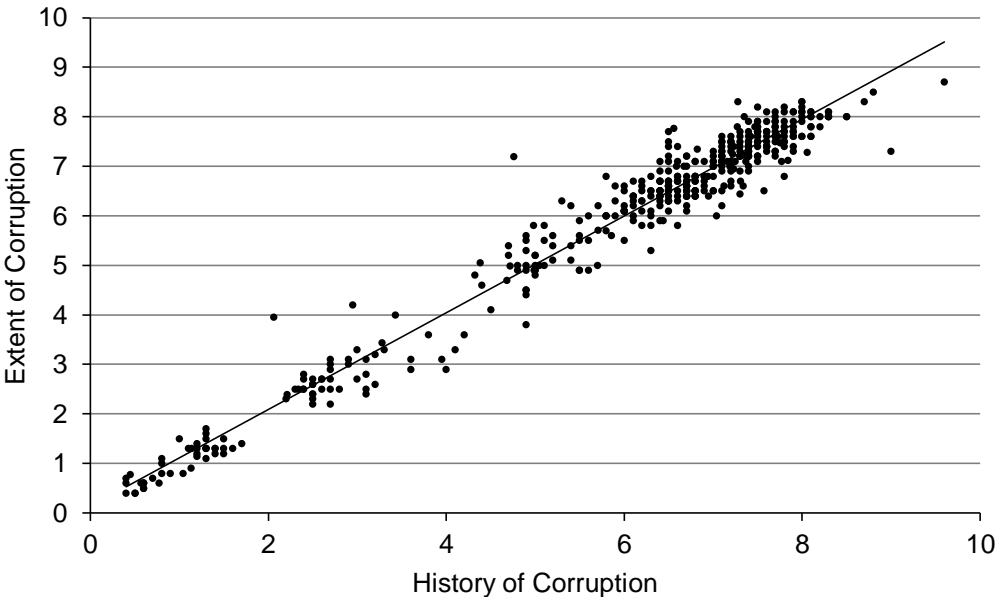
Years of Democracy are measured by the number of consecutive years since 1930 when the system had been democratic.

C.1.34: Boxplots of the Extent of Corruption and Communist Past (Non-European Countries)



Note: Dependent Variable: Extent of Corruption: Corruption Perception Index transformed: 0= low corruption; 10=highest level of corruption.
Communist Past is measured by a dummy variable: 1= Communist Past; 0= no Communist Past.

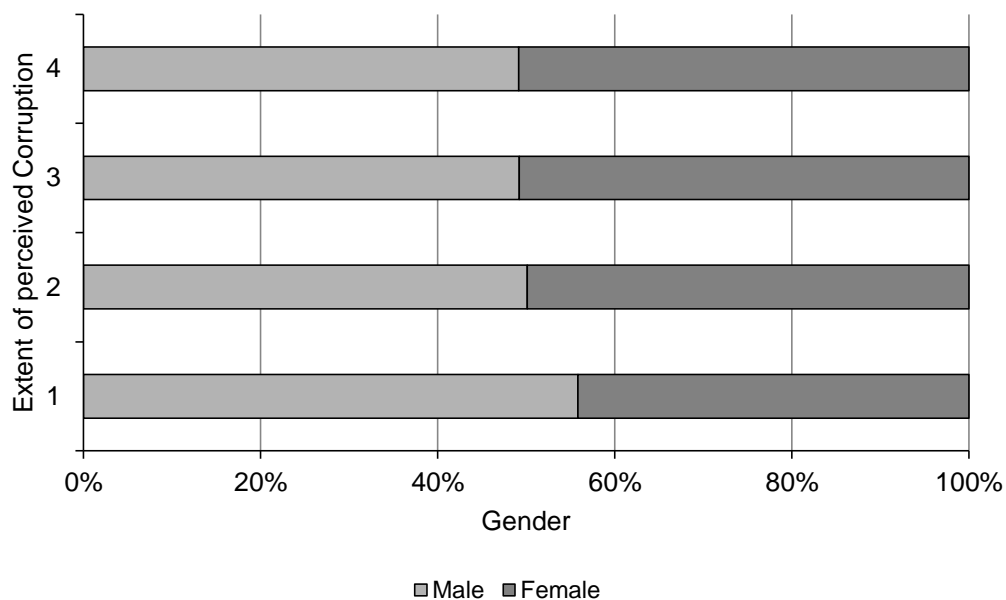
C.1.35: Correlation between the Extent of Corruption and History of Corruption (Non-European Countries)



Note: Dependent Variable: Extent of Corruption: Corruption Perception Index transformed: 0= low corruption; 10=highest level of corruption. The variable History of Corruption is measured by a 4-years-lagged dependent variable, the transformed Corruption Perception Index.

C.2 Micro Level

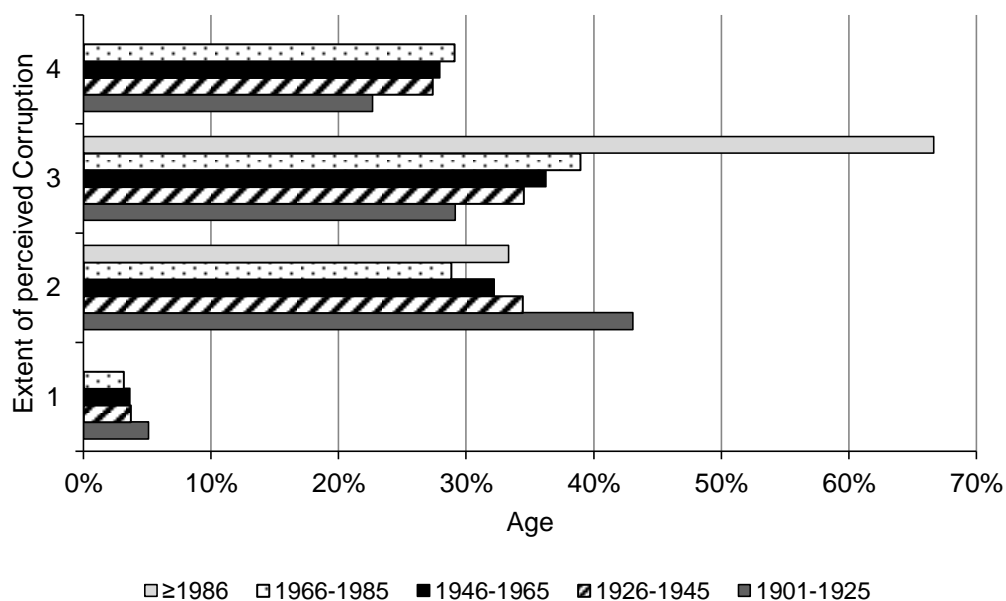
C.2.1: Extent of perceived Corruption and an Individual's Gender (Non-European Countries)



Note: Dependent Variable: “Extent of perceived Corruption” is generated by asking “How widespread do you think bribe taking and corruption is in this country?” Responses were recorded on a four-point scale: “1” = “no public officials engaged in it”; 2 = “a few are”; 3 = “most are” and 4 = “almost all public officials are engaged in it.”

Gender is measured by 1 = Male and 2 = Female

C.2.2: Extent of perceived Corruption and an Individual's Age (Non-European Countries)



Note: Dependent Variable: “Extent of perceived Corruption” is generated by asking “How widespread do you think bribe taking and corruption is in this country?” Responses were recorded on a four-point scale: “1” = “no public officials engaged in it”; 2 = “a few are”; 3 = “most are” and 4 = “almost all public officials are engaged in it.”

The variable age is measured by “Year of Birth.”

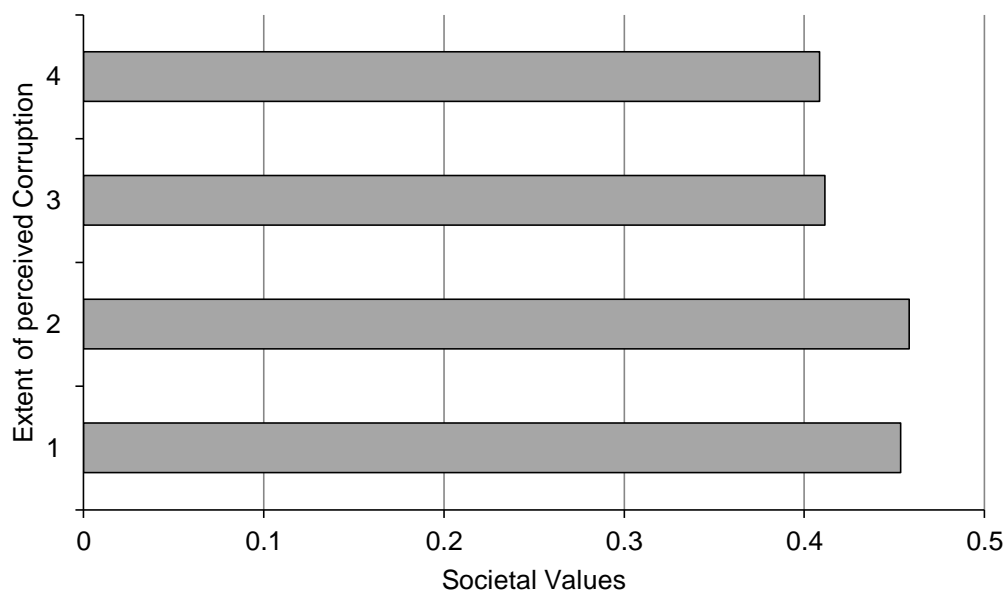
C.2.3: Extent of perceived Corruption and an Individual's Employment Status (Non-European Countries)



Note: Dependent Variable: "Extent of perceived Corruption" is generated by asking "How widespread do you think bribe taking and corruption is in this country?" Responses were recorded on a four-point scale: "1" = "no public officials engaged in it"; 2 = "a few are"; 3 = "most are" and 4 = "almost all public officials are engaged in it."

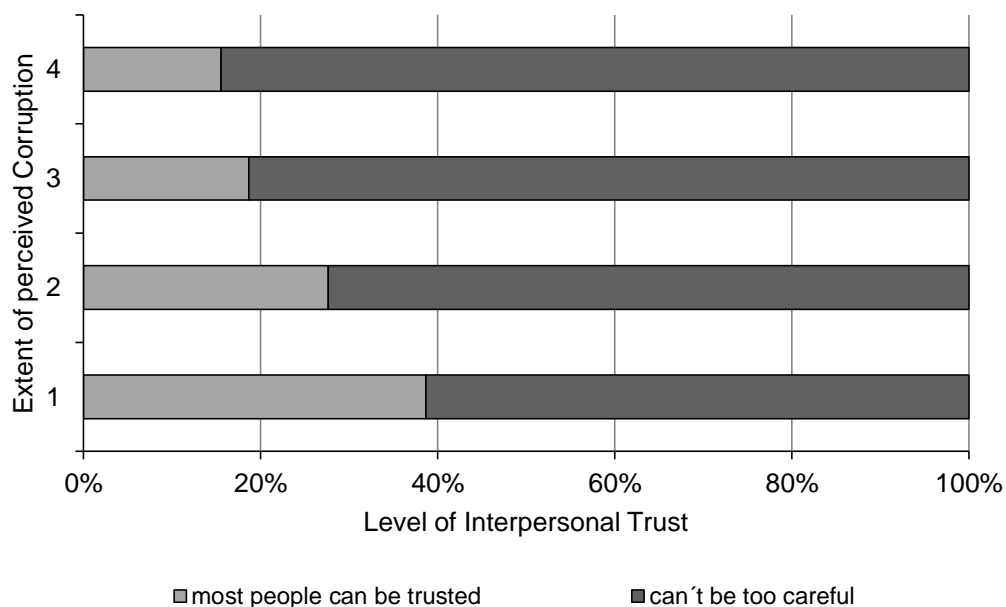
The item "Employment Status" is measured by the following categories: "Full time", "Part time", "Self-employed", "Retired", "Housewife", "Students" or "Unemployed."

C.2.4: Extent of perceived Corruption and an Individual's Societal Values (Non-European Countries)



Note: Dependent Variable: "Extent of perceived Corruption" is generated by asking "How widespread do you think bribe taking and corruption is in this country?" Responses were recorded on a four-point scale: "1" = "no public officials engaged in it"; 2 = "a few are"; 3 = "most are" and 4 = "almost all public officials are engaged in it." Societal Values are scaled from 0 ("Low societal values) to 1 ("High societal values").

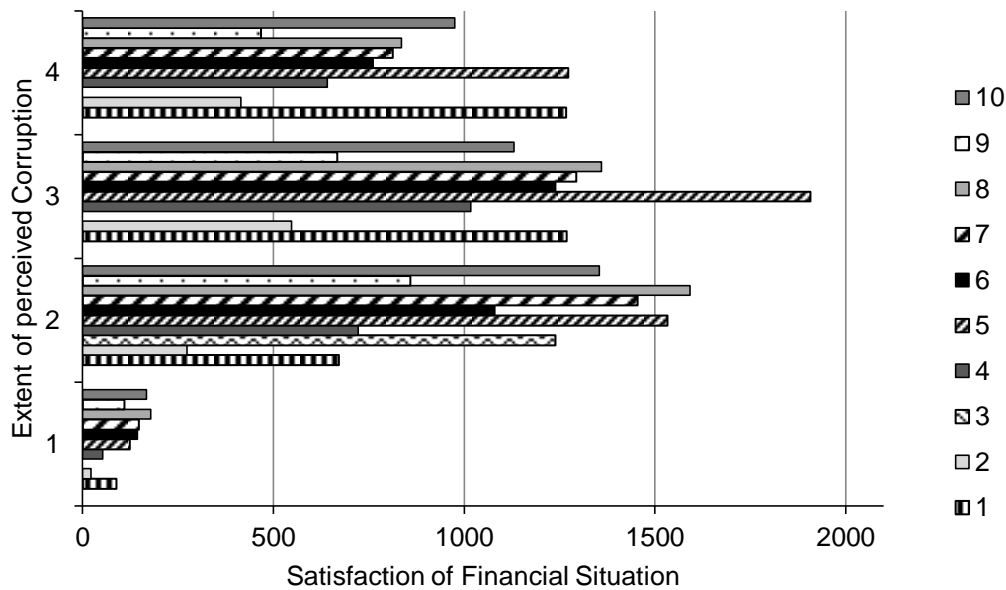
C.2.5: Extent of perceived Corruption and an Individual's Level of Interpersonal Trust (Non-European Countries)



Note: Dependent Variable: “Extent of perceived Corruption” is generated by asking “How widespread do you think bribe taking and corruption is in this country?” Responses were recorded on a four-point scale: “1” = “no public officials engaged in it”; 2 = “a few are”; 3 = “most are” and 4 = “almost all public officials are engaged in it.”

Level of Interpersonal Trust is scaled from 1 (“Most people can be trusted”) to 0 (“Can’t be too careful”).

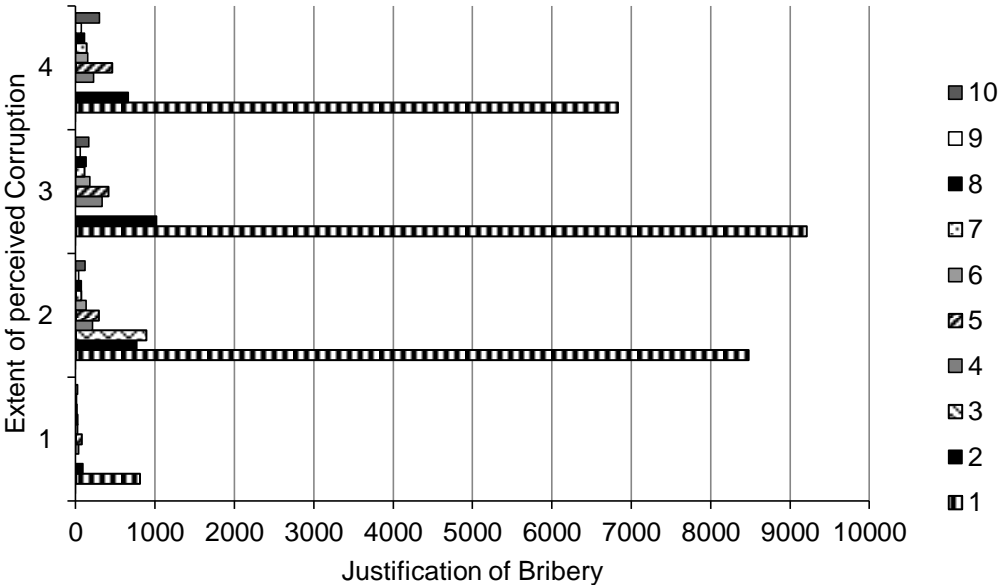
C.2.6: Extent of perceived Corruption and an Individual's Satisfaction with the Financial Situation (Non-European Countries)



Note: Dependent Variable: "Extent of perceived Corruption" is generated by asking "How widespread do you think bribe taking and corruption is in this country?" Responses were recorded on a four-point scale: "1" = "no public officials engaged in it"; 2 = "a few are"; 3 = "most are" and 4 = "almost all public officials are engaged in it."

The item "Satisfaction with Financial Situation" is scaled from 1 ("Completely dissatisfied") to 10 ("Completely satisfied").

C.2.7: Extent of perceived Corruption and an Individual’s Justification of Bribery (Non-European Countries)



Note: Dependent Variable: “Extent of perceived Corruption” is generated by asking “How widespread do you think bribe taking and corruption is in this country?” Responses were recorded on a four-point scale: “1” = “no public officials engaged in it”; 2 = “a few are”; 3 = “most are” and 4 = “almost all public officials are engaged in it.”

The item “Justification of Bribery” is scaled from 1 (“Never justifiable”) to 10 (“Always justifiable”).

Appendix D: Independent Variables

D.1: Macro Level

MACRO LEVEL					
ECONOMIC FACTORS	Operationalization	Positive-Significant by	Negative-Significant by	Hypotheses	Source
Rate of Inflation	Annual growth rate of the GDP implicit deflator shows the rate of price change in the economy as a whole.	Paldam (2002); Braun and Di Tella (2004); Sung (2004); Gerring and Thacker (2005); Treisman (2007)		<p>“The extent of corruption will be higher, the higher the level of inflation.” (1a)</p> <p>(Alternative hypothesis: „The extent of corruption will be lower, the higher the level of inflation.”)</p>	World Bank, OECD
Unemployment Rate	Share of the labor force that is without work but available for and seeking employment.	Goel and Rich (1989); Sung (2004); Mocan (2008)		<p>“The extent of corruption will be higher, the higher the rate of unemployment.” (1b)</p> <p>(Alternative hypothesis: “The extent of corruption will be lower, the higher the rate of unemployment.”)</p>	International Labour Organisation, International Monetary Fund
Civil Service Wages	Government expenditure on wages and employer contributions (% of expense).	Frechette (2006)	Haque and Sahay Ratna (1996); van Rijckeghem and Weder (2001); Montinola and Jackman (2002); Alt and Lassen (2003); Herzfeld and Weiss (2003); Azfar and Nelson, JR. (2007);	<p>“The extent of corruption will be higher, the lower the level of civil service wages.” (1c)</p> <p>(Alternative hypothesis: „The extent of corruption will be higher, the higher the level of civil service wages.”)</p>	International Monetary Fund

		Pellegrini and Gerlagh (2008); van Veldhuizen (2012)		
International Integration	Dummy-variables (1/0)	Sandholtz and Gray (2003); Sandholtz and Koetzle (2000); Paldam (2002); Kostadinova (2012)	<p>“The extent of corruption will be higher, the lower the degree of integration in the world economy.” (1d)</p> <p>(Alternative hypothesis: “The extent of corruption will be lower, the lower the degree of integration in the world economy.”)</p> <p>“The extent of corruption will be lower, if the country is a member state of the European Union.” (1d1)</p> <p>(Alternative hypothesis: The extent of corruption will be higher, if the country is a member state of the European Union.)</p> <p>“The extent of corruption will be lower, if the country is a member state of the WTO.” (1d2)</p> <p>(Alternative hypothesis: The extent of corruption will be higher, if the country is a member state of the WTO.)</p> <p>“The extent of corruption will be lower, if the country is a member state of the OECD.”</p>	European Union; World Trade Organization; OECD

(1d3)

(Alternative hypothesis: The extent of corruption will be higher, if the country is a member state of the OECD.)

POLITICAL FACTORS	Operationalization	Positive-Significant by	Negative-Significant by	Hypotheses	Source
Degree of Democracy	Freedom-House-Index / Imputed Polity IV		Ades and Di Tella (2003); Brunetti and Weder (2003); Rose-Ackerman (1999); Johnston (1999); Goldsmith (1999); Wei (2000); Sandholtz and Koetzle (2000); Swamy <i>et al.</i> (2001); Paldam (2002); Montinola and Jackman (2002); Herzfeld and Weiss (2003); Hill (2003); Anderson and Tverdova (2003); Damania <i>et al.</i> (2004); Braun and Di Tella (2004); Chowdhury (2004); Sung (2004); Shen and Williamson (2005); Lederman <i>et al.</i> (2005); Serra (2006); Shah (2007); Alt and Lassen (2008); Billger and Goel (2009); Saha <i>et al.</i> (2009)	„The extent of corruption will be higher, the lower the degree of democracy.” (2a) (Alternative hypothesis: „The extent of corruption will be lower, the lower the degree of democracy.”)	Freedom House; Polity IV

Anti-Corruption Policy	Dummy-Variable: 1) If a country is member of GRECO and has ratified both conventions of the Council of Europe (Criminal Law Convention on Corruption, the Civil Law Convention on Corruption); 0) if not.	Larmour (2007); Anechiarico and Jacobs (1996); Krastev (2004); Gong and Wu (2012)	Ades and Di Tella (2003); Shah (2007); Hanna <i>et al.</i> (2011)	„The extent of corruption will be higher, if the country has no anti-corruption policy.” (2b) (Alternative hypothesis: „The extent of corruption will be higher, if the country has an anti-corruption policy.”)	GRECO; the Criminal Law Convention on Corruption, Civil Law Convention on Corruption
Degree of Government Centralization	1) Unitary state 2) Confederation 3) Federal system	Weingast (1995); Goldsmith (1999); Treisman (2000); Brown <i>et al.</i> (2005); Kunicová and Rose-Ackerman (2005)	Shleifer and Vishny (1993); Paldam (2002); Fisman and Gatti (2002); Strøm <i>et al.</i> (2003); Ali and Isse (2003); Lederman <i>et al.</i> (2005); Gurgur and Shah (2005)	“The extent of corruption will be higher, the higher the degree of government centralization.” (2c) (Alternative hypothesis: “The extent of corruption will be lower, the higher the degree of government centralization.”)	Institutions and Elections State
Degree of Political Competition	Legislative Index of Political Competitiveness; Executive Index of Political Competitiveness		Rose-Ackerman (1999); Shleifer and Vishny (1993); Della Porta and Vannucci (1999); Montinola and Jackman (2002); Persson <i>et al.</i> (2003); Braun and Di Tella (2004); Damania and Yalçin (2008)	“The extent of corruption will be higher, the lower the political competition in a political system.” (2d) (Alternative hypothesis: “The extent of corruption will be higher, the higher the political competition in a political system.”)	Database of Political Institutions
Degree of Public Spending Ratio	Government consumption expenditure (% of GDP)	Buchanan (1980); LaPalombara (1994); Tanzi (1994/1999); La Porta <i>et al.</i> (1999);	Elliot (1997); Bonaglia <i>et al.</i> (2001); Fisman and Gatti (2002)	“The extent of corruption will be higher, the larger the degree of public spending ratio.” (2e)	World Bank, OECD

		Treisman (2000); Goel and Nelson (1998); Ali and Isse (2003); Alt and Lassen (2003)		(Alternative hypothesis: "The extent of corruption will be lower, the larger the degree of public spending ratio.")	
Women in Parliaments	Percentage of parliamentary seats in a single or lower chamber held by women.		Dollar <i>et al.</i> (2001); Swamy <i>et al.</i> (2001); (Lambsdorff and Fink Hady (2006); Mocan (2008); Frank <i>et al.</i> (2011); Rivas (2013)	"The extent of corruption will be lower, the higher the percentage of women in parliaments." (2f) (Alternative hypothesis: "The extent of corruption will be higher, the higher the percentage of women in parliaments.")	World Bank; United Nations
SOCIO- CULTURAL FACTORS	Operationalization	Positive- Significant by	Negative-Significant by	Hypotheses	Source
Religion					
Percentage of Catholics	Catholics as percentage of population		Treisman (2000); Paldam (2001); Gerring and Thacker (2005)	"The extent of corruption will be higher, the larger the proportion of Catholics in a country's population." (3a1) (Alternative hypothesis: "The extent of corruption will be lower, the larger the proportion of Catholics in a country's population.")	Worldmark Encyclopedia of the Nations; Statistical Abstract of the World; United Nations
Percentage of Orthodox	Orthodox as percentage of population		Treisman (2000); Paldam (2001); Gerring and Thacker (2005)	3a2: "The extent of corruption will be higher, the larger the proportion of Orthodox in a country's population." (Alternative hypothesis: "The extent of	Worldmark Encyclopedia of the Nations; Statistical Abstract of the World; United

			corruption will be lower, the larger the proportion of Orthodox in a country's population.")	Nations
Percentage of Protestants	Protestants as percentage of population	Treisman, 2000); Paldam (2001); Gerring and Thacker (2005)	"The extent of corruption will be higher, the smaller the proportion of Protestants in a country's population." (3a3) (Alternative hypothesis: "The extent of corruption will be lower, the smaller the proportion of Protestants in a country's population.")	Worldmark Encyclopedia of the Nations; Statistical Abstract of the World; United Nations
Percentage of Muslims	Muslims as percentage of population	Treisman (2000); Paldam (2001); Gerring and Thacker (2005)	"The extent of corruption will be higher, the larger the proportion of Muslims in a country's population." (3a4) (Alternative hypothesis: "The extent of corruption will be lower, the larger the proportion of Muslims in a country's population.")	Worldmark Encyclopedia of the Nations; Statistical Abstract of the World; United Nations
Degree of Ethno-linguistic Fractionalization	Index of ethno-linguistic fractionalization	Mauro (1995); La Porta <i>et al.</i> (1999); Treisman (2000); Alesina <i>et al.</i> (2002); Herzfeld and Weiss (2003); Lederman <i>et al.</i> (2005)	Shen and Williamson (2005); Bonaglia <i>et al.</i> (2001) "The extent of corruption will be higher, the higher the degree of ethno-linguistic fractionalization in a country." (3b) (Alternative hypothesis: "The extent of corruption will be lower, the higher the degree of ethno-linguistic fractionalization in a country.")	Index of ethno-linguistic fractionalization
Degree of Urbanization	Percentage of total population living in urban areas as	Billger and Goel (2009)	"The extent of corruption will be higher, the higher the degree of urbanization." (3c)	World Bank; United Nations World

	defined by national statistical offices.			(Alternative hypothesis: "The extent of corruption will be lower, the higher the degree of urbanization.")	Urbanization Prospects
Level of Education	Average score of gross tertiary education enrollment, female and gross tertiary education enrollment, male	Magnus <i>et al.</i> (2002)	Ades and Di Tella (1999); Treisman (2000); Ahrend (2002); Knack and Azfar (2003); Ali and Isse (2003); Arikian (2008); Glaeser and Saks (2006); Frechette (2006); Dreher <i>et al.</i> (2007); Mocan (2008)	"The extent of corruption will be higher, the lower the level of education." (3d) (Alternative hypothesis: "The extent of corruption will be lower, the lower the level of education.")	Unesco Institutions for Statistics; OECD Factbook
HISTORICAL FACTORS	Operationalization	Positive-Significant by	Negative-Significant by	Hypotheses	Source
Years of Democracy	The number of consecutive years since 1930 the system had been democratic as of 2000		Treisman (2000); Blake and Martin (2006); Pellegrini and Gerlagh (2008)	"The extent of corruption will be lower, if the country has a long democratic history." (4b) (Alternative hypothesis: "The extent of corruption will be higher, if the country has a long democratic history.")	Quality of Government Dataset (2011)
Communist Past	Dummy-Variable: 1) If a country has a communist past; 0) if not	Miller <i>et al.</i> (2001); Moreno (2002); Sandholtz and Taagepera (2005); Gerring and Thacker (2005); Holmes (2006); Møller and Skaaning (2009);		"The extent of corruption will be higher, if the country has a communist past." (4c) (Alternative hypothesis: "The extent of corruption will be lower, if the country has a communist past.")	Worldmark Encyclopedia of the Nations; Statistical Abstract of the World; United Nations

Kostadinova (2012)				
History of Corruption	Corruption Perception Index (4-years-lagged variable)	Herzfeld and Weiss (2003)	“The extent of corruption will be higher, the higher the degree of corruption years before.” (4a)	Transparency International
			(Alternative hypothesis: “The extent of corruption will be lower, the higher the degree of corruption years before.”)	

D.2: Micro Level

MICRO LEVEL					
SOCIO-DEMOGRAPHIC	Operationalization	Positive-Significant by	Negative-Significant by	Hypotheses	Source
CHARACTERISTICS					
Gender	Question text: Categories: -5 Missing; Unknown -4 Not asked in survey -3 Not applicable -2 No answer -1 Don't know 1 Male		Dollar <i>et al.</i> (2001); Swamy <i>et al.</i> (2001); Torgler and Valev (2006a); Lambsdorff and Fink Hady (2006); Seldadyo and Haan (2006); Mocan (2008); Frank <i>et al.</i> (2011); Rivas (2013)	“Gender influences the extent of perceived corruption.” (5a) (Alternative hypothesis: “Gender does not influence the extent of perceived corruption.”)	World Values Survey

	2 Female			
Age	Question text:	Swamy <i>et al.</i> (2001); Torgler and Valev (2006a); Mocan (2008); Hirschi and Gottfredson (2000)	“Age influences the extent of perceived corruption.” (5b)	World Values Survey
	“Year of birth”			
	Categories:		(Alternative hypothesis: “Age does not influence the extent of perceived corruption.”)	
	-5 Missing; Unknown			
	-4 Not asked in survey			
	-3 Not applicable			
	-2 No answer			
-1 Dont know				
Employment Status	Question text:	Torgler and Valev (2006a); Mocan (2008)	“Employment status influences the extent of perceived corruption.” (5c)	World Values Survey
	“Are you employed now or not? IF YES: About how many hours a week? If more than one job: only for the main job.”		(Alternative hypothesis: “Employment status does not influence the extent of perceived corruption.”)	
	Categories:			
	-5 Missing; Unknown			
	-4 Not asked in survey			
	-3 Not applicable			
	-2 No answer			
-1 Don’t know				
1 Full time				

	2 Part time				
	3 Self employed				
	4 Retired				
	5 Housewife				
	6 Students				
	7 Unemployed				
	8 Other				
Level of Income	Question text: “Here is a scale of incomes. We would like to know in what group your household is, counting all wages, salaries, pensions and other incomes that come in. Just give the letter of the group your household falls into, before taxes and other deductions.” Categories: By decides for your society, 1= Lowest decide, 10= Highest decide	Frechette (2006)		“Individual income influences the extent of perceived corruption.” (5d) (Alternative hypothesis: “Individual income does not influence the extent of perceived corruption.”)	World Values Survey
VALUES AND NORMS	Operationalization	Positive-Significant by	Negative-Significant by	Hypotheses	Source
Societal Values				“The level of societal values influences the extent of perceived corruption.” (5e)	World Values Survey

ATTITUDES	Operationalization	Positive-Significant by	Negative-Significant by	Hypotheses	Source
Level of Interpersonal Trust	<p>Question text:</p> <p>“Generally speaking, would you say that most people can be trusted or that you need to be very careful in dealing with people?”</p> <p>Categories:</p> <p>1) Most people can be trusted</p> <p>0) Can't be too careful</p>	<p>Seligson (1999); Paldam and Svendsen (2001); Moreno (2002); Davis <i>et al.</i> (2004); You (2005); Uslaner (2006)</p>	<p>(Alternative hypothesis: “The level of societal values does not influence the extent of perceived corruption.”)</p>	<p>“The level of trust in other people influences the extent of perceived corruption.” (5f)</p> <p>(Alternative hypothesis: “The level of trust in other people does not influence the extent of perceived corruption.”).</p>	<p>World Values Survey</p>
Satisfaction with Financial Situation	<p>Question text:</p> <p>“How satisfied are you with the financial situation of your household? If '1' means you are completely dissatisfied on this scale, and '10' means you are completely satisfied, where would you put your satisfaction with your household's financial situation?”</p>	<p>Torgler and Valev (2006a)</p>	<p>“Financial satisfaction influences the extent of perceived corruption.” (5g)</p> <p>(Alternative hypothesis: Financial dissatisfaction influences the extent of perceived corruption.”)</p>	<p>World Values Survey</p>	

	The item is scaled from 1 (“Dissatisfied”) to 10 (“Satisfied”).		
Justification of Bribery	<p>Question text:</p> <p>“Please tell me for each of the following statements whether you think it can always be justified, never be justified, or something in between, using this card. (Read out statements. Code one answer for each statement): Someone accepting a bribe in the course of their duties.”</p> <p>The item is scaled from 1 (“Never justifiable”) to 10 (“Always justifiable”).</p>	<p>“The level of the justification of bribery influences the extent of perceived corruption.” (5h)</p> <p>(Alternative hypothesis: “The level the justification of bribery does not influence the extent of perceived corruption.”)</p>	World Values Survey

Appendix E: Correlation Matrices

E.1: Correlation Matrix (European Countries)

	Rate of Inflation	Unemployment Rate	Civil Service Wages	EU - Membership	WTO - Membership	OECD - Membership	Degree of Democracy	Anti-Corruption Policy	Degree of Government Centralization	Degree of Political Competition	Degree of Public Spending Ratio	Women in Parliaments
Rate of Inflation	1.00											
Unemployment Rate	0.01	1.00										
Civil Service Wages	0.19	0.09	1.00									
EU-Membership	-0.37	-0.18	-0.06	1.00								
WTO-Membership	-0.41	-0.24	-0.03	0.36	1.00							
OECD-Membership	-0.55	-0.27	-0.26	0.50	0.42	1.00						
Degree of Democracy	-0.53	-0.07	-0.00	0.46	0.75	0.55	1.00					
Anti-Corruption Policy	0.17	0.40	0.03	-0.11	0.12	-0.37	0.02	1.00				
Degree of Government Centralization	-0.23	0.08	-0.29	0.09	0.02	0.28	0.11	0.01	1.00			

Degree of Political Competition	-0.17	-0.09	-0.21	0.24	0.12	0.22	0.31	0.02	-0.08	1.00		
Degree of Public Spending Ratio	-0.20	-0.03	0.05	0.19	-0.04	0.17	0.05	-0.07	-0.14	0.18	1.00	
Women in Parliaments	-0.30	-0.17	-0.29	0.16	0.15	0.33	0.25	-0.11	-0.09	0.21	0.48	1.00
Percentage of Catholics	-0.28	0.00	-0.03	0.38	0.23	0.38	0.28	-0.13	0.17	0.06	-0.10	-0.11
Percentage of Orthodox	0.52	0.18	0.20	-0.37	-0.46	-0.61	-0.61	0.22	-0.00	-0.34	-0.24	-0.40
Percentage of Protestants	-0.17	-0.26	-0.09	-0.05	0.15	0.30	0.24	-0.17	-0.16	0.22	0.35	0.64
Percentage of Muslims	0.01	0.50	0.22	-0.17	-0.29	-0.26	-0.14	0.15	-0.07	-0.09	-0.06	-0.03
Degree of Ethno-linguistic Fractionalization	0.09	0.18	-0.15	-0.21	-0.25	-0.46	-0.29	0.24	0.05	-0.14	-0.06	-0.04
Degree of Urbanization	-0.27	-0.30	-0.26	0.19	0.05	0.44	0.20	-0.28	0.00	0.11	0.43	0.47
Level of Education	0.02	-0.17	-0.02	0.21	-0.00	0.04	0.06	0.20	0.00	0.09	0.31	0.25
Years of Democracy	-0.50	-0.42	-0.19	0.41	0.30	0.66	0.43	-0.41	0.02	0.25	0.31	0.49
Communist Past	0.46	0.37	-0.01	-0.47	-0.31	-0.69	-0.42	0.50	-0.06	-0.08	-0.24	-0.34
History of Corruption	0.49	0.50	0.15	-0.39	-0.38	-0.67	-0.51	0.43	0.06	-0.25	-0.31	-0.64

	Percentage of Catholics	Percentage of Orthodox	Percentage of Protestants	Percentage of Muslims	Degree of Ethno-linguistic Fractionalization	Degree of Urbanization	Level of Education	Years of Democracy	Communist Past	History of Corruption		
Percentage of Catholics	1.00											
Percentage of Orthodox	-0.53	1.00										
Percentage of Protestants	-0.45	-0.29	1.00									
Percentage of Muslims	-0.20	0.18	-0.10	1.00								
Degree of Ethno-linguistic Fractionalization	-0.08	0.21	-0.30	0.17	1.00							
Degree of Urbanization	-0.02	-0.40	0.37	-0.14	0.12	1.00						
Level of Education	-0.17	-0.07	0.35	-0.29	-0.17	0.08	1.00					
Years of Democracy	0.12	-0.47	0.47	-0.08	-0.10	0.60	0.09	1.00				
Communist Past	-0.30	0.37	-0.20	0.08	0.15	-0.52	0.01	-0.78	1.00			
History of Corruption	-0.08	0.63	-0.62	0.17	0.23	-0.57	-0.15	-0.84	0.69	1.00		

E.2: Correlation Matrix (Non-European Countries)

	Rate of Inflation	Unemployment Rate	Civil Service Wages	WTO-Membership	OECD-Membership	Degree of Democracy	Anti-Corruption Policy	Degree of Government Centralization	Degree of Political Competition	Degree of Public Spending Ratio	Women in Parliaments
Rate of Inflation	1.00										
Unemployment Rate	0.20	1.00									
Civil Service Wages	-0.01	0.03	1.00								
WTO-Membership	-0.32	-0.08	-0.07	1.00							
OECD-Membership	-0.28	-0.27	-0.32	0.14	1.00						
Degree of Democracy	-0.26	-0.11	-0.30	0.37	0.47	1.00					
Anti-Corruption Policy	0.17	0.07	0.05	-0.11	-0.20	-0.14	1.00				
Degree of Government Centralization	-0.05	-0.07	-0.30	0.12	0.34	0.48	0.00	1.00			

Degree of Political Competition	-0.10	-0.10	-0.23	0.08	0.31	0.49	-0.10	0.33	1.00		
Degree of Public Spending Ratio	-0.16	0.00	-0.11	-0.09	0.48	0.19	-0.00	0.28	0.18	1.00	
Women in Parliaments	-0.15	-0.15	-0.27	0.21	0.55	0.41	-0.09	0.42	0.13	0.19	1.00
Percentage of Catholics	0.07	0.24	-0.06	0.27	-0.03	0.45	0.08	0.43	0.21	0.00	0.23
Percentage of Orthodox	0.24	-0.03	-0.01	-0.43	-0.05	-0.19	0.15	0.19	-0.01	0.24	-0.12
Percentage of Protestants	-0.26	-0.35	-0.16	0.23	0.67	0.59	-0.15	0.29	0.21	0.36	0.44
Percentage of Muslims	0.15	-0.00	0.22	-0.24	-0.29	-0.76	0.09	-0.45	-0.50	-0.24	-0.32
Degree of Ethno-linguistic Fractionalization	-0.00	-0.09	0.00	0.04	0.10	0.13	-0.12	0.28	0.15	0.21	0.18
Degree of Urbanization	-0.13	0.20	-0.27	-0.03	0.39	0.59	-0.01	0.41	0.24	0.42	0.26
Level of Education	-0.20	-0.14	-0.34	-0.06	0.53	0.53	-0.11	0.20	0.23	0.46	0.27
Years of	-0.21	-0.20	-0.32	0.19	0.89	0.57	-0.16	0.43	0.50	0.46	0.46

Democracy											
Communist Past	0.20	0.30	-0.08	-0.33	-0.19	-0.02	0.06	0.09	-0.09	-0.02	-0.15
History of Corruption	0.41	0.19	0.20	-0.23	-0.76	-0.64	0.15	-0.44	0.23	-0.50	-0.52
	Percentage of Catholics	Percentage of Orthodox	Percentage of Protestants	Percentage of Muslims	Degree of Ethno-linguistic Fractionalization	Degree of Urbanization	Level of Education	Years of Democracy	Communist Past	History of Corruption	
Percentage of Catholics	1.00										
Percentage of Orthodox	-0.24	1.00									
Percentage of Protestants	0.05	-0.16	1.00								
Percentage of Muslims	-0.57	0.09	-0.44	1.00							
Degree of Ethno-linguistic Fractionalization	0.22	0.02	0.11	-0.09	1.00						
Degree of Urbanization	0.46	-0.08	0.30	-0.55	-0.07	1.00					

Level of Education	-0.05	0.22	0.48	-0.51	-0.16	0.64	1.00				
Years of Democracy	0.11	-0.12	0.65	-0.44	0.15	0.42	0.53	1.00			
Communist Past	0.09	0.28	-0.14	-0.18	-0.10	0.24	0.12	-0.19	1.00		
History of Corruption	-0.08	0.17	-0.68	0.45	-0.12	-0.59	-0.63	-0.74	0.01	1.00	

Appendix F: Anti-Corruption Policy

F.1: Anti-Corruption Policy of European Countries

Countries	GRECO	Criminal Law Convention on Corruption		Civil Law Convention on Corruption	
	Accessions	Signature	Ratification	Signature	Ratification
Albania	2001	1999	2001	2000	2000
Austria	2006	2000	-	2000	2006
Belarus ¹	2011	2001	2007	2004	2006
Belgium	1999	1999	2004	2000	2007
Bosnia and Herzegovina	2000	2000	2002	2000	2002
Bulgaria	1999	1999	2001	1999	2000
Croatia	2000	1999	2000	2001	2003
Cyprus	1999	1999	2001	1999	2005
Czech Republic	2002	1999	2000	2000	2003
Denmark	2000	1999	2000	1999	-
Estonia	1999	2000	2001	2000	2000
Finland	1999	1999	2002	2000	2001
France	1999	1999	2008	1999	2008
Georgia	1999	1999	2008	1999	2003
Germany	1999	1999	-	1999	-
Greece	1999	1999	2007	2000	2002
Hungary	1999	1999	2000	2003	2003
Iceland	1999	1999	2004	1999	-
Ireland	1999	1999	2003	1999	-
Italy	2007	1999	-	1999	-
Latvia	2000	1999	2001	2004	2005
Lithuania	1999	1999	2002	2002	2003
Luxembourg	1999	1999	2005	1999	-
Macedonia	2000	1999	1999	2000	2002
Moldova	2001	1999	2004	1999	2004
Netherlands	2001	2000	2002	2007	2007
Norway	2001	1999	2004	1999	2008
Poland	1999	1999	2002	2001	2002
Portugal	2002	1999	2002	-	-
Romania	1999	1999	2002	1999	2002

Slovakia	1999	1999	2000	2000	2003
Slovenia	1999	1999	2000	2001	2003
Spain	1999	2005	2010	2005	2009
Sweden	1999	1999	2004	2000	2004
Switzerland	2006	2001	2006	-	-
Ukraine	2006	1999	2009	1999	2005
United Kingdom	1999	1999	2003	2000	-

Note: ¹Non-member state of the Council of Europe

F.2: Anti-Corruption Policy of Non-European Countries

Countries	United Nations Convention against Corruption	
	Signature	Ratification (a= Accession)
Algeria	2003	2004
Argentina	2003	2006
Armenia	2005	2007
Australia	2003	2005
Azerbaijan	2004	2005
Bangladesh	-	2007a
Brazil	2003	2005
Canada	2004	2007
Chile	2003	2006
China	2003	2006
Colombia	2003	2006
Congo	-	2006a
Dominican Republic	2003	2006
Egypt	2003	2005
El Salvador	2003	2004
Ethiopia	2003	2007
Ghana	2004	2007
Guatemala	2003	2006
India	2005	2011
Indonesia	2003	2006
Iran	2003	2009
Japan	2003	-
Korea, South	2003	2008
Kyrgyzstan	2003	2005
Malaysia	2003	2008

Mexico	2003	2004
Morocco	2003	2007
New Zealand	2003	-
Pakistan	2003	2007
Peru	2003	2004
Philippines	2003	2006
Singapore	2005	2009
South Africa	2003	2004
Thailand	2003	2011
Trinidad and Tobago	2003	2006
Uganda	2003	2004
Uruguay	2003	2007
Venezuela	2003	2009
Vietnam	2003	2009
Zambia	2003	2007

Source: (United Nations Convention against Corruption, 2013)

Appendix G: Models of Corruption (Lagged Variables)

G.1: Economic Model of Corruption (Lagged Variables)

Variables	Dependent Variable: Extent of Corruption					
	European Countries			Non-European Countries		
	2-years-lags	5-years-lags	10-years-lags	2-years-lags	5-years-lags	10-years-lags
Rate of Inflation	0.37*** (0.08)	0.37*** (0.07)	0.40*** (0.07)	0.40*** (0.09)	0.45*** (0.10)	0.58*** (0.16)
Unemployment Rate	0.45*** (0.08)	0.50*** (0.09)	0.43*** (0.13)	-0.12*** (0.04)	-0.14** (0.06)	-0.35*** (0.12)
Civil Service Wages	-0.02 (0.04)	0.08 (0.05)	0.18** (0.07)	0.01 (0.03)	0.06** (0.02)	0.27*** (0.06)
EU-Membership	-0.03** (0.01)	-0.05*** (0.01)	-0.07*** (0.01)			
WTO-Membership	-0.04*** (0.01)	-0.10*** (0.02)	-0.17*** (0.03)	-0.05*** (0.01)	-0.04* (0.02)	0.03 (0.04)
OECD-Membership	-0.19*** (0.02)	-0.13*** (0.02)	-0.01 (0.05)	-0.41*** (0.03)	-0.38*** (0.03)	-0.17*** (0.03)
Constant	0.23*** (0.08)	0.21*** (0.06)	0.16** (0.07)	0.41*** (0.09)	0.36*** (0.11)	0.09 (0.17)
Observations	399	318	151	249	184	75
Number of Countries	37	37	32	37	33	20
R-squared	0.59	0.62	0.66	0.62	0.61	0.54

Note: Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

Dependent Variable: "Extent of Corruption" (Corruption Perception Index transformed); 0= low corruption; 10= highest level of corruption.

G.2: Political Model of Corruption (Lagged Variables)

Variables	Dependent Variable: Extent of Corruption					
	European Countries			Non-European Countries		
	2-years-lags	5-years-lags	10-years-lags	2-years-lags	5-years-lags	10-years-lags
Degree of Democracy	-0.68*** (0.04)	-0.69*** (0.04)	-0.62*** (0.07)	-0.38*** (0.01)	-0.41*** (0.01)	-0.41*** (0.03)
Anti-Corruption Policy	0.13*** (0.01)	0.10*** (0.01)	0.05*** (0.01)	0.00 (0.02)	-0.03 (0.02)	0 (0)
Degree of Government Centralization	0.04*** (0.01)	0.05*** (0.01)	0.05*** (0.01)	-0.09*** (0.01)	-0.08*** (0.01)	-0.09*** (0.01)
Degree of Political Competition	0.07 (0.08)	0.13 (0.08)	0.04 (0.05)	0.24*** (0.05)	0.25*** (0.05)	0.24*** (0.06)
Degree of Public Spending Ratio	-0.05 (0.04)	-0.01 (0.03)	-0.00 (0.06)	-0.47*** (0.02)	-0.46*** (0.02)	-0.35*** (0.03)
Women in Parliaments	-0.01*** (0.00)	-0.01*** (0.00)	-0.01*** (0.00)	-0.00*** (0.00)	-0.00*** (0.00)	-0.00*** (0.00)
Constant	1.17*** (0.04)	1.15*** (0.03)	1.08*** (0.07)	1.04*** (0.01)	1.06*** (0.01)	1.02*** (0.01)
Observations	418	317	137	443	345	150
Number of Countries	37	37	36	41	41	39
R-squared	0.73	0.74	0.72	0.52	0.53	0.50

Note: Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

Dependent Variable: "Extent of Corruption" (Corruption Perception Index transformed); 0= low corruption; 10= highest level of corruption.

G.3: Socio-Cultural Model of Corruption (Lagged Variables)

Variables	Dependent Variable: Extent of Corruption					
	European Countries			Non-European Countries		
	2-years-lags	5-years-lags	10-years-lags	2-years-lags	5-years-lags	10-years-lags
Percentage of Catholics	-0.09*** (0.01)	-0.07*** (0.01)	-0.07 (0)	0.27*** (0.01)	0.27*** (0.01)	0.25 (0)
Percentage of Orthodox	0.19*** (0.01)	0.21*** (0.01)	0.22 (0)	0.28*** (0.03)	0.34*** (0.01)	0.32 (0)
Percentage of Protestants	-0.39*** (0.01)	-0.37*** (0.01)	-0.35 (0)	-0.47*** (0.03)	-0.54*** (0.04)	-0.53 (0)
Percentage of Muslims	0.03 (0.04)	0.04 (0.03)	-0.02 (0)	0.16*** (0.00)	0.15*** (0.00)	0.14 (0)
Degree of Ethno-linguistic Fractionalization	-0.01 (0.00)	-0.02*** (0.01)	-0.05 (0)	-0.05*** (0.01)	-0.05*** (0.01)	-0.02 (0)
Degree of Urbanization	-0.58*** (0.04)	-0.53*** (0.04)	-0.40 (0)	-0.51*** (0.02)	-0.50*** (0.03)	-0.44 (0)
Level of Education	0.00 (0.04)	-0.00 (0.04)	-0.05 (0)	-0.08*** (0.02)	-0.10*** (0.02)	-0.21 (0)
Constant	0.83*** (0.04)	0.79*** (0.05)	0.73 (0)	0.85*** (0.01)	0.85*** (0.01)	0.83 (0)
Observations	382	282	102	351	268	94
Number of Countries	37	36	36	40	40	36
R-squared	0.70	0.70	0.68	0.64	0.67	0.67

Note: Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

Dependent Variable: "Extent of Corruption" (Corruption Perception Index transformed); 0= low corruption; 10= highest level of corruption.

G.4: Historical Model of Corruption (Lagged Variables)

Variables	Dependent Variable: Extent of Corruption					
	European Countries			Non-European Countries		
	2-years-lags	5-years-lags	10-years-lags	2-years-lags	5-years-lags	10-years-lags
Years of Democracy	-0.07*** (0.02)	-0.09*** (0.03)	-0.12*** (0.02)	-0.00 (0.01)	-0.00 (0.01)	0.00 (0.01)
Communist Past	0.00 (0.01)	0.00 (0.01)	-9.24 (0.01)	0.00 (0.00)	0.00 (0.00)	0.01*** (0.00)
History of Corruption	0.82*** (0.04)	0.78*** (0.05)	0.71*** (0.04)	0.96*** (0.02)	0.95*** (0.02)	0.94*** (0.02)
Constant	0.09*** (0.03)	0.12*** (0.03)	0.15*** (0.03)	0.02 (0.01)	0.02 (0.01)	0.01 (0.01)
Observations	368	331	154	394	354	163
R-squared	0.92	0.90	0.88	0.94	0.93	0.90
Number of Countries	37	37	35	41	41	36

Note: Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

Dependent Variable: "Extent of Corruption" (Corruption Perception Index transformed); 0= low corruption; 10= highest level of corruption.

Appendix H: Economic Model of Corruption (KOF Index of International Integration)

Variables	Dependent Variable: Extent of Corruption	
	European Sample	Non-European Sample
Rate of Inflation	0.25*** (0.06)	0.28*** (0.05)
Unemployment Rate	0.46*** (0.08)	0.10*** (0.02)
Civil Service Wages	0.06* (0.03)	0.11*** (0.04)
KOF Index of International Integration	-1.11*** (0.07)	-1.39*** (0.03)
Constant	0.77*** (0.07)	0.92*** (0.05)
Observations	341	205
R-squared	0.64	0.72
Number of Countries	37	36

Note: Standard errors in parentheses*** p<0.01, ** p<0.05, * p<0.1

Dependent Variable: "Extent of Corruption" (Corruption Perception Index transformed); 0= low corruption; 10= highest level of corruption.

Appendix I: Models of Corruption (Control of Corruption Index)

I.1: Economic Model of Corruption (European Countries)

Variables	Corruption Perception Index (transformed)	Control of Corruption Index (transformed)
Rate of Inflation	0.37*** (0.08)	0.18*** (0.03)
Unemployment Rate	0.45*** (0.08)	0.14*** (0.03)
Civil Service Wages	-0.02 (0.04)	-0.03* (0.02)
EU-Membership	-0.03** (0.01)	-0.00
WTO-Membership	-0.04*** (0.01)	-0.03*** (0.00)
OECD-Membership	-0.19*** (0.02)	-0.09*** (0.00)
Constant	0.23*** (0.08)	0.11*** (0.03)
Observations	399	413
R-squared	0.59	0.65
Number of Countries	37	37

Note: Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

Dependent Variable: "Extent of Corruption" (Corruption Perception Index transformed) and Control of Corruption Index (transformed); 0= low corruption; 10= highest level of corruption.

I.2: Economic Model of Corruption (Non-European Countries)

Variables	Corruption Perception Index (transformed)	Control of Corruption Index (transformed)
Rate of Inflation	0.40*** (0.09)	0.17*** (0.04)
Unemployment Rate	-0.12*** (0.04)	-0.06*** (0.01)
Civil Service Wages	0.01 (0.03)	0.00 (0.01)
WTO-Membership	-0.05*** (0.01)	-0.01* (0.01)
OECD-Membership	-0.41*** (0.03)	-0.17*** (0.01)
Constant	0.41*** (0.09)	0.18*** (0.04)
Observations	249	264
R-squared	0.62	0.58
Number of Countries	37	37

Note: Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

Dependent Variable: "Extent of Corruption" (Corruption Perception Index transformed) and Control of Corruption Index (transformed); 0= low corruption; 10= highest level of corruption.

I.3: Political Model of Corruption (European Countries)

Variables	Corruption Perception Index (transformed)	Control of Corruption Index (transformed)
Degree of Democracy	-0.68*** (0.04)	-0.33*** (0.01)
Anti-Corruption Policy	0.13*** (0.01)	0.05*** (0.00)
Degree of Government Centralization	0.04*** (0.01)	0.00 (0.00)
Degree of Political Competition	0.07 (0.08)	0.00 (0.03)
Public Spending Ratio	-0.05 (0.04)	-0.02* (0.01)
Women in Parliaments	-0.01*** (0.00)	-0.00*** (0.00)
Constant	1.17*** (0.04)	0.52*** (0.01)
Observations	418	426
R-squared	0.73	0.75
Number of Countries	37	37

Note: Standard errors in parentheses *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Dependent Variable: "Extent of Corruption" (Corruption Perception Index transformed) and Control of Corruption Index (transformed); 0= low corruption; 10= highest level of corruption.

I.4: Political Model of Corruption (Non-European Countries)

Variables	Corruption Perception Index (transformed)	Control of Corruption Index (transformed)
Degree of Democracy	-0.38*** (0.01)	-0.18*** (0.00)
Anti-Corruption Policy	0.00 (0.02)	0.01 (0.01)
Degree of Government Centralization	-0.09*** (0.01)	-0.03*** (0.00)
Degree of Political Competition	0.24*** (0.05)	0.09*** (0.01)
Degree of Public Spending Ratio	-0.47*** (0.02)	-0.21*** (0.01)
Women in Parliaments	-0.00*** (0.00)	-0.00*** (0.000255)
Constant	1.04*** (0.01)	0.47*** (0.00)
Observations	443	462
R-squared	0.52	0.54
Number of Countries	41	41

Note: Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

Dependent Variable: "Extent of Corruption" (Corruption Perception Index transformed) and Control of Corruption Index (transformed); 0= low corruption; 10= highest level of corruption.

I.5: Socio-Cultural Model of Corruption (European Countries)

Variables	Corruption Perception Index (transformed)	Control of Corruption Index (transformed)
Percentage of Catholics	-0.09*** (0.01)	-0.03*** (0.00)
Percentage of Orthodox	0.19*** (0.01)	0.09*** (0.00)
Percentage of Protestants	-0.39*** (0.01)	-0.15*** (0.00)
Percentage of Muslims	0.03 (0.04)	0.06*** (0.00)
Degree of Ethno-linguistic Fractionalization	-0.01 (0.00)	0.01** (0.00)
Degree of Urbanization	-0.58*** (0.04)	-0.24*** (0.01)
Level of Education	0.00 (0.04)	0.03** (0.01)
Constant	0.83*** (0.04)	0.31*** (0.01)
Observations	382	390
R-squared	0.70	0.72
Number of Countries	37	37

Note: Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

Dependent Variable: "Extent of Corruption" (Corruption Perception Index transformed) and Control of Corruption Index (transformed); 0= low corruption; 10= highest level of corruption.

I.6: Socio-Cultural Model of Corruption (Non-European Countries)

Variables	Corruption Perception Index (transformed)	Control of Corruption Index (transformed)
Percentage of Catholics	0.27*** (0.01)	0 ¹ (0)
Percentage of Orthodox	0.28*** (0.03)	0 (0)
Percentage of Protestants	-0.47*** (0.03)	0 (0)
Percentage of Muslims	0.16*** (0.00)	0 (0)
Degree of Ethno-linguistic Fractionalization	-0.05*** (0.01)	0 (0)
Degree of Urbanization	-0.51*** (0.02)	0 (0)
Level of Education	-0.08*** (0.02)	0 (0)
Constant	0.85*** (0.01)	0 (0)
Observations	351	-
R-squared	0.64	-
Number of Countries	40	-

Note: Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

Dependent Variable: "Extent of Corruption" (Corruption Perception Index transformed) and Control of Corruption Index (transformed); 0= low corruption; 10= highest level of corruption.

I.7: Historical Model of Corruption (European Countries)

Variables	Corruption Perception Index (transformed)	Control of Corruption Index (transformed)
Years of Democracy	-0.07*** (0.02)	-0.02*** (0.00)
Communist Past	0.001 (0.01)	-0.00** (0.00)
History of Corruption	0.82*** (0.04)	0.88*** ¹ (0.03)
Constant	0.09*** (0.03)	0.03*** (0.01)
Observations	368	444
R-squared	0.92	0.94
Number of Countries	37	37

Note: Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

¹4-years –lagged CoC-index

Dependent Variable: “Extent of Corruption” (Corruption Perception Index transformed) and Control of Corruption Index (transformed); 0= low corruption; 10= highest level of corruption.

I.8: Historical Model of Corruption (Non-European Countries)

Variables	Corruption Perception Index (transformed)	Control of Corruption Index (transformed)
Years of Democracy	-0.00 (0.01)	-0.00 (0.00)
Communist Past	0.00 (0.00)	0.00 (0.00)
History of Corruption	0.96*** (0.02)	0.96*** (0.01)
Constant	0.02 (0.01)	0.01* (0.00)
Observations	394	492
R-squared	0.94	0.95
Number of Countries	41	41

Note: Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

Dependent Variable: "Extent of Corruption" (Corruption Perception Index transformed) and Control of Corruption Index (transformed); 0= low corruption; 10= highest level of corruption.

I.9: Overall Model of Corruption (European Countries)

Variables	Corruption Perception Index (transformed)	Control of Corruption Index (transformed)
Rate of Inflation	0.05** (0.02)	0.02*** (0.00)
Unemployment Rate	-0.00 (0.03)	-0.00 (0.00)
EU-Membership	-0.02*** (0.00)	0.00 (0.00)
WTO-Membership	-0.00 (0.01)	0.00 (0.00)
OECD-Membership	0.03*** (0.01)	0.00 (0.00)
Degree of Democracy	-0.14** (0.06)	-0.03** (0.01)
Anti-Corruption Policy	0.01* (0.00)	0.00*** (0.00)
Degree of Government Centralization	0.01 (0.00)	0.01*** (0.00)
Women in Parliaments	-0.00** (0.00)	-0.00** (0.00)
Percentage of Catholics	0.01 (0.01)	0.00 (0.00)
Percentage of Orthodox	0.05*** (0.01)	0.01** (0.00)
Percentage of Protestants	-0.04** (0.02)	-0.01** (0.00)
Degree of Urbanization	-0.01 (0.03)	-0.02 (0.01)
Years of Democracy	-0.08*** (0.02)	-0.02** (0.01)
History of Corruption	0.64*** (0.06)	0.74*** (0.05)
Constant	0.27*** (0.05)	0.07*** (0.02)
Observations	365	434
R-squared	0.94	0.95
Number of Countries	37	37

Note: Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

Dependent Variable: "Extent of Corruption" (Corruption Perception Index transformed) and Control of Corruption (transformed); 0= low corruption; 10= highest level of corruption.

I.10: Overall Model of Corruption (Non-European Countries)

Variables	Corruption Perception Index (transformed)	Control of Corruption Index (transformed)
Rate of Inflation	0.05** (0.02)	0.00 (0.00)
WTO-Membership	-0.00 (0.00)	0.00 (0.00)
OECD-Membership	-0.01** (0.00)	-0.01** (0.00)
Degree of Democracy	-0.03*** (0.01)	-0.01* (0.00)
Degree of Government Centralization	-0.01 (0.00)	-0.00* (0.00)
Degree of Political Competition	-0.01 (0.02)	0.01** (0.00)
Degree of Public Spending Ratio	-0.00 (0.02)	0.01 (0.00)
Women in Parliaments	-0.00 (0.00)	0.00 (0.00)
Percentage of Catholics	0.03** (0.01)	0.01*** (0.00)
Percentage of Orthodox	0.06 (0.03)	0.01 (0.01)
Percentage of Protestants	-0.03** (0.01)	-0.02*** (0.00)
Percentage of Muslims	0.00 (0.00)	0.01*** (0.00)
Degree of Ethno-linguistic Fractionalization	0.01* (0.00)	-0.00 (0.00)
Degree of Urbanization	-0.06*** (0.02)	-0.03*** (0.00)
History of Corruption	0.82*** (0.03)	0.85*** (0.03)
Constant	0.11*** (0.03)	0.04*** (0.01)
Observations	355	429

R-squared	0.95	0.96
Number of Countries	41	41

Note: Standard errors in parentheses *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Dependent Variable: "Extent of Corruption" (Corruption Perception Index transformed) and Control of Corruption (transformed); 0= low corruption; 10= highest level of corruption.

Appendix J: Overall Model of Corruption (with and without "History of Corruption")

Variables	Overall Model (with "History of Corruption")	Overall Modell (without "History of Corruption)
Rate of Inflation	0.05** (0.02)	0.09*** (0.03)
Unemployment Rate	-0.00 (0.03)	0.18*** (0.03)
EU-Membership	-0.02*** (0.00)	-0.03*** (0.00)
WTO-Membership	-0.00 (0.01)	0.02 (0.01)
OECD-Membership	0.03*** (0.01)	0.00 (0.01)
Degree of Democracy	-0.14** (0.06)	-0.23*** (0.04)
Anti-Corruption Policy	0.01* (0.00)	0.03*** (0.00)
Degree of Government Centralization	0.01 (0.00)	0.03*** (0.00)
Women in Parliaments	-0.00** (0.00)	-0.00*** (0.00)
Percentage of Catholics	0.01 (0.01)	0.04*** (0.01)
Percentage of Orthodox	0.05*** (0.01)	0.14*** (0.00)
Percentage of Protestants	-0.04** (0.02)	-0.11*** (0.02)
Degree of Urbanization	-0.01 (0.03)	-0.00 (0.03)
Years of Democracy	-0.08*** (0.02)	-0.27*** (0.01)
History of Corruption	0.64*** (0.06)	
Constant	0.27*** (0.05)	0.65*** (0.03)
Observations	365	423

R-squared	0.94	0.89
Number of Countries	37	37

Note: Standard errors in parentheses *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Dependent Variable: "Extent of Corruption" (Corruption Perception Index transformed); 0= low corruption; 10= highest level of corruption.

Appendix K: OLS-Regression Models

K.1: OLS-Regression Models (European Countries)

Variables	Dependent Variable: Extent of Corruption				
	(1)	(2)	(3)	(4)	(5)
Rate of Inflation	0.37*** (0.05)				0.05** (0.02)
Unemployment Rate	0.45*** (0.05)				-0.00 (0.02)
Civil Service Wages	-0.02 (0.06)				
EU-Membership	-0.03* (0.01)				-0.02*** (0.00)
WTO-Membership	-0.04 (0.02)				
OECD-Membership	-0.19*** (0.02)				0.03*** (0.01)
Degree of Democracy		-0.68*** (0.04)			-0.14*** (0.03)
Anti-Corruption Policy		0.13*** (0.01)			0.01* (0.00)
Degree of Government Centralization		0.04** (0.01)			0.01 (0.01)
Degree of Political Competition		0.07 (0.09)			
Degree of Public Spending Ratio		-0.05 (0.04)			
Women in Parliaments		-0.01*** (0.00)			-0.00** (0.00)
Percentage of Catholics			-0.09*** (0.03)		0.01 (0.01)
Percentage of Orthodox			0.19*** (0.03)		0.05*** (0.01)
Percentage of Protestants			-0.39*** (0.04)		-0.04* (0.02)
Percentage of Muslims			0.03 (0.07)		

Degree of Ethno-linguistic Fractionalization				-0.01 (0.03)	
Degree of Urbanization				-0.58*** (0.06)	-0.01 (0.03)
Level of Education				0.00 (0.04)	
Years of Democracy				-0.07*** (0.02)	-0.08*** (0.02)
Communist Past				0.00 (0.01)	
History of Corruption				0.82*** (0.02)	0.64*** (0.03)
Constant	0.23*** (0.06)	1.17*** (0.03)	0.83*** (0.05)	0.09*** (0.02)	0.26*** (0.05)
Observations	399	418	382	368	365
R-squared	0.59	0.73	0.70	0.92	0.94

Note: Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

Dependent Variable: "Extent of Corruption" (Corruption Perception Index transformed); 0= low corruption; 10= highest level of corruption.

K.2: OLS-Regression Models with Cluster Robust Standard Errors (European Countries)

Variables	Dependent Variable: Extent of Corruption				
	(1)	(2)	(3)	(4)	(5)
Rate of Inflation	0.37*** (0.08)				0.07* (0.03)
Unemployment Rate	0.45*** (0.14)				-0.00 (0.04)
Civil Service Wages	-0.02 (0.19)				
EU-Membership	-0.03 (0.05)				
WTO-Membership	-0.04 (0.04)				

OECD-Membership	-0.19*** (0.06)			0.02* (0.01)	
Degree of Democracy		-0.68*** (0.11)			-0.18*** (0.03)
Anti-Corruption Policy		0.13*** (0.03)			0.01 (0.01)
Degree of Government Centralization		0.04 (0.04)			
Degree of Political Competition		0.07 (0.20)			
Degree of Public Spending Ratio		-0.05 (0.13)			
Women in Parliaments		-0.01*** (0.00)			-0.00* (0.00)
Percentage of Catholics			-0.09 (0.11)		
Percentage of Orthodox			0.19 (0.11)		
Percentage of Protestants			-0.39*** (0.12)		-0.03** (0.01)
Percentage of Muslims			0.03 (0.15)		
Degree of Ethno-linguistic Fractionalization			-0.01 (0.12)		
Degree of Urbanization			-0.58*** (0.20)		-0.03 (0.04)
Level of Education			0.00 (0.13)		
Years of Democracy				-0.07** (0.03)	-0.07** (0.03)
Communist Past				0.00 (0.01)	
History of Corruption				0.82*** (0.04)	0.69*** (0.06)
Constant	0.23* (0.12)	1.17*** (0.10)	0.83*** (0.16)	0.09*** (0.03)	0.29*** (0.06)
Observations	399	418	382	368	365
R-squared	0.59	0.73	0.70	0.92	0.93

Note: Robust Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

Dependent Variable: "Extent of Corruption" (Corruption Perception Index transformed); 0= low corruption; 10= highest level of corruption.

K.3.: OLS-Regression Models (Non-European Countries)

Variables	Dependent Variable: Extent of Corruption				
	(1)	(2)	(3)	(4)	(5)
Degree of Democracy		-0.38*** (0.03)			-0.05*** (0.01)
Ant-Corruption Policy		0.00 (0.04)			
Degree of Government Centralization		-0.09*** (0.02)			-0.00 (0.01)
Degree of Political Competition		0.24*** (0.06)			-0.01 (0.03)
Degree of Public Spending Ratio		-0.47*** (0.05)			-0.02 (0.02)
Women in Parliaments		-0.00*** (0.00)			-0.00 (0.00)
Rate of Inflation	0.40*** (0.06)				0.04** (0.02)
Unemployment Rate	-0.12** (0.05)				0.03* (0.02)
Civil Service Wages	0.01 (0.05)				
WTO-Membership	-0.05 (0.03)				
OECD-Membership	-0.41*** (0.02)				-0.0 (0.01)
Percentage of Catholics			0.27*** (0.03)		0.04*** (0.01)
Percentage of Orthodox			0.28*** (0.09)		0.12** (0.05)
Percentage of Protestants			-0.47*** (0.05)		-0.00 (0.02)
Percentage of Muslims			0.16*** (0.02)		0.00 (0.01)
Degree of Ethno-			-0.05* (0.02)		0.01 (0.01)

linguistic Fractionalization		(0.02)		(0.01)	
Degree of Urbanization		-0.51***		-0.07***	
		(0.05)		(0.02)	
Level of Education		-0.08			
		(0.05)			
Years of Democracy			-0.00		
			(0.01)		
Communist Past			0.00		
			(0.00)		
History of Corruption			0.96***	0.83***	
			(0.01)	(0.02)	
Constant	0.41***	1.04***	0.85***	0.02*	0.11***
	(0.07)	(0.02)	(0.02)	(0.01)	(0.02)
Observations	249	443	351	394	318
R-squared	0.62	0.52	0.64	0.94	0.95

Note: Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

Dependent Variable: "Extent of Corruption" (Corruption Perception Index transformed); 0= low corruption; 10= highest level of corruption.

K.4: OLS-Regression Models with Cluster Robust Standard Errors (Non-Europe Countries)

Variables	Dependent Variable: Extent of Corruption				
	(1)	(2)	(3)	(4)	(5)
Degree of Democracy		-0.38***			-0.03**
		(0.08)			(0.01)
Anti-Corruption Policy		0.00			
		(0.04)			
Degree of Government Centralization		-0.09			
		(0.06)			
Degree of Political Competition		0.24**			-0.01
		(0.10)			(0.02)
Degree of Public Spending Ratio		-0.47***			0.00
		(0.15)			(0.02)
Women in Parliaments		-0.00			

	(0.00)				
Rate of Inflation	0.40**				0.06***
	(0.15)				(0.02)
Unemployment Rate	-0.12				
	(0.12)				
Civil Service Wages	0.01				
	(0.10)				
WTO-Membership	-0.05				
	(0.03)				
OECD-Membership	-0.41***				-0.01*
	(0.08)				(0.01)
Percentage of Catholics			0.27***		0.03***
			(0.09)		(0.01)
Percentage of Orthodox			0.28		
			(0.27)		
Percentage of Protestants			-0.47***		-0.02
			(0.16)		(0.02)
Percentage of Muslims			0.16**		0.01
			(0.06)		(0.00)
Degree of Ethno-linguistic Fractionalization			-0.05		
			(0.06)		
Degree of Urbanization			-0.51***		-0.07***
			(0.14)		(0.01)
Level of Education			-0.08		
			(0.14)		
Years of Democracy				-0.00	
				(0.02)	
Communist Past				0.00	
				(0.01)	
History of Corruption				0.96***	0.83***
				(0.02)	(0.02)
Constant	0.41**	1.04***	0.85***	0.02	0.09***

	(0.16)	(0.08)	(0.06)	(0.02)	(0.02)
Observations	249	443	351	394	359
R-squared	0.62	0.52	0.64	0.94	0.95

Note: Robust Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

Dependent Variable: "Extent of Corruption" (Corruption Perception Index transformed); 0= low corruption; 10= highest level of corruption.

Appendix L: Random Effects Models

L.1: Random Effects Models (European Countries)

Variables	Dependent Variable: Extent of Corruption				
	(1)	(2)	(3)	(4)	(5)
Rate of Inflation	-0.04*				0.04
	(0.02)				(0.02)
Unemployment Rate	0.04				
	(0.04)				
Civil Service Wages	0.05				
	(0.07)				
EU-Membership	-0.04***				-0.05***
	(0.01)				(0.01)
WTO-Membership	-0.04***				0.01
	(0.01)				(0.02)
OECD-Membership	-0.13***				0.03*
	(0.03)				(0.01)
Degree of Democracy		-0.37***			-0.17***
		(0.05)			(0.05)
Anti-Corruption Policy		0.00			
		(0.00)			
Degree of Government Centralization		0.0			
		(0.02)			
Degree of Political Competition		0.04			
		(0.05)			
Degree of Public Spending Ratio		-0.09**			-0.03
		(0.04)			(0.03)
Women in Parliaments		-0.00*			0.00
		(0.00)			(0.00)
Percentage of Catholics			-0.06		
			(0.12)		
Percentage of Orthodox			0.26**		0.08***
			(0.12)		(0.02)
Percentage of Protestants			-0.43***		-0.16***
			(0.14)		(0.02)
Percentage of Muslims			0.20		
			(0.20)		

Ethno-linguistic Fractionalization			-0.07		
			(0.12)		
Degree of Urbanization			-0.00		
			(0.18)		
Level of Education			-0.09***		0.07**
			(0.02)		(0.03)
Years of Democracy				-0.21***	-0.18***
				(0.03)	(0.03)
Communist Past				0.03*	
				(0.02)	
History of Corruption				0.51***	0.38***
				(0.04)	(0.04)
Constant	0.58***	0.80***	0.53***	0.27***	0.43***
	(0.04)	(0.05)	(0.15)	(0.03)	(0.06)
Observations	399	418	382	368	339
Number of Countries	37	37	37	37	37

Note: Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

Dependent Variable: "Extent of Corruption" (Corruption Perception Index transformed); 0= low corruption; 10= highest level of corruption.

L.2: Random-Effects Models (Non-European Countries)

Variables	Dependent Variable: Extent of Corruption				
	(1)	(2)	(3)	(4)	(5)
Degree of Democracy		-0.03			
		(0.02)			
Anti-Corruption Policy		-0.01			
		(0.01)			
Degree of Government Centralization		-0.24***			-0.03
		(0.07)			(0.02)
Degree of Political Competition		0.01			
		(0.02)			
Degree of Public Spending Ratio		-0.10***			-0.02
		(0.03)			(0.04)
Women in Parliaments		0.00			

	(0.00)				
Rate of Inflation	0.06***			0.06***	
	(0.0)			(0.02)	
Unemployment Rate	-0.00				
	(0.05)				
Civil Service Wages	-0.17***			-0.01	
	(0.05)			(0.03)	
WTO-Membership	-0.01				
	(0.03)				
OECD-Membership	-0.45***			-0.08**	
	(0.06)			(0.03)	
Percentage of Catholics		0.23***		0.09***	
		(0.08)		(0.03)	
Percentage of Orthodox		0.26			
		(0.31)			
Percentage of Protestants		-0.41**		-0.11**	
		(0.16)		(0.05)	
Percentage of Muslims		0.18**		0.03	
		(0.07)		(0.02)	
Degree of Ethno-linguistic Fractionalization		0.02			
		(0.09)			
Degree of Urbanization		-0.37***		-0.19***	
		(0.10)		(0.04)	
Level of Education		-0.02			
		(0.03)			
Years of Democracy			-0.16***	-0.05	
			(0.02)	(0.03)	
Communist Past			-3.06		
			(0.01)		
History of Corruption			0.63***	0.50***	
			(0.03)	(0.04)	
Constant	0.71***	0.76***	0.73***	0.28***	0.39***
	(0.05)	(0.03)	(0.07)	(0.02)	(0.05)
Observations	249	443	351	394	237
Number of Countries	37	41	40	41	37

Note: Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

Dependent Variable: "Extent of Corruption" (Corruption Perception Index transformed); 0= low corruption; 10= highest level of corruption.

Appendix M: Fixed Effects Models

M.1: Fixed Effects Models (European Countries)

Variables	Dependent Variable: Extent of Corruption				
	(1)	(2)	(3)	(4)	(5)
Rate of Inflation	-0.05** (0.02)				-0.03 (0.02)
Unemployment Rate	0.01 (0.04)				
Civil Service Wages	-0.00 (0.07)				
EU-Membership	-0.04*** (0.00)				-0.05*** (0.00)
WTO-Membership	-0.03*** (0.01)				0.02 (0.01)
OECD-Membership	0.02 (0.04)				
Degree of Democracy		-0.25*** (0.05)			-0.24*** (0.06)
Anti-Corruption Policy		-0.01* (0.00)			-0.01 (0.00)
Degree of Government Centralization		-0.00 (0.02)			
Degree of Political Competition		0.05 (0.05)			
Degree of Public Spending Ratio		-0.03 (0.03)			
Women in Parliaments		0.00 (0.00)			
Degree of Urbanization			1.12*** (0.30)		1.12*** (0.30)
Level of Education			-0.13*** (0.02)		-0.0 (0.03)
Years of Democracy				-0.09* (0.05)	
History of Corruption				-0.11** (0.04)	
Constant	0.49***	0.65***	-0.17	0.48***	0.00

	(0.04)	(0.05)	(0.17)	(0.03)	(0.17)
Observations	399	418	382	368	380
R-squared	0.11	0.09	0.07	0.02	0.21
Number of Countries	37	37	37	37	37

Note: Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

Dependent Variable: "Extent of Corruption" (Corruption Perception Index transformed); 0= low corruption; 10= highest level of corruption.

M.2: Fixed-Effects Models (Non-European Countries)

Variables	Dependent Variable: Extent of Corruption				
	(1)	(2)	(3)	(4)	(5)
Degree of Democracy		-0.01 (0.02)			
Anti-Corruption Policy		-0.01 (0.01)			
Degree of Political Competition		0.01 (0.02)			
Degree of Public Spending Ratio		-0.07** (0.03)			-0.05 (0.04)
Women in Parliaments		0.00 (0.00)			
Rate of Inflation					0.03* (0.01)
Unemployment Rate					
Civil Service Wages					-0.10* (0.05)
WTO-Membership					
Degree of Urbanization			-0.04 (0.16)		
Level of Education			-0.03 (0.04)		
Years of Democracy				-0.10*** (0.04)	-0.26*** (0.06)
Communist Past				0.01 (0.03)	

History of Corruption				0.10*** (0.04)	0.14*** (0.05)
Constant		0.64*** (0.01)	0.65*** (0.07)	0.58*** (0.03)	0.64*** (0.05)
Observations	249	443	351	394	237
R-squared	0.09	0.02	0.00	0.04	0.13
Number of Countries	37	41	40	41	37

Note: Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

Dependent Variable: "Extent of Corruption" (Corruption Perception Index transformed); 0= low corruption; 10= highest level of corruption.

Appendix N: Overall Model of Corruption with Country-Dummies

Variables and Countries	Dependent Variable: Extent of Corruption
Rate of Inflation	-0.02 (0.02)
Unemployment Rate	0.01 (0.04)
EU-Membership	-0.04*** (0.00)
WTO-Membership	0.04 (0.03)
OECD-Membership	-0.26*** (0.06)
Degree of Democracy	-0.47*** (0.11)
Anti-Corruption Policy	-0.00 (0.00)
Degree of Government Centralization	-0.00 (0.02)
Women in Parliaments	0.00 (0.00)
Percentage of Catholics	0.60*** (0.07)
Percentage of Orthodox	0.82*** (0.05)
Degree of Urbanization	1.00*** (0.15)
Years of Democracy	0.00 (0.08)
History of Corruption	-0.12 (0.08)
Albania	0.53*** (0.06)
Austria	-0.12*** (0.04)
Belgium	-0.32*** (0.06)
Bosnia and Herzegovina	0.34*** (0.05)

Bulgaria	-0.03 (0.05)
Belarus	-0.52*** (0.10)
Cyprus	-0.37*** (0.07)
Czech Republic	0.49*** (0.05)
Denmark	-0.04*** (0.01)
Estonia	0.11** (0.05)
Finland	0.19*** (0.04)
France	-0.17*** (0.05)
Georgia	-0.08 (0.05)
Germany	0.06*** (0.02)
Hungary	0.36*** (0.04)
Iceland	-0.12*** (0.02)
Ireland	-0.08 (0.06)
Italy	0.17*** (0.04)
Latvia	0.33*** (0.06)
Lithuania	-0.09*** (0.03)
Luxembourg	-0.44*** (0.06)
Moldova	-0.03 (0.05)
Netherlands	-0.07*** (0.02)
Norway	0.11***

	(0.01)
Poland	0.23***
	(0.06)
Portugal	0.11**
	(0.05)
Romania	-0.04
	(0.04)
Slovakia	0.42***
	(0.06)
Slovenia	0.07*
	(0.03)
Spain	-0.20***
	(0.07)
Switzerland	-0.14***
	(0.03)
Ukraine	-0.16***
	(0.04)
United Kingdom	-0.02
	(0.03)
Constant	0.01
	(0.13)
Observations	365
Number of Countries	37
R-squared	0.97

Note: Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1

Dependent Variable: "Extent of Corruption" (Corruption Perception Index transformed); 0= low corruption; 10= highest level of corruption.

Sweden is used as country reference. The variable "Protestantism" has to be excluded because of multicollinearity problems.