HISTORY MATTERS

A COMPARATIVE ANALYSIS OF HISTORICAL LEGACIES AND POST-COMMUNIST CORRUPTION

THOMAS DALSBØ

Master's Thesis

Department of Comparative Politics

UNIVERSITY OF BERGEN

Spring 2014

Abstract

This thesis investigates the empirical relationship between historical legacies and post-communist corruption. A common argument in the post-communist corruption literature is that the current problems of corruption should be traced to either the communist past or to the transition from the socialist economy. However, this thesis join the ranks of Møller and Skaaning (2010) who claims that deep structural causes are of the essence: causes that transcends both the transition from the socialist economy and the communist experience. In particular, the hypothesis that pre-communist bureaucratic legacies can explain much of the current variation in levels of post-communist corruption, receives support. In contrast to Møller and Skaaning (2010) I use time-series cross-section (TSCS) data (they apply cross-sectional data) and test the hypothesis against a larger battery of alternative explanations. The main conclusion of this study is that levels of post-communist corruption largely can be explained by historical legacies. Furthermore, this study finds evidence for the impact of imperial legacies (which is a closely related variable to bureaucratic legacies) and it finds partial support for the effect of a protestant heritage. In addition, it shows that post-communist countries on average are more corrupt than other countries, but argue that this difference also reflect pre-communist causes that got reproduced during communism.

Acknowledgements

Table of Contents

List of Tables

List of Figures

"One must always maintain one's connection with the past

and yet ceaselessly pull away from it"

- Gaston Bachelard

1. Introduction

Are historical legacies more important than proximate causes when explaining post-communist corruption? The answer may not be obvious. On the one hand, it is reasonable to believe that institutional, cultural, political and economic legacies of the past have profoundly shaped the post-communist countries – and by that also their relative levels of corruption. On the other hand, causes located closer in time and especially those causes dating back to the transition (such as initial power balance, EU-integration incentives, economic reform, etc.), can obviously also be thought to influence current levels of corruption. A common approach to this puzzle has been to trace the causes of post-communist corruption back to two factors: the communist past and/or the transition from the socialist economy (Sandholtz and Taagepera 2005, Holmes 2006). The current thesis, however, argue that the causes for post-communist corruption must be traced further back: to historical causes that transcends both the transition and the communist past.

The post-communist world is marked by an interesting characteristic: diversity. After the fall of communism, a myriad of states emerged from what many thought was a more or less homogenous region. It quickly became clear that the countries once thought of as the "second world" differed substantially both economically, societally and politically. In the 1990's political scientist largely attributed these differences to proximate factors such as elite politics (Linz and Valenzuela 1994, Huntington 1993, Di Palma 1990), initial post-communist power balance (McFaul 2002, Fish 1998, 1997, Roeder 1994) institutional choices (Ishiyama and Velten 1998) and third wave democratization (Diamond and Plattner 1996) emphasizing geographical diffusion (Kopstein and Reilly 2000) and incentives for European integration (Kurtz and Barnes 2002, Pridham and Ágh 2001).

However, scholars of post-communism have increasingly highlighted historical legacies as an important explanation for these divergent outcomes. Ken Jowitt (1993) claimed that the communist past would severely shape the course of the post-communist countries, and Andrew Janos (2000, 1993) argued that pre-communist differences would continue to be prominent

1

among the post-communist countries despite five decades of communist rule. There now exist many studies that have used historical legacies to explain post-communist outcomes, such as regime change (Moller 2009, Pop-Eleches 2007, Ekiert 2003, Horowitz 2003, Bunce 1999), growth variation (De Melo et al. 2001, Katchanovski 2000), democracy and democratization (Bunce 2005, Kopstein 2003, Roeder 1999), institutional quality (Dimitrova-Grajzl 2007), post-transition elections (Darden and Grzymala-Busse 2006), political party development (Grzymala-Busse 2002, Kitschelt 1999, Ishiyama 1997) and lastly, corruption (Sandholtz and Taagepera 2005, Møller and Skaaning 2010).

As noted, this thesis focuses on the topic covered by the last of the abovementioned studies: it is concerned with the empirical relationship between historical legacies and corruption. Thus, the research question is the following: *Can post-communist levels of corruption be explained by historical legacies?* Evidence suggests it can. However, estimating the causal effect of historical legacies on levels of post-communist corruption is not easy: it is complicated by the intertwined nature of historical causes. In other words, it is easier to say that historical legacies matter jointly than it is to identify which legacies matter the most.

By post-communist all countries of the former Soviet Union, the Soviet satellite-states of Eastern Europe, former Yugoslavia, Albania, Bulgaria, and Romania are included. It will be clear throughout the thesis what is meant by historical legacies.

The research question is analyzed by using quantitative hypothesis tests based on time-series cross-section analysis (TSCS). In particular, a Prais-Winsten (PW) transformed regression model with panel-corrected standard errors (PCSE) is applied. The TSCS design overcomes the "small-N" problem that characterizes many post-communist studies. Therefore, it is capable of testing hypotheses drawn from the global cross-national literature.

1.1 Relevance of the Research Question

1.1.1 Societal Contribution

The research question of this thesis – whether historical legacies can explain levels of post-communist corruption – has societal relevance. Take for example the harmful effects of corruption. Transparency International describes 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 public sector and private sector development and particularly hurts the poor.[1]

If this statement is true, corruption has the potential to destroy one of the central attributes of democracy: impartiality. Rothstein and Teorell (2008) define impartiality as the equal treatment of those who are equal by law or policy. When corruption occurs, democratic governance risks becoming particularistic: it treats unequally those who are equal. This will indeed move power from the electorate and into the hands of hidden influencers, damaging transparency and accountability.

These issues seem even more acute when viewing them in a post-communist context. According to Rose, "Corruption is the greatest obstacle to progress in the post-communist countries" (Rose 2001:105). If these countries are to make a successful transition to full-fledged democracies they need to reduce corruption. However, if one is to reduce corruption one must first understand its causes. If not, one risks implementing ill-defined measures.

As will be shown later in this thesis several scholars highlight historical legacies as important causes when trying to understand the post-communist corruption problem. Some point to the particular legacy of communism and its inherent tendency to promote corruption, others point to the pre-communist legacies. Nevertheless, we need increased knowledge about the connection between historical legacies and corruption. This might be important for the sake of knowledge itself, but it will be even more important as a mean for creating awareness about the particular post-communist corruption 'problematique' – and finding sound measures to inhibit it. The post-communist countries must not be enslaved by their past. In that regard, deepening the knowledge about the empirical link between historical legacies and corruption might help their emancipation.

However, it is important not to exaggerate the importance of our empirical findings. One scientific study does not have the ability to establish truth. But if we are able to aggregate the empirical evidence of many studies, it may move us closer to something of an approximate truth. The current thesis aims to contribute to the latter. However, this concerns the area of scientific relevance, which is the next topic up for discussion.

---

[1] http://transparency.org.au/index.php/about-us/mission-statement/

1.1.2 Scientific Contribution

As already noted, there are several studies that try to assess the relationship between historical legacies, and post-communist outcomes. The number of studies investigating the relationship between historical legacies and post-communist corruption are, however, less numerous. Møller and Skaaning (2010) and Sandholtz and Taagepera (2005) are the most important ones and deal with the topic directly.[2]

The first study is quantitative and tries to assess the empirical relationship between bureaucratic legacies and post-communist corruption. What they find, by building on prior work from Herbert Kitschelt, is that the variation in levels of post-communist corruption to a large degree can be explained by the variation in pre-communist bureaucratic legacies. The second study is also quantitative and focuses on culture. They find empirical evidence for the fact that communism pushed societies towards 'survival' values, which in turn caused higher corruption levels. Even though the current study, in line with Møller and Skaaning (2010), argues that pre-communist factors has more explanatory power than "communist" factors, it is important to know the arguments presented by Sandholtz and Taagepera (2005). However, the fact that there are only two quantitative studies available calls for increased attention to the topic in order to strengthen findings further.

The most valuable contribution of this thesis to the current area of research is that it strengthens confidence in previous findings. By using updated TSCS data on three different measures of the dependent variables, and a wide range of control variables, it reaches the conclusion that historical legacies can explain levels of post-communist corruption. These legacies are also remarkably robust even when relevant proximate variables are included. Such an empirical analysis with this kind of data has not, as the author is aware of, been done before in the post-communist corruption literature. Amongst the hypotheses, H2 – that the variation in levels of post-communist corruption largely can be explained by variations in pre-communist bureaucratic legacies – gains the most support. However, even though the combined effect of historical legacies seems to be a powerful explanation, it is difficult to speak of the effect of individual legacies with any real certainty.

---

[2] Holmes (2006) also writes about historical legacies and post-communist corruption. However, he has a qualitative focus and will therefore mainly be referred to for theoretical purposes. It is also worth mentioning that Treisman (2003) touches upon the topic.

1.2 Organization of Thesis

The thesis is structured as follows. Chapter two starts by presenting and defending the theoretical definition of the dependent variable: corruption. It is explained why corruption is a slippery concept to define and what characteristics are included in the chosen definition. Then, a similar approach is taken when defining the key independent variable: historical legacies. In particular, it is argued that the legacy paradigm needs to be understood within the larger framework of historical institutionalism in order to be a concept apt for analytical purposes.

Next, with basis in the work of Møller and Skaaning (2010) and the global corruption literature, the central theoretical framework is established. From this, the following four hypotheses are deduced. (1) Post-communist countries are more corrupt than other countries; (2) a protestant heritage should reduce post-communist corruption levels; (3) variation in levels of post-communist corruption can largely be explained by variations in pre-communist bureaucratic legacies; and (4) a Western imperial legacy should decrease post-communist corruption levels.

Chapter three explains why a quantitative approach was chosen, and why TSCS data is well suited to answer the chosen research question. Two related points are especially highlighted: its ability to overcome the "small-n" problem that often characterizes post-communist studies, and therefore the possibility to test hypotheses drawn from the global corruption literature.

The fourth chapter explains the case selection for this study, and shows how the relevant theoretical variables are operationalized. A quite thorough discussion of the quality of corruption data is included here. However, treating corruption data as TSCS data poses some potentially serious reliability-challenges – since sources used to obtain the corruption indexes have changed over time. In other words, what the indexes actually measure can vary from year to year. Despite these obvious flaws, the current thesis argue that it is better to say something with imperfect measures than to wait for perfect measures, and say nothing at all. In addition, this thesis is more interested in variation between countries than variation over time, which minimizes the danger of drawing faulty over-time statistical inferences.

Chapter five presents and discusses findings. Hypotheses are tested across different data, models and sample sizes, in order to assess robustness. Methodological challenges arising because of the intertwined nature of legacies are also addressed. In addition, the legacy variables are tested

against alternative explanations, which consist of (temporally) proximate variables that could influence corruption.

Finally, in chapter six, the thesis ends with a conclusion and a discussion on what implications findings have both for previous and future research.

2. Theoretical Framework: Post-Communist Corruption and Historical Legacies

This chapter begins by explaining the theoretical definition of the concept underlying the dependent variable: corruption. It then continues by dealing with the theoretical concepts underlying historical legacies, which is the key independent variable. To be able to operationalize these two variables we need meaningful theoretical definitions: we need to know what corruption and historical legacies are, and what they are not. Hence, this part of the chapter defends and explains the chosen theoretical definitions. The chapter proceeds with a section on previous research with a special emphasis on the study by Møller and Skaaning (2010) and on the causes of corruption identified by the global corruption literature. The chapter ends with the deduction of hypotheses.

2.1 Definition of Concepts: Corruption

2.1.1 Definition of the Current Study

Corruption is here defined as "the misuse of public office for private gain" (Treisman 2007:1). There are two central attributes about this definition worth noticing. First, the term 'public office' implies an emphasis on public corruption rather than private corruption. The present study thus maintains that corruption is by definition a public sector phenomenon. Second, the term 'private gain' emphasizes the notion of private enrichment. It may not be straightforward, but at least in the current study private gain introduces a distinct *material* attribute to the concept. This means that corruption must, directly or indirectly, have a material character. Calling someone corrupt because of his or her degraded morality will therefore not qualify as corruption. This definition is, however, narrower than how corruption has been understood historically.

Corruption stems from the Latin word *corrumpere* where '*cor*' can be translated with 'total' and '*rumpere*' means something like decay or rotten (Mikkelsen 2013) The term can relate to societies as a whole or to individuals and their acts. According to Johnston (1996), the term corruption, in the 'classical view,' refers to societies and/or individuals that have fallen short from a standard of virtue and goodness. However, the danger becomes apparent if we use this original meaning of corruption for contemporary academic studies. An imprecise definition risks blurring the borders of a concept until it becomes useless for both inquiry and comparison

(Mikkelsen 2013:3). This danger is present in the corruption literature because corruption is a slippery concept to define. To avoid conceptual weaknesses researchers must make conscious choices when picking definitions of corruption. Hence, some comments must be made about the difficulties plaguing the corruption concept.

2.1.2 The Problematic Nature of the Concept of Corruption

Despite the heightened awareness among scholars about the importance of understanding and explaining corruption we still lack consensus, both academically and legally, on how to define corruption. According to Lancaster and Montinola (1997:188) the task is difficult because the phenomenon of corruption is plagued by cultural relativism: what seems like corrupt behavior to some may not be corruption to others. Second, even though most of the literature identifies corruption with deviations from some kind of norm or ideal, it has not been completely clear what corruption actually deviates from (Carvajal 1999:337).[3]

Despite these definitional challenges, there seem to be agreements among scholars upon some characteristics. The most important ones are misuse of public office, incompatibility with public opinion, violation of public interest, violations of the law and agent-client relationships. Not all of these characteristics are included in the corruption definition used in this thesis. However, in the following they will all be explained, and the ones included in the definition will be defended.

2.1.3 Characteristics Included in the Definition

Misuse of Public Office

There is not complete agreement whether corruption always has to involve misuse of public office but, nevertheless, it is the definitional attribute most commonly used in works on corruption (Lancaster and Montinola 1997:188). Joseph Nye, one the earliest scholars applying a public-office standard, defined corruption as:

> behavior which deviates from the formal duties of a public role because of private-regarding (personal, close family, private clique) pecuniary or status gains; or violates rules against the exercise of certain types of private-regarding influence (1967:419).

---

[3] However, impartiality – "that public institutions should operate in an impartial rule-based manner" (Linde 2009:3) – is gaining ground as the positive referent for corruption.

There are two factors inherent in this definition worth emphasizing. First, corruption is a violation of trust. A public role carries with it certain duties and these are breached whenever a public officer engages in corrupt behavior. Decisions which in their nature should be both non-discriminatory and objective – that its, they should be impartial – are suddenly for sale (Rothstein and Teorell 2008). Second, the motivation for the corrupter is private benefits. This point (as briefly touched upon on the page above) is of such importance that, even though it is included in the 'public office' characteristic, it will be dealt with as a separate characteristic in the next section.

Definitions of corruption that include the characteristic of public office are often viewed as more 'objective' compared to, for example, public interest definitions. This is because they classify corrupt behavior by using legal norms as a reference point, while the latter definitions emphasize what a society perceives to be corruption. Because of the reference to legal norms 'public office-definitions' scores high when it comes to operationability: it is relatively easy to discern what constitutes breaking formal rules or regulations and, at least in principle, it is quite observable (Kurer 2005:225). However, there are three important criticisms that have been raised against the public office characteristic.

The first one is accurately summarized by Rose-Ackerman: "One does not condemn a Jew for bribing his way out of a concentration camp" (1978:9). The critique inherent in this example is that a public office definition conflicts with popular understanding: it deems corrupt what the public opinion does not regard as corrupt, and vice versa. Even though several criticisms towards public office-definitions highlight its failure to conform to public opinion, the particular example from Rose-Ackerman seems to rely on a misunderstanding. As Kurer (2005:225) points out, it is not the exemplified prisoner that is corrupt, it is the guard. Only the formal transgression by the official can be regarded as corrupt behavior, and he is only corrupt because his primary motivation was private enrichment. Simply breaking the rules (letting the prisoner escape) cannot be classified as an act of corruption.

The second criticism claims that the public office standard is culture-specific: upholding bureaucratic rules and regulations may be supported by Western norms and conventions but may be absent in other parts of the world. To answer this criticism one has to know whether deep disparities in perceived corruption actually exist. A thorough examination of this subject is not

within scope of the current study, but it suffices to say that the evidence are equivocal (Rose-Ackerman 1999, Kurer 2005). If such disparities exist, international comparisons become difficult. One cannot make meaningful comparisons by applying a uniform and 'objective' concept on the inhabitants of a country that have 'subjective' perceptions of what constitutes corrupt behavior. On the other hand, such comparisons can be important regardless of 'culture-specific' biases. This is of course only the case if one holds that the social, political and economic consequences of corruption are universal, despite definitional disagreements.

Finally, the public office characteristic has been criticized for its 'legality' attribute: acts that are not forbidden by law are not corrupt (Kurer 2005). An identical act in two countries can be either corrupt or non-corrupt, depending on the laws of the country. Similarly, the definition cannot deal with instances where the law itself is corrupt.

Private (material) Gain

As mentioned, the term private gain is included in the public office standard. However, it is an important aspect of the definition worth elaborating on its own terms, especially since 'private' carries with it a distinct material character. By including private gain in the definition we are able to exclude concepts that sometimes mistakenly are perceived as corruption, such as nepotism, clientelism, patronage and pork barrel politics. According to Rothstein and Teorell (2008) all these concepts are related to corruption through the superset of 'particular governing.'[4]

However, corruption distinguishes itself from other forms of 'particular governing' (Rothstein and Teorell 2008) by having *material gain* as its main goal and not political support (clientelism), administrative control (patronage), preferential treatment of friends/relatives (nepotism) or electoral support by favoring constituencies for government funds (pork-barrel politics) (Kopecký and Scherlis 2008). Private gain, however, must not be equated with individual gain. Although it could be argued that the latter is a viable approach, material gains from corruption can be directed towards groups. Empirically this is observed both in relation to organizations and political parties (Mikkelsen 2013:11). Nevertheless, in either case the meaning is the same: the misuse of public office for private and material gain. As long as 'misuse' means breaches of public duty and 'private gain' is not equated with individual gain, but still understood as

---

[4] For an excellent discussion about the conceptualization of corruption and how it is connected to the superset of particular governing, see Mikkelsen (2013).

pertaining only material rewards,[5] the current definition is both theoretically embedded and operationally relevant. However, the latter is not similar to monetary rewards.

Some principal-agent definitions of corruption have tried to de-emphasize the importance of private material gain. For example, Klitgaard says that "corruption occurs when an agent betrays the principal's interest in pursuit of her own" (1988:24). The problem, however, with leaving out the characteristic of private material gain is that without it, betrayal of trust becomes a sufficient condition for classifying corrupt acts. Essentially, this makes it impossible to distinguish corruption from cheating (Kurer 2005:226).

2.1.4 Characteristics Excluded from the Definition

Violation of Public Interest
Some scholars view corruption as behavior that deviates from public interest. According to Rogow and Laswell (1970) corruption promotes special interest by violating a system of public and civic order that tries to promote the common interest. Morris (1991) reflects the same argument when he claims that corrupt behavior does not align with the pursuit of the common good, which he argues are embodied in a society's ideology or law.

However, definitions centered on public interest have been criticized for being too vague. Who should decide what are in the public interest? As Theobald (1990) points out, modern pluralistic societies have many different 'publics,' each with unique interests. Second, almost any action can be justified as promoting the common good (Peters and Welch 1978).[6]

Incompatibility with Public Opinion
Public opinion-definitions of corruption hold that the definitional attributes of corruption are determined by 'the public,' or some parts of it (Scott 1972:3-4). Public opinion-definitions are somehow unique in the definitional corruption debate because of their dual role as both a *source* for a definition and as a *criterion* for evaluating other definitions. The latter point refers to the common practice in the literature to make conformity to public opinion a criterion for assessing the quality of the definition of corruption (Kurer 2005:224). As noted earlier, this is one of the critiques against the public-office definition.

---

[5] However, material rewards are not similar to monetary rewards. A box of whiskey or an opportunity for insider trading is material rewards even though money is not directly involved.
[6] For example, some kinds of corruption (so-called 'honest graft') have been thought to promote public interest.

One of the central criticisms against public opinion definitions regards its high degree of 'subjectivity': there is probably not agreement among the public as to what makes up corruption. Because of this disagreement, who is to decide which view that matters (Kurer 2005:224)? In other words, the definition has obvious flaws when it comes to operationability. Because of this weakness it is tempting to reject the definition wholesale. However, this is probably too harsh. Despite its weakness when it comes to operationalization it is precisely these types of definitions that have become the foundations for the common international comparisons of levels of corruption. The most famous is Transparency International's Corruption Perception Index (CPI), which is based on subjective perceptions from selected members of the public. Several scholars have criticized the CPI for its methodological weaknesses (Treisman 2007, Knack 2006). Nevertheless, it is widely used. Hence, the authors of such indexes and those scholars using them must believe that there exists a sufficient common understanding of what constitutes corrupt behavior. Furthermore, what the public thinks is corrupt behavior can be valuable information in itself. It can help design better anti-corruption programs and it can lead to increased knowledge about how a conflict between values (perception) and formal rules affects corruption levels.

Nevertheless, public opinion is not included as a definitional characteristic in the current thesis. The main reason is that it fails the operationability test. What people perceive to be corruption is an unsecure definitional basis in a cross-country comparison. That being said, this thesis will use indexes of perceived corruption as data for the empirical analysis. This is not ideal. It creates a mismatch between theory and the empirical findings, which are an inherent weakness in the current thesis. However, the perception-based measures are the best data available. The author is of the opinion that it is better to say something with imperfect measures than to wait for perfect measures, and probably never get a chance to contribute to the scholarly debate.

Principal-Agent Relationships

According to principal-agent definitions corruption occurs whenever an agent substitutes the principal's interest for his own. Banfield defines an agent as "a person who has accepted an obligation to act on behalf of his principal in some range of matters and, in doing so, to serve the principal's interests as if it were his own" (1975:587-588). The obvious mistake of equating corruption with betrayal of the principal's interest has already been noted. Hence, it seems like

the 'principal-agent' framework is better suited as a method of analysis than for definitional purposes (Kurer 2005:226).

2.2 Definition of Concepts: Historical Legacies

2.2.1 Definition of the Current Study

Historical legacies are here defined as, "the structural, cultural and institutional starting point of ex-communist countries at the outset of transition" (Pop-Eleches 2007:910). As is seen, the particular post-communist context is included in the definition from the beginning.

The study of historical legacies in the post-communist literature has one special characteristic: it often heavily emphasizes the communist past. This is, of course, not surprising since the communist period probably has shaped the post-communist countries in several ways. However, if historical legacies are to be treated as a well-defined analytical concept it must be clear when we mean the communist past and when we generally refer to historical causes. The current study concerns itself with the latter. This does not mean that the communist experience is not important. It is. However, this thesis makes the claim that historical legacies preceding the communist period are the most important ones. As we shall see later, it can be argued that variables that try to capture historical legacies dating back to the communist period actually (to a large degree) capture pre-communist phenomenon. However, before we delve into that discussion we must address the definitional difficulties arising when we try to use historical legacies as an analytical concept.

2.2.2 Definitional Difficulties

The post-communist literature lacks a uniform approach as to how to deal with historical legacies. This is problematic. If we don't know with certainty what constitutes a concept there will be a mismatch between its theoretical definition and its analytical usage. Nevertheless, legacies are often applied as a causal factor in post-communist studies, and it is used in at least four different ways.

First, the term 'legacy' often becomes a synonym for the communist past. The substance of the legacy is usually not specified but the argument is that the post-communist countries need to address their past in order to take hold of the future. However, it is not clear what this legacy is and is not. Second, some studies use legacy as the outcome of interest. This means that the legacy

becomes the dependent variable and within a causal framework. Researchers using this approach would for example be interested in questions like why some legacies survived the communist past while others did not. Third, legacy is also used as an independent variable and plays a causal role in explaining some post-communist phenomenon. This is the approach for the present study. Finally, communist legacies can also be applied in a more indirect way. For example as a variable that limits actor's choices within a particular decision-making environment. Valerie Bunce (1999) argues in her study of post-communist economic reform that the particular communist past constrained the reform options available and also to a large degree influenced which political leaders were able to contend for power. The last two usages – as an independent and indirect variable – are the most widely used approaches within the post-communist legacy literature.

However, it is not enough to just be able to treat legacy as a causal factor. Several other important questions need to be addressed in order to deal with legacies in an analytical sound way. First, are historical legacies linked to a political regime or is the concept broader so that it encompasses any phenomenon that occurred during the specific period? This study argues for the former. An earthquake during the communist period, with its material and social effects, are not considered a legacy. As will become clear later, legacies refer to political, economic or social factors that originate from human action.

Secondly, must one identify causal mechanisms in order to speak of legacies? Kitschelt (2003), and to a lesser degree Wittenberg (2010), believes so. According to the former, the process of how an historical feature influences a contemporary phenomenon must be specified. If not, we cannot assume a causal relationship. However, most studies on historical legacies in the post-communist literature fail to address causal mechanisms directly. Rather the focus is on correlations between features in the pre-communist/communist era and the post-communist period, which is interpreted as evidence of legacies. Furthermore, a firm grasp on the causal mechanisms is important in order assess the relative explanatory power of legacies compared to competing causal explanations. This is crucial in order to make the legacy paradigm contribute to the current field of research.

Finally, we need to understand on what level of abstraction a legacy is thought to act or, in other words, what our unit of analysis is. This is important in the building of shared standards about the assumptions and practices of legacy arguments. That is why this chapter contains a description of

a typology for historical legacies. But first we must show that the legacy approach is not a rootless concept: it is connected to the larger theoretical paradigm of historical institutionalism.

2.2.3 Conceptualizing Historical Legacies

Legacies and Historical Institutionalism
Using legacy as a causal factor is an approach situated within a larger tradition of using historical factors as causes of current outcomes. The most known of these traditions is historical institutionalism. In the words of Charles Tilly, historical institutionalism is a method for measuring "big structure, large processes and making huge comparisons." Both legacy explanations and historical institutionalism focuses on historical processes, the timing of events and the lasting effect of these events. However, the latter does this by applying two distinct concepts: *path dependence* and *critical junctures*. These concepts deserve some attention.

In political science path dependence is about the self-reinforcing processes in a political system. The logic is that once a particular path is chosen, the self-reinforcing nature of path dependence makes it increasingly difficult to reverse that course. Political alternatives that once existed can, at this stage, be totally out of reach. Thus, when viewing politics in a path dependent framework, beginnings resemble crossroads and become extremely important areas of study. Or in Paul David's words, path dependence is "the idea of history as an irreversible branching process" (2001:8). Path dependence, and historical institutionalism, emphasizes the "stickiness" of institutions, which means that the consequences of a particular institution typically outlive its initial purpose. The reason that these consequences persist is because of path-dependent dynamics that "lock in" on the path chosen, even though the initial purpose of the institution have vanished. In other words, the political reality and the decisions available are inherently conditioned by choices made at earlier times. Historical legacies also seem to be characterized by this kind of "stickiness."

The other central concept in historical institutionalism is critical junctures. Critical junctures are events that disrupt the normal state of continuity, and these disruptions create new institutional configurations that eventually form a new path. Hall and Taylor (1996:942) calls it "moments when substantial institutional change takes place, thereby creating a 'branching point' from which historical development moves onto a new path." Scholars don't agree whether choices are

constrained in these periods or not. Some argue that during critical junctures agency is at the core – both in terms of the impact of choices and the number of alternatives available.[7] Others have the opinion that "not everything is up for grabs during critical junctures" (LaPorte and Lussier 2011:651). They rather believe that conditions preceding the critical juncture in some way will circumscribe the choices eventually available for the actors.[8]

Even though historical institutionalism and the legacy paradigm share a similar commitment to the study of historical causes, they also exhibit important differences. This is especially the case with the definition of legacy, and what role critical junctures play in creating and/or shaping these legacies. In historical institutionalism critical junctures produce legacies. For example, in their study of political stability in Latin America, Collier and Collier (1991) define the critical juncture as the moment when the political arena opened for labor movements, which helped create a distinct legacy of regime instability in Latin America. Considering post-communist historical legacies from this point of view implies that we, for example, view the establishment of communism as the critical juncture, rather than its breakdown. However, in the legacies paradigm, legacies are considered factors that survived the critical juncture. This means that they existed both before and after the "path divergence." Thus, in our case, the critical juncture is the breakdown of communism. Most of the early post-communist literature focused on this critical juncture and the point of intersection between institutional factors inherited from communism and those stemming from proximate action.

Another point of divergence between historical institutionalism and the legacies paradigm is that not all legacies are institutions. If they were the two approaches could be merged. However, as mentioned above, legacies also manifest themselves in attitudes and behaviors and not just only as institutions in the way historical institutionalism regards them.

In order to have a common understanding of the role of historical causes the two approaches needs to address their divergences. In addition, the legacies paradigm needs to resolve some of its own flaws. This is especially the case when dealing with the question of whether legacies imply *all* historical causes or whether some of the causes are legacies and some of them just represents

---

[7] See Katznelson (2003).
[8] See Collier and Collier (1991).

"background" conditions. This is important to clarify because it is reasonable to believe that not all historical factors are part of a causal process.

There are several gains from integrating the legacies paradigm into the broader approach of historical institutionalism. Firstly, historical institutionalism offers a framework for explaining institutional reproduction, which the legacy paradigm lacks. One of these is the "constant cause" explanation. Essentially, the constant cause explanations means that the same factors that explained the birth of the institution also can explain its development over time. Another, rather contrary explanation is that institutions get renegotiated from time to time leaving or redirecting some institutional configurations while others are kept (Thelen 2004). These theories help answering some important questions within the legacies paradigm. Furthermore, the legacies paradigm can enrich historical institutionalism, especially empirically, through all its studies of different post-communist cases. By placing the legacy paradigm within that of historical institutionalism we have laid a proper foundation that enables us to use legacies in an empirical analysis. However, before we turn to the application of this theoretical paradigm, a typology of historical legacies might make the concept even more available for analytical purposes.

Developing a Typology of Historical Legacies

Going from mere descriptions of legacies to a typology of legacies has several advantages. First, it helps us in the concept formation: it clarifies the meaning of the concept, places it in its proper place both with related concepts and hierarchically structures the inherent parts of the concept itself. Secondly it provides us with meaningful "data containers," which enhances measurement of actual cases within the conceptual framework. Legacies can be conceptualized along two dimensions: the domain on which the legacy is situated and the unit of analysis in which it operates. The first dimension is comprised by the categories of political, economic and social. It seems difficult to find a legacy that cannot be properly categorized within these three domains. The second dimension is made up of three different levels of analysis: institutional, attitudinal and behavioral. By combining these two dimensions the chosen categories becomes mutually exclusive and able to provide a nuanced and rigorous classification of legacies.

The institutional level of analysis constitutes the broadest type of legacy. It includes structures, organizations, and norms/practices created by these. All variables in the current study are located at this level. Political legacies could refer to most features of the political regime, the nature of

political opposition and degree of political reforms. Economical institutional legacies could refer to collectivized agriculture, state ownership of resources, minimal production of consumer goods, centralized economic planning, and lack of property rights. Social/cultural institutional legacies are things like for example religion and ethnic fragmentation. Even though this thesis only focuses on the institutional level, the two other levels (attitudinal and behavioral) will be briefly commented so that we have a complete understanding of the typology.

The second level of analysis, attitudinal legacies, constitutes expectations and attitudes of both individuals and groups of individuals. A political attitudinal legacy can be support for a strong authoritarian leader while an economical attitudinal legacy can be the belief in a strong governmental involvement in the economy. The expectations of social services and government provisions can be a social attitudinal legacy.

The third and final level of analysis is behavioral legacies. These legacies are similar to the attitudinal level in that it applies to individuals or groups of individuals, but instead of attitudes its focus is on specific actions and inactions. A political behavioral legacy can for example be a voter's response to the risk of political violence. An economical behavioral legacy can be to use the shadow economy to buy goods and services that are difficult to produce or too expensive to buy in the formal economy. Finally, a social behavioral legacy can be the use of informal networks for transactions and favors that otherwise would have been channeled through the bureaucracy or some political representative body.

The strength of this typology is its capacity, through its two dimensions, to systematically organize the different types of legacies and still contain a rigorous level of detail. Furthermore, when a legacy has appropriately been placed within one of the cells in the typology how to measure the phenomena becomes clearer. The typology will be displayed in a table after the characteristics of the definition have been explained.

2.2.4 Characteristics Included in the Definition

The current definition is formulated in such a way that it could encompass a whole range of different legacies. To help clarify the definition, this thesis organizes historical legacies for post-communist countries along four key dimensions: (1) cultural/religious legacies, (2) economic legacies, (3) social conditions/modernization legacies, and (4) institutional legacies. Because

these four dimensions will be extensively laid out later in the thesis, I will only make some brief comments about them here.

Cultural/Religious legacies

There are, as noted when dealing with the causes of corruption, several cultural/religious legacies that can affect corruption. First, a protestant religious heritage (compared to Islam, Orthodox Christianity and Catholicism) has showed to be associated with lower levels of corruption (Lambsdorff 2005, Treisman 2007). Second, imperial legacy is thought to influence post-communist outcomes. It seems like institutions, civic values and national ideas in those countries formerly part of the Habsburg Empire are differently influenced than those countries under either Russian or Ottoman rule (Dimitrova-Grajzl 2007, Møller and Skaaning 2010).

Economic legacies

The existing literature seems to highlight four kinds of economic legacies relevant for post-communist countries: natural resources, trade dependence and structural factors related to the economy. For example, De Melo et al. (2001) has demonstrated the relevance, and potentially powerful constraining effects, of these legacies.

Social conditions/modernization

When the communist countries transitioned they were characterized by considerable differences in socioeconomic development. Interestingly, this was the case despite the communist's strong efforts to erase pre-communist differences. According to modernization theory these differing socioeconomic levels should have predicted the following democratization process. The accurateness of the modernization theory can of course be questioned, but if it is true, developments supporting democratization should at the same time inhibit corruption (Treisman 2000:404). Legacies in belonging to this dimension could be things like economic development at the outset of the transition, degree of urbanization, distribution of literacy and higher education etc.

Institutional legacies

Despite their common experience of one-party rule, the transition countries also differed significantly when it came to institutional legacies. Some of these variations were possibly connected to late-communist reforms, but a significant part seemed to be caused by deeper

historical legacies (Pop-Eleches 2007:912). Examples of such legacies could be the already mentioned variable of bureaucratic legacies, but also things like pre-war membership in the Soviet Union, historical experience with democracy etc.

In table 1 below all the legacy-dimensions are presented by applying the mentioned typology of historical legacies. In addition, the variables considered in the later analysis are also included so that the full potential of the typology can be seen.

Table 1: A typology of histoircal legacies considered in the current thesis*

	Political	Economic	Social/cultural
Institutional	*Bureaucratic legacy*	*Resource endowments*	*Protestant heritage*
	History of statehood	*Energy intensity*	*Muslim*
	Prior democracy	*GDP/cap 1989*	*Minorities*
	Pre-war Soviet republic	*Trade dependence*	*Imperial legacy*
			Urbanization 1989
Attitudinal			
Behavioral			

Note: * As will be seen later, not all these variables will be included in the final analysis. Methodological constraints and issues related to the data resulted in the exclusion of several potentially relevant variables. However, they were all considered. Sources will be listed at the end of this chapter.

2.2.5 Characteristics Excluded from the Definition

Geography

Geography is the only dimension that explicitly is excluded from this analysis. Several scholars emphasize the importance of geography when explaining political development and corruption (La Porta et al. 1999, Acemoglu, Johnson, and Robinson 2002, Sandholtz and Gray 2003, Gerring and Thacker 2005). However, in this study, geography does not qualify as a legacy. Of course, things like proximity to the West and closeness to the EU will probably be correlated with lower corruption levels. Nevertheless, geography does not take agency (actions of human beings)

into account, and the political consequences of location are considered for (at least indirectly) in other variables, such as for example incentives for EU-integration.[9]

To summarize, historical legacies are now placed within the larger theoretical paradigm of historical institutionalism and it consist of four characteristics/dimensions: cultural/religious, economic, social conditions/modernization and institutional. The next section introduces relevant previous research, and how these should be understood in order to build a proper theoretical framework suite for empirical analysis.

2.3 Previous Research

2.3.1 Determinants of Post-Communist Corruption

When studying post-communist corruption one characteristic is striking: the inherent variation in corruption levels among the cases. Since all these countries share a common historical experience with communism, a more uniform picture is expected. However, according to Møller and Skaaning this diversity indicates that the communist legacy has little explanatory power, "after all, a uniform point of departure cannot account for a terminus of diversity" (2010:322).[10] Thus, according to them, other historical factors must be important.

When studying figure 1 (page below), we can see that corruption levels follow a clear geographic pattern. The most corrupt states are the central Asian countries. The less corrupt states are the Baltic and central European countries, and the intermediate states are found among the Balkan countries.

Put differently, a tripartite division occurs that more or less coincide with historical and cultural regions. Furthermore, this clear geographical pattern fits badly with the idea that proximate explanations (initial power balance, EU-conditionality, economic reforms, etc.) could be the decisive factors. It is hard to see how explanations relying on actors choices could produce such a distinct geographical pattern. Rather, the diversity indicates that one have to trace deep (structural) historical legacies in order to explain the present diversity in corruption levels. This is

---

[9] These variables can be found in the section testing for alternative explanations (chapter 5).

[10] However, this line of argument requires that one indeed think of the communist past as a "uniform" phenomenon. Ekiert (2003) points out that the communist legacy was characterized by a systematic diversity, and this can explain the present diversity in corruption levels among the post-communist countries. Nevertheless, the argument from Møller and Skaaning (2010) is that pre-communist variables counts more than "communist" variables.

not strange when one takes into account that each subregion probably faces the same structural constraints and similar historical trajectories (Møller and Skaaning 2010:322). This argument is in line with the concept of path dependency mentioned earlier, and it is also a point stressed by Herbert Kitschelt (1999, 2003) in several works.

Figure 1: Average corruption levels (2007-2010) in post-communist countries
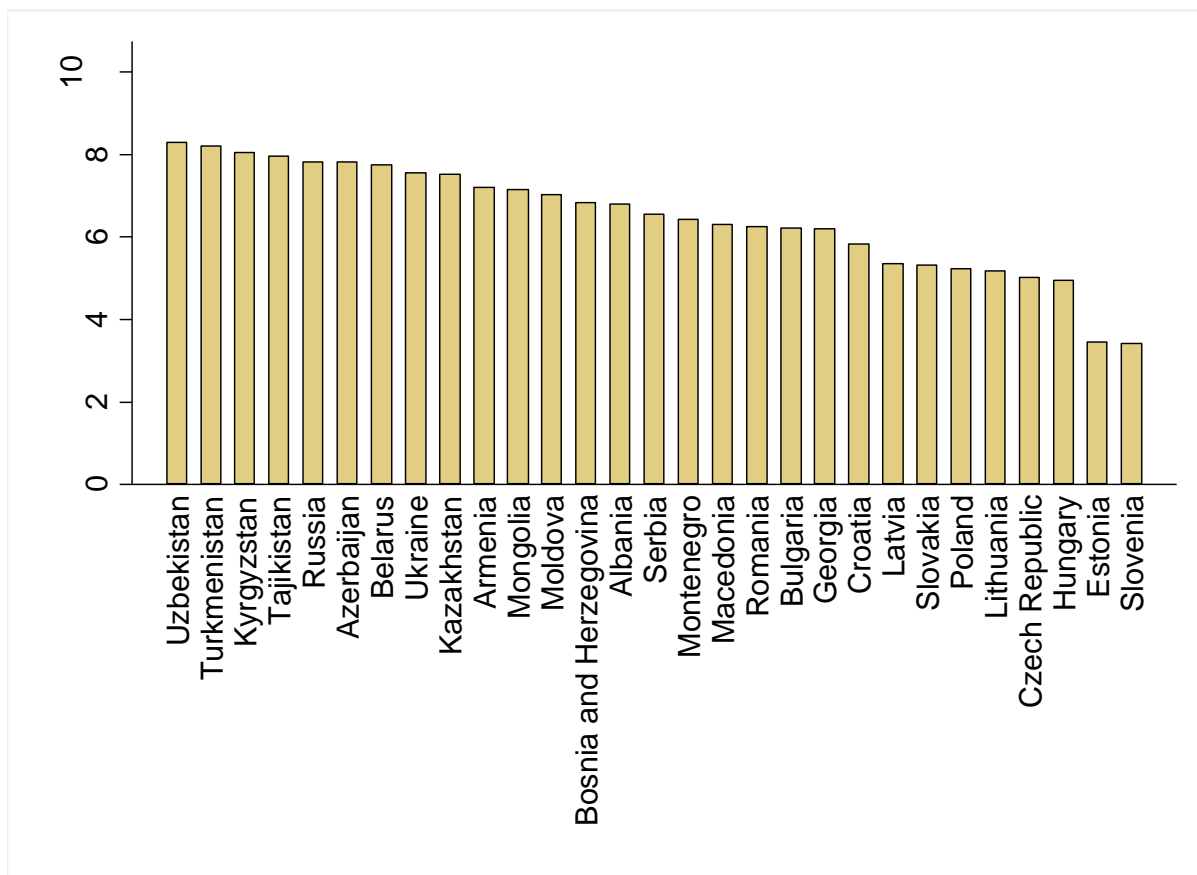
Note: The index is inverted so that 0 represent a clean government and 10 a completely corrupt government. Source: Transparency International.

In the following we will look at two studies that more or less points to the same historical cause: imperial legacies - and the bureaucratic legacies inherited/created by these. The latter is the already mentioned study by Møller and Skaaning (2010). They argue that the diversity in post-communist corruption must be explained by different *bureaucratic legacies* dating back to the

pre-communist period. Second, we will look at a study by Dimitrova-Grajzl (2007) that assess the role of different *imperial legacies* in relation to institutional development (which includes corruption). We start with the former.

Bureaucratic Legacies and Post-Communist Corruption
In their study of post-communist corruption Møller and Skaaning (2010) find strong support for the hypothesis that pre-communist bureaucratic legacies can explain current levels of post-communist corruption.

For their assessment of "bureaucratic legacies" they heavily rely on a framework developed by Kitschelt (1999, 2001, 2003). In comprised form, Kitschelt argues that post-communist outcomes are the result of structural features that were in place long before the communist regime crumbled. This is in contrast to more proximate explanations that rely on strategic interactions among actors when explaining these outcomes. While Kitschelt identified two "twin attributes" – bureaucratic legacy and "the power balance between communists and their challengers" – as the important structural factors, Møller and Skaaning only focus on bureaucratic legacy. This is, however, as they themselves point out, in line with Kitschelt's own usage of the two factors since they overlap empirically. Second, bureaucratic legacy naturally becomes the most important factor when dealing with corruption. After all, (political) corruption is intrinsically linked with the governmental and bureaucratic sphere.

The two structural factors identified by Kitschelt have their origin in the period between 1850 and the start of communism, and according to Kitschelt, these two factors have survived communism. Those countries with a favorable bureaucratic legacy were able to achieve some kind of bureaucratic professionalization during the communist period. This eventually helped prevent large-scale rent seeking after the breakdown of communism. Furthermore, a "favorable balance of power between communists and their challengers" helped form the civil society in such a way that it was able to speak up during the transition. Both these factors overlap empirically, but the critical point is that a "favorable legacy", which produced bureaucratic professionalization and a civil society with a capacity to guard the guardians, must have had an adverse influence on corruption (Møller and Skaaning 2010:323).

When operationalizing bureaucratic legacies Kitschelt created a four-point scale that distinguished between (1) bureaucratic authoritarian, (2) national accommodative, (3) patrimonial communism and (4) colonial periphery. These classifications represent different communist regime forms but are based solely on the scoring on the two attributes (mentioned above) before the introduction of communism. Because of the argument that these structural factors got reproduced during communism, they can be said to measure pre-communist dividing lines (Møller and Skaaning 2010:324)

The Czech Republic are, by Kitschelt, classified as the only 'bureaucratic authoritarian' regime. Hungary, Poland, Slovenia, the Slovak republic and the three Baltic states are all in the class of 'national accommodative communism.' In the class of 'patrimonial communism,' we find Albania, Belarus, Bosnia-Herzegovina, Bulgaria, Macedonia, Moldova, Romania, Russia, Serbia-Montenegro and Ukraine. Finally, the remaining countries of Armenia, Azerbaijan, Georgia, Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan, are all in the class of 'colonial periphery.'

Table 2: Classification of post-communist countries and bureaucratic legacies

Bureaucratic authoritarian	National accommodative	Patrimonial communism	Colonial periphery
Czech Republic	Estonia	Belarus	Albania
Slovenia	Hungary	Bosnia-Herzegovina	Armenia
	Latvia	Bulgaria	Azerbaijan
	Lithuania	Macedonia	Georgia
	Poland	Moldova	Kazakhstan
	Slovak Republic	Romania	Kyrgyzstan
		Russia	Tajikistan
		Serbia-Montenegro	Turkmenistan
		Ukraine	Uzbekistan

Source: Møller and Skaaning (2010).

Møller and Skaaning make some minor adjustment to this classification by elevating Slovenia to the status of bureaucratic authoritarian and relegating Albania to the status of colonial periphery.[11] The current study follows this classification, and the ordering of countries is summarized in table 2 above.

Basically, this four-point scale measures the 'Weberianness' of the pre-communist bureaucracy (Møller and Skaaning 2010:325), and both Kitschelt (1999) and Møller and Skaaning (2010) uses it in a regression analysis.

A point that validates this empirical ordering of cases is that they reflect other classifications of pre-communist or communist legacies. Huntington's (1996) distinction between western Christian, eastern Orthodox and Islamic civilizations is very similar to Kitschelt's ordering if Kitschelt's two first categories are merged. Bunce (1999) and Ekiert (2003) also presents a similar geographical pattern although their emphasis is on the communist legacy, and not the pre-communist legacy.

Imperial Legacy and Post-Communist Corruption

Similar to Kitschelt, Dimitrova-Grajzl (2007) has also traced post-communist outcomes to pre-communist legacies. She claims that the variation in institutional quality (which includes corruption) among the former socialist countries of South East and Central Europe can be explained by the legacies of the Ottoman and Habsburg Empires. Interestingly, she finds evidence that the communist experience did not change the prior "imperial" institutional development. Rather, in many cases, it even reinforced it (Dimitrova-Grajzl 2007:540). In other words, it seems like the informal institutions inherited from the Habsburg and Ottoman empires, through path dependence, survived massive political and economic upheaval. This is similar to the findings of Møller and Skaaning. Post-communist outcomes must be understood by turning to deep (often pre-communist) historical explanations.

Culture and Communism

When investigating the links between culture, communism and corruption Sandholtz and Taagepera (2005) have provided an interesting study. Their findings are two-fold: first they argue

---

[11] This is done on the basis that it more accurately resembles historical realities. Especially, they rely on Seton-Watson's (1945) rigorous historiographical description of the countries between Germany and Russia, which was written before these countries came under Soviet hegemony.

that communism had a direct influence on corruption by facilitating structural incentives for corrupt behavior, second they point out that communism had an indirect effect on corruption through the way communism led societies towards 'survival' orientations which in turn promoted corruption.

Even though communist countries were pushed towards secularism (which in the literature should have a negative effect on corruption) Sandholtz and Taagepera (2005) argue that it looks like the possible reward from secular values was overshadowed by the strong survival values that grew in the wake of communism. The communists probably did not intended this push towards survival values, but as Sandholtz and Taagepera (2005:116) show, it became an inevitable fact as economic development halted and people's lives increasingly revolved around basic human needs. Thus, communism could have created a specific culture of corruption that now has turned into a legacy, which in turn affects levels of post-communist corruption.

Other Studies Assessing the Relationship between Historical Legacies and Post-Communist Outcomes

There are also several other studies that finds evidence for hypotheses predicting historical legacies to affect various post-communist political outcomes.

Pop-Eleches (2007) argue that post-communist regime outcomes have been substantially circumscribed by historical legacy differences. Even though he cannot answer the question of which particular legacy matters the most, Western Christianity appears as one of the strongest variables. In addition, the legacy explanations are robust even when pitted against several prominent alternative explanations.

Grzegorz Ekiert (2003), in contrast to Møller and Skaaning (2010) and Dimitrova-Grajzl (2007), emphasize the variety of communist legacies. He particularly points out how it influenced countries' *initial conditions*, and that the most successful post-communist countries share common historical legacies. According to him the communist region at the outset of the transition, was characterized by highly different domestic conditions and institutions. Countries such as Poland and Hungary had already experienced some degree of political liberalization and they had begun to develop organized political opposition (Ekiert 2003:111)

According to Valeri Bunce (1999) the decisive "legacy" factor are the patterns of political dissent during communism. In some countries the communist experience produced a viable and largely liberal opposition that according to Bunce (1999:790) was a "counter-regime-in-waiting." In other countries no such protests were present, or if they were, they were illiberal in nature. Thus, when the communist party hegemony broke down these preferences and resource distributions manifested and either produced a new democratic regime or a continuation of the old authoritarian order

Horowitz (2003) finds statistical evidence supporting the hypothesis that post-communist countries that had greater pre-communist political and economic achievements are more likely to embrace democracy.

2.3.2 Causes of Corruption from the Global Corruption Literature

Economic Development

The most influential and consistent finding in the general corruption literature is that richer countries are less corrupt (Ades and Di Tella 1999, La Porta et. al. 1999, Montinola and Jackman 2002, Treismann 2000, 2007). In other words, higher economic development is strongly correlated with lower levels of perceived corruption. Both empirical and theoretical evidence are in favor of this finding.

The modernization theory claimed that "the more well-to-do a country, the greater the chances it will sustain democracy" (Lipset 1960). Specifically, it was argued that economic development had a positive impact on democracy because it created participatory attitudes and a civic culture. Modernization introduced societal changes like urbanization, spread of education, literacy, depersonalized relationships and mass communications – and this produced a shift towards 'democratic' attitudes. So, if the process of modernization creates attitudes of participation and democracy it should at the same time raise the odds for corrupt acts to be noticed and challenged. In other words, the exposure of corruption should be more likely in modernized countries. (Treisman 2000:404). Conversely, in countries with low economic development corruption will probably be more widespread.

Democracy

Another important structural variable in the corruption literature is the longevity of democracy. Even though the literature has failed to establish a significant relationship between levels of democracy and lower corruption, long periods of exposure to democracy seems to be positively related to lower corruption (Treisman 2000, Gerring and Thacker 2005). The argument is quite straightforward.

Democracy is built on structures and values that are inimical towards corruption, and thus it should inhibit it. Corruption requires special access and hidden influence which are directly opposed to the democratic ideals of equality and openness (Della Porta and Pizzorno 1996:74). However, the fight against corruption is not won just by implementing democracy: the important thing is the longevity of the democracy. The difference between a country that have a short experience with democracy and a country that has an extensive experience with democracy, is that in the latter country democratic norms and values have taken root and are widely shared. People expect equality before the law, there is a separation between the public and the private sphere, and office holders are obliged to serve the public will and not themselves. In such an environment people will regard corrupt actions as illegitimate and improper. The essential point is that it is hard for democratic structures to function properly without a potent political culture. In other words, democracy will not reduce corruption if the existing norms don't condemn it (Sandholtz and Koetzle 2000:39). This is line with Eckstein's (1988) socializing effect. Democratic norms are transmitted from one generation to another, and if this continues a democratic culture will spread both more widely and intensely to broader and broader segments of the population. Thus, more years of continuous democracy should tend to reduce corruption.

Trade Openness

A third structural variable is that countries that are more open to foreign trade tend to be less corrupt (Ades and Tella 1996, 1999), even though it is hard to establish the direction of causation. Presumably, trade openness and increased levels of competition reduces the power of bureaucrats over resources and administrative goods (permits, licenses etc.). This is important since bureaucrats could have traded these "goods" for private rewards. Furthermore, it is thought that increased foreign trade will lead to diffusion of norms and values, which lead us into arguments located at the political culture dimension. International trade is to a large degree dominated by

firms with a "Western" background. This means that their value system and business culture generally are non-acceptant to corrupt practices such as bribes, kickbacks, nepotism and extortion. So, when businesspeople and government officials from a "corrupt" country increasingly connects and "lock into" the international economy they will probably start to adopt more anti-corrupt attitudes (Sandholtz and Koetzle 2000:40).

Natural Resources

Fourth, natural resource endowments are thought to increase corruption (Ades and Di Tella 1999, Leite and Weidmann 1999). The basic assumption is that abundance of natural resources leads rent-seeking behavior, which leads to increased opportunities for corruption (Lambsdorff 2005:25). Rents derived from natural resources such as oil, gas and minerals, are usually extremely valuable and can dramatically increase the amount of revenue in a country. The problem is that this increased state revenue can lead to corrupt public officials. Nigeria is a case in point.

In the 1970's Nigeria was generally no worse than other neighboring African states when it came to corruption. However, after they discovered oil-reserves several observers noted that the revenue from Nigeria's new petroleum production created "extraordinary opportunities for corruption" (Ades and Di Tella 1999:982) According to *The Economist* (August 4, 1985) oil and corruption went hand in hand, making parties and party officials conspicuously rich.

Presidentialism

It has been argued that presidentialism could foster higher levels of corruption (Gerring and Thacker 2004:298). The assumption is that presidentialism creates a more fragmented political system through its decentralized model of governance, resulting in competing sources of power that are hard to keep responsible and accountable. Further, presidentialism is thought to be more susceptible to corruption because of such characteristics as fixed terms in office and legislative bargaining patterns (Kunicová and Rose-Ackerman 2005:598).

Religion

An often-cited cultural variable within the corruption literature is that countries with a predominantly Protestant population exhibit more quality governments and lower levels of corruption (Lambsdorff 2005, Treisman 2007). It is commonly thought that Protestantism is more

egalitarian and individualistic than the 'hierarchical religions' of Catholicism and Islam.[12] Presumably, this lowers the bar for confronting corrupt officials in countries with a "protestant" culture. Furthermore, Lipset and Lenz (2000:11-12) argue that Protestantism "is more conducive to norm adhering behavior", since it places more value on personal responsibility and is generally less tolerant towards human failing. This could make them less acceptant of corrupt behavior.

Religion is also thought to influence how people view their loyalty to family as opposed to other fellow citizens. The 'hierarchical religions' have, at least historically, to a larger degree influenced societies towards 'familism' and thus, potentially facilitating nepotism.

Another way in which religion could influence corruption is through the historical relationship between church and state. In the protestant tradition, which has its origin in opposing state sponsored religion, church and state got separated and this could have placed the church in a better position to challenge and question corrupt state officials.[13] In the hierarchical traditions, however, the church and state have sometimes been so intertwined making it much harder to develop similar accountability-functions. This is especially the case when considering Eastern Christianity compared to Western Christianity. In the west a consensus emerged that the king and the pope rule different "spheres." Conversely, in the east there was no clear line between the Orthodox Church and the ruler. According to Katchanovski (2000:64) this helped consolidate autocratic rule in 19th century Russia.

2.4 Theoretical Relationships

2.4.1 Evaluating the Theories
All of the abovementioned theories are relevant if we want to have a broad understanding on both the topics of corruption and historical legacies. However, some of these theories are better than others for guiding us towards an answer of whether levels of post-communist corruption can be explained by historical legacies, or not.

First, the work by Kitschelt (2001, 1999) and Møller and Skaaning (2010) about bureaucratic legacies seems essential. It would, to say the least, be hard to justify *not* taking this variable into

---

[12] According to La Porta et al. (1996) Eastern Orthodoxy is also part of the 'hierarchical religions.'
[13] However, it must be noted that in the Scandinavian countries this is not the case. Here, the protestant church and the state were strongly connected probably making it harder for the Scandinavian churches to question state officials.

account: it has clear theoretical expectations about post-communist countries, it has shown significant results, the data is available and the measure is applicable in a regression analysis.

Much of the same can be said about the imperial legacy-theory. It touches most of the post-communist countries, it has a clear expectations and it could help cast light on the same phenomenon as that of bureaucratic legacies. As will be seen in the analysis the strong correlations between these variables do not create problems with multicollinearity, thus potentially functioning as a robustness test of each other.

Several theories claim that communism has created an extraordinary problem of corruption. Commenting on all these is not within reach for this thesis, but we have taken a closer look at the study by Sandholtz and Taagepera (2005). This study also seems convincing. It expects that communism both had structural and cultural elements that encouraged corruption, and that this became so embedded that it (at least culturally) lives on even after communism is gone. These expectations are somewhat contrary to that of bureaucratic and imperial legacies, but it is a theory that gives us increased insight into how the communist experience might have affected these countries.

Several of the theoretical relationships identified in by the global corruption literature also seem relevant for our purpose. First, it is quite clear that the relationships between economic variables and levels of corruption should be considered. For the post-communist countries levels of economic development, natural resource endowments and trade openness should at least be included.

Second, we must consider what theory has to say about the religious and cultural diversity in our cases. In particular, the effect of Protestantism or Western Christianity, which theory expects has a diminishing effect on corruption, should be assessed.

There are also other theoretical relationships that could have been considered. For example the degree of political dissent during the communist period is expected to have effect on the prospects for future democracy, and the same goes for economic liberalization during the communist period. However, these factors seem to be secondary to those mentioned earlier, both in terms of expected effects and findings from earlier research. Since the theoretical framework

now is in place, the next step is to use these theoretical relationships to deduce concrete hypothesis that can be tested.

2.4.2 Deduction of Hypotheses

The first hypothesis deduced explores post-communist corruption in relation to global corruption levels.

H_1: *Post-communist countries are more corrupt than other countries.*

If the theoretical expectations put forward by Sandholtz and Taagepera (2005), Karklins (2002), Holmes (2006) are true, corruption problems in those countries that have experiences with communism should be larger and more severe than those countries without this experience. Thus, it is expected that post-communist countries display significantly larger levels of corruption than other countries. As will be seen in the empirical analysis, H1 is supported by the empirical data.

The second hypothesis postulates that a protestant heritage will lead to lower levels of corruption in post-communist countries:

H_2: *A protestant heritage should reduce levels of post-communist corruption.*

This hypothesis is drawn from the global corruption literature, and has received substantial support (Treisman 2000). It predicts that if a post-communist country has/or have had some protestant adherents among its population this should help them achieve reduced levels of corruption. It will be seen in the later analysis that H2 is partially supported by the empirical data.

Furthermore, H3 is deduced from the theory about bureaucratic legacy developed by (Kitschelt 2001):

H_3: *Differences in levels of post-communist corruption can be explained by differences in pre-communist bureaucratic legacies.*

H3 predicts that the variation in levels of post-communist corruption actually reflects variation in pre-communist bureaucratic legacies. In particular, this means that those countries with a bureaucratic authoritarian or a national-accommodative (value 1 and 2) bureaucratic legacy should have reduced levels of corruption compared to those countries with a patrimonial or

colonial peripheral legacy (value 3 and 4). Findings indicate that bureaucratic legacies are powerful predictors of post-communist corruption.

Finally, the fourth hypothesis incorporates the effect of imperial legacy:

H_4: *A Western imperial legacy should decrease levels of post-communist corruption.*

This hypothesis is deduced from the theory of Dimitrova-Grajzl (2007), which claims that values, norms and practices inherited from imperial rule can explain post-communist regime outcomes. Thus, this hypothesis predicts that a Western imperial legacy (compared to an Ottoman or Russian imperial legacy) will reduce post-communist corruption. Furthermore, this variable is quite similar to that of bureaucratic legacies. A country's bureaucratic legacies are to a large degree a product of which empire they historically were ruled by. Thus, these two variables measure more or less the same phenomenon, which could strengthen the robustness of these findings if both are significant.[14] It is seen in the later analysis that H4 receives partial support.

2.5 Summary

The chapter started by defining corruption as "the misuse of public office for private gain" (Treisman 2007:1) It was emphasized that *misuse of public office* means breaching the impartiality principle, and that it is important to recognize the distinctive material attribute of *private gain.* Historical legacies were defined as "the structural, cultural and institutional starting point of ex-communist countries at the outset of the transition" (Pop-Eleches 2007:910). Next, it was showed that historical legacies must be understood within the larger framework of historical institutionalism. In particular, the ideas of *path dependency* and *critical junctures* are critical 'information containers' if we are to handle legacies as proper analytical concepts. The chapter proceeded with showing the remarkable diversity in corruption levels among the post-communist countries, and how researchers has explained this by pointing to things like pre-communist bureaucratic legacies, imperial legacies and the communist experience. Further, those causes of corruption identified by the global corruption literature were presented. Lastly, based upon the theoretical framework established, four hypotheses were deduced.

---

[14] However, because of the strong correlation between these two variables including them both in a statistical model could cause problems with multicollinearity. But, as will be seen in the analysis, the VIF indicator did not exceed the critical value of 10 even though both variables were included.

3. Methodological Considerations

This chapter presents and defends the method and statistical models chosen to handle the data. It starts with explaining why a quantitative approach is better than a qualitative approach in answering the research question. Next, time-series cross-section design is introduced. Despite the analytical flexibility of TSCS data, it has its flaws. In their influential article, Beck and Katz (1995) provided solutions for these problems that more or less has become orthodoxy in the dealing with TSCS data. However, as will be shown, the 'Beck and Katz-solution' is not appropriate for the current analysis. Instead, a regression model with Prais-Winsten transformation (AR1) and panel-corrected standard errors seems to be the best option. In the end it is explained what we gain by applying TSCS design on post-communist corruption data, and some model specific issues are discussed.

3.1 Introducing Times-Series Cross-Section Design

3.1.1 Why a Quantitative Approach?

The currents study aims to illuminate the research question by testing hypotheses containing expectations about the effects of historical legacies on post-communist corruption levels. In order to test causal hypotheses we must make causal inferences, and in order to find results valid for the post-communist universe we must be able to generalize. Quantitative methods are better suited for both these endeavors (King, Keohane, and Verba 1994:100). There are multiple reasons for this.

First, and quite straightforward, quantitative research produces explanations that are generalizable. This is usually an unattainable (and often neglected) goal for qualitative studies. They usually focus on complex in-depth descriptions rather than obtaining generalizable results (Lancaster and Montinola 2001:4). The latter is of course a promising (and maybe even the best) approach when studying the effect of historical legacies in one or a few cases. However, when assessing the causal effect of historical legacies on post-communist corruption generally, quantitative methods are needed.

Second, scholars using the qualitative methods tend to select unusual cases (outliers). This can be problematic since these cases are more or less unique in comparison to the general population – making generalization even more difficult. In the quantitative approach outliers do not represent

such a problem, since analyses encompass numerous cases and are able to control for the effect of outliers through conscious case-selection and statistical methods.

Furthermore, quantitative methods avoid the pitfall of 'over-determination' (Lijphart 1971). This is a serious challenge to many case-oriented and 'small-N' studies. In practice, this often means that a given study has more independent variables than cases.

Fourth, quantitative studies are better at distinguishing the relative importance of different independent variables. However, this usually comes at the expense of causal complexity. According to critics, quantitative methods risk generalizing away casual complexities that qualitative methods could have explained more appropriately (Ragin 1989). This is a valid point. However, the tradeoff is probably not so severe. Statistical methods can (to a degree) control for causal complexity through interaction terms and by applying a range of statistical tools[15].

Fifth, quantitative methods tend to be more careful when dealing with operationalization and measurement problems. This is because concept-validity is inherently problematic in the quantitative approach. Qualitative methods focus on descriptive explanations of nations, institutions and societies, but this is often done with lack of sensitivity to the problems of measurement and operationalization.

Lastly, studies using quantitative methods are often far more replicable than qualitative studies. This is because they tend to give full account of the procedures used to collect and evaluate data (Jackman 1985). The specific quantitative method chosen for this study are the topic for the next section.

3.1.2 Time-Series Cross-Section Design: Pros and Cons

TSCS data (or panel data)[16] has become one of the most common quantitative methods in political science generally, and political economy specifically (Adolph, Butler, and Wilson 2005). Basically, TSCS data are pooled time-series and cross-sectional data. This means that compared

---

[15] Like for example applying lag-structures, periodic effects and country-dummies (dynamic modeling).

[16] The terms TSCS data and panel data are sometimes used interchangeably in the scholarly literature. There are however some differences. According to Beck (2001:273) TSCS data has a fixed, non-sampled number of units, while panel data has a shorter time-horizon and a large number of units that are randomly sampled. However, these differences should probably not be overrated. While TSCS data follow a hierarchical data structure, most issues relevant for TSCS data are relevant for panel data (Wilson and Butler 2004:2).

to purely cross-sectional or time-series studies, TSCS data makes it possible to capture variations over time and across units simultaneously[17] (Beck and Katz 1995). This characteristic gives TSCS data sets analytical flexibility. First, it increases the number of observations (*n*) and therefore also the degrees of freedom in the analysis. This makes it possible to counter a problem that has always plagued comparative political studies: few observations and many variables (Lijphart 1975). Second, it makes it possible to control for exogenous shocks that potentially affects all countries at the same time. In addition, it is able to control for case-stable omitted variables, which represent an important type of unmeasured heterogeneity in multivariate analysis (Hargens 2004).

Potential pitfalls

However, TSCS data has to deal with its own problems. There are especially four issues that could violate the necessary assumptions for linear ordinary least squares (OLS) regression. These are *autocorrelation*, *heteroskedasticity, correlated errors across units* as the result of exogenous shocks, and a combination of the last two issues.

Autocorrelation often occurs in time-series data because errors that are temporally close are also often similar to each other (Plümper, Troeger, and Manow 2005:239). This means that the errors are not independent of each other, and this is the case for the corruption data used in the current study. As we shall see later, however, there are several statistical tools available for dealing with autocorrelation. If autocorrelation is not dealt with it can lead to quite misleading assessments of the strength of the regression.

The source of *heteroskedastic errors* is usually that the variance of the errors is different for different cases. If exogenous shocks, like for example the breakdown of the Soviet Union or the financial crisis, affect all countries in the analysis the result will likely be that the errors are correlated across countries. All of the abovementioned problems are issues that can result in misleading estimates and wrong standard errors (Beck and Katz 1995).

The Beck and Katz-solution

The standard method for solving these problems has been to use a template provided by Beck and Katz (1995) (hereafter referred to as the B&K method). By including panel corrected standard

---

[17] Thus, TSCS data can be understood as three-dimensional, consisting of (1) cases, (2) variables, and (3) time points.

36

errors (PCSE) and a lagged dependent variable (LDV) at the right hand side of the regression equation, Beck and Katz argued that the problems of heteroskedastic errors and autocorrelation could be solved. In addition, they controlled for unit heterogeneity and exogenous shocks by incorporating fixed effects for both countries and time periods (by giving all countries and time periods their own constant).

However, despite the attractiveness and widespread use of this method it should not, as several scholars have pointed out, be used uncritically. As both Plümper, Troeger, and Manow (2005), and Wilson and Butler (2007) shows in a series of replication studies, the results of TSCS data are highly sensitive to simple alternative model specifications.

Furthermore, a potential serious problem with the B&K-method is the fact that it tends to overlook one fundamental assumption of TSCS analysis: namely that there must exist enough over-time variation so that observations can meaningfully be viewed as independent. If there is no variation within and between variables, TSCS data will not provide increased degrees of freedom. This is because the number of observations is only artificially increased (in the same way as one could divide a variable in weeks instead of years (Wilson and Butler 2007:108). As will be shown in the next chapter the nature of the variables used in this analysis are mostly time-invariant or at least slow-changing (quite obviously since they try to capture historical legacies), and this poses some interesting challenges for a sound application of TSCS analysis. However, even though the variables mostly lack "within"-variation they have variation between cases, which makes the B&K-method less appropriate.

Why the B&K-method is unsuitable for the current analysis
First, and most importantly, a direct consequence of using fixed effects (FE) is that the potential effects of time-invariant variables are excluded. This is of course incompatible with both the theoretical and empirical design of this thesis. Historical legacies are by their very nature (relatively) stable country-traits that, in the current context, are thought to influence the level of corruption.

The fact that FE-models is unsuitable for estimating time-invariant or slow-changing ("sluggish") variables is quite recognized in the literature. According to Beck, "the fixed effects will soak up most of the explanatory power of those slowly changing variables (…) [and] make it hard for

such variables to appear either substantively or statistically significant" (2001:285). In addition, estimates will also potentially be misleading because of the methods inefficiency for handling time-invariant variables (Plümper and Troeger 2007:127).

Second, as soon as the dependent variable starts to show some variance, FE-models will soak up any variation that occurred before the starting point of the analysis. This is because FE-models completely remove cross-level effects. Theoretically speaking, this is an assumption that fits badly with the current analysis. It is the cross-case differences and not over-time differences that are of primary importance in this study. Hence, taking the abovementioned issues into account, applying fixed effects in the current analysis is problematic.

Alternatively, one could use *random effects* (RE) models. However, when the independent variables are correlated with the unit effects, RE-models will produce both inconsistent and unbalanced results (Stock and Watson 2012:647-649, Plümper and Troeger 2007). Another alternative is to apply the Hausman-Taylor method (a common method in econometrics), where instrumental variables are included in order to correct for the skewedness in the RE-model. This opportunity seems, nevertheless, to be quite unrealistic for researchers that are concerned with empirical assessment and not just statistical modeling[18] (Plümper and Troeger 2011:149).

3.2 The TSCS Design in the Current Analysis

There are two potential solutions to the problems described above. The first one is to use OLS with panel-corrected standard errors (PCSE) to correct for panel heteroskedasticity and a Prais-Winsten transformation (AR) to correct for autocorrelation (hereafter PW-model or PW-regression).

3.2.1 Prais-Winsten regression

In the PW-model an autoregressive (AR) transformation is applied in order to lag the residual. The purpose of this is to obtain more efficient estimates and eliminate autocorrelation (Stock and Watson 2012:644). The B&K-method, however, advocates using a lagged dependent variable (LDV) instead. Several scholars have pointed out that to use a LDV to explain a potential trend in the data is problematic. For example, as Plümper *et.al.* shows, a LDV treats the dynamics of all independent variables as identical since it introduces (and measures) a weighted average of the

---

[18] To elaborate a bit, it seems like studies with a high concern for validity seldom has powerful instrumentals at their disposal.

independent variables at the right-hand side of the regression equation. As they emphasize in their article, "this assumption is not very convincing and almost certainly wrong" (Plümper, Troeger, and Manow 2005:335). In addition, it cannot be used with RE- or FE-models. This is not the case with the PW-method.

One of the advantages with PW-models is that they are less sensitive to time-series dynamics compared to the B&K-method. Therefore, it is a better method if the goal is to explain not only cross-sectional variance but also average changes in levels, as is the case with this study.

Thus, this thesis uses the PW-model as the basic model in the analysis. [19] An apparent weakness with these models is that they risk explaining the variance in the dependent variable that existed prior to 1998, with the variance in the mean of the independent variables in the period between 1998 and 2012. As a result, we must assume that countries with comparably high rates of corruption in the period between 1998 and 2012 also had the highest levels prior to 1998. In addition, PW-models fail to control for the effect of omitted variables (Plümper, Troeger, and Manow 2005:332).

3.2.3 Defending its Use on Post-Communist Corruption Data

Overcoming "small-n"
One potential problem when trying to carry out a multivariate statistical analysis on post-communist countries is the limited number of cases (around 30). However, TSCS data is able to handle this problem by collecting data on the cases at several points in time rather than just one. This makes it possible to obtain additional observations, which facilitates a better analysis. Thus, instead of having between 24 and 29 observations per model, the models in this thesis have between 299 and 340 observations. Despite the potential serious problems with making over-time comparisons using corruption data (this will be further addressed in the next chapter), increasing the observations strengthen our ability to produce valid statistical inferences.

---

[19] It is important to remember that the goal of this, or any other statistical model, is to be a *useful* representation of reality, and not a *true* representation of reality. However, even though a model cannot aspire to be the "truth," it can be used successfully to explore the relationships between variables and make sound forecasts based on those relationships. Furthermore, these models are only temporary constructions and should change as a result of new data, alternative models, analysis of the current model etc. In addition, there are typically several different models that are useful representations of reality.

Dealing with autocorrelation

As noted in section 3.1.2, an important assumption of the regression analysis is that the random errors are uncorrelated with each other. However, when the data has a natural sequential order, as is the case with perceived corruption levels, the result is that the correlation structure is related to the sequential order of the data. This means that, empirically, one of the biggest challenges in estimating determinants of post-communist corruption is special and serial autocorrelations because corruption levels in one year is likely influenced by corruption level in the previous year.

There are several reasons for why autocorrelation occurs. In TSCS data (or time-series data) it is often the case that adjacent values are similar which means that, often, high values follow high values and low values follow low values. For example, in economic data, measurements from consecutive time periods (like days, months, years) are often positively correlated because of over-time changes in underlying economic processes (Chatterjee and Simonoff 2013:82). Autocorrelation can also occur by the fact that an important explanatory variable has been omitted from the model. Usually, this happens because the successive values of the omitted variable are correlated, which means that the errors of the model will reflect the effect of the missing variable. Hence, it is important not to misinterpret what really is an issue of model specification for autocorrelation.

3.3 Summary

This chapter has presented the method and models used to handling data, on which hypotheses are tested. The strength of the quantitative approach in comparison to the qualitative approach is that it can produce explanations that are generalizable; it is better equipped for making causal inferences; it has a more conscious approach to operationalization and measurement; and it is easier to replicate quantitative studies. All this makes quantitative analysis better suited for answering the research question. However, the TSCS design, despite its inherent flexibility, often struggles with autocorrelation, heteroskedasticity, correlated errors across units and heteroskedastic errors. As shown, the solution proposed by Beck and Katz (1995) for solving these problems cannot, for several reasons, be applied in this analysis. The most important factor is that, by using fixed effects, the potential effect of time-invariant variables is excluded. This would be disastrous for the current analysis. A Prais-Winsten transformed regression model with panel-corrected standard errors is, as argued in the text, better suited for the current analysis. It

effectively deals with autocorrelation and is less sensitive to time-series dynamics. The latter point is important because this analysis is not primarily concerned with over-time variation but between-unit variation. Lastly, TSCS data overcomes the "small-n" problem that is characteristic for post-communist studies. The next chapter deals with the particular data (and related issues) that the abovementioned methodology will be applied upon.

4. Case Selection, Data and Operationalization

This section starts by briefly explaining the case-selection and time-period applied in this analysis. Then, the data and sources underlying the dependent variables will be examined, with a thorough discussion of the quality of corruption data. The chapter ends with an examination of the data underlying the independent variables. In addition the chapter contains summary statistics of all variables.

4.1 Case Selection and Time Period

4.1.1 The Post-Communist Countries

The selection of cases for this thesis is naturally limited by its focus on the post-communist world. This means that we do not need to have a long argument about why the particular cases are selected: the cases for this analysis are more or less given. This means that the following countries are included in the analysis: Albania, Armenia, Azerbaijan, Belarus, Bosnia-Herzegovina, Bulgaria, Croatia, Czech Republic, Estonia, Georgia, Hungary, Kazakhstan, Kyrgyzstan, Latvia, Lithuania, Macedonia, Moldova, Mongolia, Montenegro, Poland, Romania, Russia, Serbia, Slovakia, Slovenia, Tajikistan, Turkmenistan, Ukraine and Uzbekistan.

As shown in the descriptive statistics in chapter two, the between-country variation on the dependent variable amongst the post-communist country is quite large. This variation is positive when, in chapter five, we want to draw statistical inferences.

One of the challenges with choosing countries on the sole basis of region is that they often display little variation on the dependent variable in order to be assessed properly. However, the post-communist "region" is marked by distinct variation on many variables. In addition, it is inherently problematic to treat the post-communist world as one region in the same way as Western Europe or Latin America. Echoing the arguments put forward in chapter two, the post-communist "region" actually consists of three regions: Central/East-Europe, South-Eastern Europe and Central Asia.

4.1.2 The Time Period: 1996-2011

Data availability on the dependent variables limits the time period under assessment to be between 1996 and 2011. The independent variables all originate before this (since they measure historical legacies). Some are from the outset of the transition, some are from the ends of the

communist period and many are from the pre-communist period. Even though this thesis is mainly concerned with between-country variation, and not over-times variation, the chosen time-span gives us flexibility in terms of larger-n and gives us more certainty when making statistical inferences.

4.2 Data and Operationalization

4.2.1 Dependent Variables: Data on Corruption Levels

The data on corruption levels that will be used in the empirical analysis are gathered from three different sources: (1) Transparency International's Corruption Perception Index (TI), (2) Control of Corruption Index from the World Bank (WB) and Nations in Transit's (NiT) measure of corruption. By combining these three measures we will be able to perform a robust test of the hypotheses.

The TI is an index of perceived corruption and is probably the most commonly used index in empirical quantitative analysis. To generate this index Transparency International draw from a number of different sources that include country risk ratings produced by consultancies, surveys of business people and polls of country inhabitants. Most of these are based on expert evaluations. 13 sources from 12 independent institutions (one is NiT) are included in the CPI 13. The TI has a fairly good coverage of the post-communist countries, but it is not as extensive as the WB index because TI requires data from all the different sources if a country is to be included (WB treats one source as sufficient). The TI includes annual ratings dating back to 1995.[20]

The WB is also an index of perceived levels of corruption, and like the TI they aggregate information from multiple sources. From 1996 to 2002 they published their country ratings every second year, but since then findings have been published annually. The index originally ranges from -2.5 to +2.5 but has in this study been rescaled to 0 to 10.

The third corruption indicator is NiT. NiT exclusively focuses on the post-communist countries and has since 1995 surveyed the political developments in these countries. Their corruption variable, however, was introduced in 1999. The index is based on expert assessments covering issues like public perceptions of corruption, the business interests of high ranking policy makers, laws on financial disclosure and conflict of interest, and the effectiveness of anti-corruption work.

---

[20] I were, however, only able to obtain data from 1996 and onwards.

NiT's index have many similarities with the well-known freedom house indexes of civil liberties and political rights. Political development is measured on a scale where 1 represents the highest and 7 the lowest level of democratic progress. This procedure is similar for all the seven sub-categories (national democratic governance, electoral process, civil society, independent media, local democratic governance, judicial framework and corruption).

Even though these three measures draw from different sources and apply different methodology, they are strongly correlated, as can be seen in Table 3 below.

Table 3: Correlations between dependent variables (2010)

	TI	WB	NiT
TI	1 N=29		
WB	.980*** N=29	1 N=29	
NiT	.942*** N=28	.972*** N=28	1 N=28

The main reason for using three indicators of corruption levels is to achieve a sufficient level of validity and reliability (Adcock and Collier 2001). The most common approach in the corruption literature has been to use only one dependent variable (usually TI). Instead, by applying three different measures of the dependent variable we will be better equipped for a more robust test of the hypotheses. The three indicators are all standardized to a scale ranging from 0 (clean) to 10 (most corrupt).

Table 4: Summary statistics of dependent variables

Variable	Obs.	Mean	Std. dev.	Min	Max
Transparency International CPI (0-10)	388	6.51	1.25	3.30	8.70
World Bank Control of Corruption (0-10)	363	5.72	1.27	2.37	7.99
Nations in Transit (0-10)	378	6.33	2.26	1.66	9.58

4.2.2 Corruption and Measurement: The Quality of the Data (REF)

Despite the fact that the TI, WB and NiT data (in addition to some other measures) are now being widely used in corruption research, their reliability has been criticized. Two issues have particularly been raised.

Potential dangers: Perception-based measurement and aggregation of sources

First, the data measures *perceptions* about the prevalence of corruption and not the extent of corruption per se. The measures are based on expert assessments and survey respondents, which is why they sometimes are referred to as "subjective" indexes. However, such opinions do not need to be based on any direct knowledge of the phenomenon in order to be reported, and the results could therefore be biased.

Instead of reflecting the prevalence of corruption, these perceptions could reflect cross-national differences in the perceived social or economic injustice in a society, the degree of public identification with the government, how the media portrays the phenomenon, the effectiveness of anti-corruption campaigns, Western values and preconceptions and ideological biases (Treisman 2007:215). Put differently, *perceived* corruption may reflect other things than the phenomenon itself. If researchers use these data to make definitive arguments about the relationship between, say democracy and corruption, it is troublesome. In other words, confusing perceptions about corruption with corruption itself would be a grave mistake.

Second, questions have been raised concerning how these indexes aggregate their sources. The argument is that the individual sources used to construct each index are measuring different things, and therefore their aggregation is problematic (Treisman 2007:215). The sources consist of opinions by Western experts, polls of international business people or country inhabitants, and surveys that ask questions about the relative nature of the corruption problem and its frequency. They also differ in focus, whereas some emphasize "petty" corruption (low-level administrative corruption), and others focus on more large-scale political corruption. In addition, some have a regional coverage while others are global in scope.

Consequently, one could wonder what the aggregate of these sources really is measuring. A possible solution could be to use specific parts of these sources and matching them with the specific problem it addresses, which could make more sense than using an index. However,

because of cultural and societal differences in perceptions of corruption, similar questions to the same target group in different countries would, nonetheless, be interpreted differently. What a businessman in Poland thinks is "misuse" of public office for private gain probably differs from what a businessman in Turkmenistan thinks constitutes the same phenomenon. So, basically, there exist concerns about both the comparability of sources and the comparability of cross-country survey responses.[21]

Possible solutions

Scholars have responded to the abovementioned issues in several ways. First, it is clear that there exist limited alternatives to the subjective indexes when it comes to reliable cross-country sources. Should one stop to study a phenomenon that most people think is an important topic only because the measures are imperfect? Of course, one could study corruption by using judicial material (i.e. rates of prosecution, conviction of misuse of office), but these sources are also in danger of capturing things that are besides the phenomenon itself (i.e. the competence of the police and judiciary, the priority of anti-corruption work and measures).

An alternative could be to use proxies to measure corruption, and some researches have tried this approach. For example, Golden and Picci (2005) studied regional corruption in Italy by creating an index based on a comparison of the value of existing infrastructure stocks to past infrastructure spending. However, using such an approach across countries would be difficult, if not impossible.

Despite the lack of real alternatives to the perception-based measures there has in recent time been a positive development when it comes to some experienced-based measures. Especially Transparency International's Global Corruption Barometer (GCB) and the United Nations Interregional Crime and Justice Research Institute (UNICRI) have come up with some promising results. They ask their respondents (or their family members' or their firm's) about their personal experience with corruption. The positive aspects of these measures are that they are less prone to capture perception-biases (inferences influenced by impressions, prejudices, rumors etc.) since they rely on actual experiences. On the other hand, such data also faces difficulties because of things like unclear memories, fear of reprisals from the government etc.

---

[21] Several cross-national surveys carefully construct their questions to strengthen the reliability of the answers and avoid misunderstandings.

A second response to the concerns about using data on perceived corruption has been to view the variety of sources as a positive sign. The fact that the indexes measuring perceived corruption are strongly correlated – despite their differences in methodology, sources and definitions – could indicate that they are capturing the same phenomenon. In TI's 2005 CPI the average correlation amongst the sources was r = 0.87 (Lambsdorff 2005).

If experience-based corruption measures are an alternative to the perception-based ratings, an interesting question is to find out how strongly they correlate. Razafindrakoto and Roubaud (2005) conducted a study in eight African countries where they compared survey results from inhabitant's experience with corruption, with answers from experts of what they thought the inhabitants would report. The results showed that the experts overestimated the level of corruption in every single country. On average, the experts believed that 54 per cent of the population had experienced acts of corruption in the last year, while the survey results only showed 13 per cent (Razafindrakoto and Roubaud 2005:292).

Furthermore, there was no correlation between the expected corruption levels and the reported corruption levels among any of the eight countries. The expert assessments were, however, correlated at 0.65 with the WB index (Treisman 2007:217), which could mean that experts share a common view about the cross-national prevalence of corruption that is, nonetheless, disturbingly different from what ordinary people experience.

That being said, there have also been found a mismatch between opinions and actual experience of corruption among country-residents themselves. Survey responses on questions like how corruption affects politics, business and personal life in their country did not correlate strongly (around 0.20) with questions whether anyone in the household had paid a bribe in the last year. Actually, their answers correlated more closely with the WB index than with their reported experience of corruption (Treisman 2007:219). In other words, expert assessments are not the only opinions who seems to differ from actual experience.

This influences how we are to understand research findings. A possible conclusion of the abovementioned issues is that perception-based corruption indexes fails to capture the frequency of corrupt behavior in a reliable manner. However, even if this became the conclusion, there would still be reasons to study *perceived* corruption because perceptions can have a powerful

impact on reality. Studies have found that perceived levels of corruption discourages victims from reporting crimes to the police (Soares 2004) and reduces economic growth via its effect on investments (Mauro 1995). What these studies would have found if the perceptions were believed to be false is, on the other hand, not clear. That being said, it still seems like the subjective indexes are the best tool available for assessing the cross-national frequency of corrupt behavior today.

Corruption data in time-series analysis

One last question, which is of high relevance for this study, is about the use of perception data in longitudinal analysis. Several studies have, in the same way as the current analysis, put annual perceived corruption scores into a TSCS panel for analysis. According to Treisman (2007:220), however, this is not recommended. There are three reasons for this.

First, the methodology for constructing some of the indexes (especially TI's CPI index) has not been consistent over the years, meaning that the index ratings could have changed independently of changes in perception levels. Furthermore, TI and WB have changed sources used in successive years with the consequence of reporting changes in perception levels that are the result of new data rather than real changes in perception levels. Thirdly, the TI index has sometimes operated with reduced interyear variation because of the occasional reusing of the same surveys in successive years. In addition, some perceptions levels are changed between successive years with the intention of correcting ratings that later have been regarded as wrong (Lambsdorff 2005:4)

As a result, both the TI and WB teams emphasize that only large interyear changes can be taken seriously. Furthermore, so much as half of the over-time variance in the WB index could result from changes in the sources used and the different weighting of these sources (Kaufmann and Kraay 2002:13-14). On the other hand, Kaufmann, Kraay, and Mastruzzi (2006) believe that some longer over-time changes are large enough to be significant.[22]

All this forces researchers to handle findings derived from perception-based indexes with extreme caution, especially inferences drawn from over-time analysis. However, if variations in

---

[22] They compared results from 1996 and 2004, and found that changes in 5-7 per cent of the countries were significant. Perception levels increased in Zimbabwe, Cyprus, Israel and Moldova, and it decreased in Latvia, Estonia, the United Arab Emirates and Bahrain.

the between-year ratings can be traced back to changes in individual sources (and not from methodological or technical changes), over-time trends can, according to Sampford (2006:84), cautiously be identified.

Obviously, to run such a "background check" on all inter-year changes in the relevant time period is outside the scope of this thesis, but it should ideally have been done in order to assess the reliability of the findings. The current study confines itself to cautiously interpreting findings (especially over-time changes) and being open with the obvious shortcomings of the data. As argued above, even though the subjective indexes are flawed when it comes to over-time comparisons, they are from the author's point of view the best measures available.

4.2.3 Independent Variables and Controls: Historical Legacies

This last section of chapter four explains the operationalization of controls and independent variables that will be assessed in the coming analysis. However, that analysis (chapter five) will show that several relevant variables included in this section had to be excluded from the final models, due to multicollinearity problems. An overview over sources and summary statistics is can be found at the end.

Cultural/Religious Legacies

As we have seen cultural/religious legacies have been highlighted as important factors explaining political outcomes in the Eastern European/Post-communist context (Pop-Eleches 2007, Janos 1989). The cultural/religious measures identified as relevant in this study are *protestant heritage, minorities, Muslim* and *Imperial legacy.*

Protestant heritage is measured by the percent of protestant adherents in 1980, and it is meant to capture the potential positive effect of protestant values, traditions and mindsets on post-communist levels of corruption. A possible danger with this variable is the small amount of protestants in post-communist countries (only Estonia had/have a protestant majority, and several countries have no protestant adherents at all), which could lead to wrong estimates. It is derived from the Standard Quality of Government dataset (Teorell et al. 2013 which uses , La Porta et al. 1999).

To measure *minorities* I use the data provided by Katchanovski (2000). Here, minorities are measured as percentage of population in 1989. There is no direct theoretical link in the literature

49

between minorities and corruption. However, the variable is included as a control since ethnic fractionalization is a feature in several post-communist countries (especially in the Balkans) and this could have an effect on levels of corruption (See Roeder 1999).

Muslim is also a control variable, and it is a dummy for whether a country had a Muslim majority in 1990 or not. Several scholars argue that Islam has a negative effect on democratic performance (Fish 2002, Stepan and Robertson 2003) , but this relationship has not been so clear when it comes to corruption. However, amongst the most corrupt post-communist countries all have a Muslim majority. Therefore, it is important to control for this cultural factors. The data are gathered from the CIA World Factbook.

Imperial legacy is the second independent variable and is coded with three values: (0) a Russian/Ottoman imperial legacy, (1) a mixed imperial legacy and (2) a Western imperial legacy. The variable to a large degree follows Dimitrova-Grajzl (2007), but I also include a category for mixed imperial legacy since several of today's countries historically (i.e. Poland) were divided between different empires.

Economic Legacies

Given the particular nature of plan economies and the painful post-communist economic adjustment, economic legacies probably represent powerful constraints on post-communist outcomes, which include levels of corruption. The measures are: *energy intensity*, *resource endowments* and *trade dependence*.

Energy intensity is supposed to capture structural economic distortions originating in the communist period. It is operationalized by using the inverse of GDP per unit of commercial energy use, normalized for the share of industrial output in total GDP (Pop-Eleches 2007:912). The data are gathered from World Development Indicators (2001).

As mentioned in chapter two several scholars argue that natural resource wealth can create a "resource curse" that increased levels of corruption. To control for this possibility I have included a variable for *resource endowments*. The measure is based on De Melo et al. (2001) and countries are coded as either rich, moderate or poor.

Trade dependence tries to capture the fact that some communist countries were more dependent on intra-communist trade than others. Those who were less dependent naturally had the potential to trade more with the West and thus be exposed to anti-corruption values. The data is derived from De Melo et al. (2001) and it is measured as the ratio of CMEA exports and imports to GDP (in %) in 1990.

Social Conditions/Modernization
At the outset of the transition the post-communist countries were marked by substantial differences when it came to social conditions and modernization. Interestingly, this was the case despite the communist's intense efforts to erase large pre-communist differences. According to the modernization theory such differences should help predict the readiness for democracy. Thus, since democracy is inimical to corruption, it is likely that these levels also effects post-communist corruption. The current analysis focuses on *GDP/capita 1989*, *Urbanization* and *Higher education*. The data for *GDP/capita 1989* and *Urbanization* are gathered from De Melo et al. (2001), and *higher education* are derived from UNICEF (2005).

Institutional Legacies
Even though the post-communist countries had a common history of communist one-party rule, they exhibited substantial institutional differences, many which could be traced to the pre-communist past. *Bureaucratic legacy* has already been mentioned as an important variable. The data for this measure is derived from Møller and Skaaning (2010) who bases their classification upon Kitschelt (2001). The other variables are *history of statehood, prior democracy* and *pre-war membership in the Soviet Union.*

The *statehood* variable is supposed to control for possible effects of having historical experience with the multiple tasks of running a state. An early settlement of statehood probably increases the power of the state apparatus, and could thus function as an inhibiting factor against corruption[23]. Presumably, a strong state is more able to implement laws, enforce sanctions and control its bureaucrats. This variable consists of three values: (1) countries with experience of independent

---

[23] See Pop-Eleches (2007) and Wittenberg (2006) for links between statehood experience and post-communist democracy. Arguably, several of this links are also relevant for post-communist corruption.

statehood after the First World War;[24] (2) countries with experience as part of decentralized states;[25] and (3) countries that became new nation states in 1989.[26]

Table 5: Overview of independent and control variables

	Variable name	Coding/measurement	Source(s)
Cultural/Religious Legacies	Protestant heritage	Percentage of protestant adherents in 1980	Teorell et al. (2013) using La Porta et al. (1999)
	Muslim	Muslim majority? 1 = yes, 0 = no	Author using CIA World Factbook
	Minorities	Proportion of ethnic minorities (in %)	Katchanovski (2000)
	Imperial legacy	2 = western, 1 = mixed , 0 = Ottoman or Russian	Author using Dimitrova-Grajzl (2007)
Economic Legacies	Energy intensity	(GDP per unit)$^{-1}$/(% industry/total GDP)	Author using Pop-Eleches (2007) and World Development Indicators (2001)
	Resource endowments	2 = rich, 1 = moderate, 0 = poor	De Melo et al. (2001)
	Trade dependence	Non-CMEA exports/Total exports	De Melo et al. (2001)
Social Conditions/Modernization	GDP/capita 1989	GDP/capita in 1989 at PPP	De Melo et al. (2001)
	% Urban 1989	Urban population /total (in %)	De Melo et al. (2001)
	% Higher education 1989	% higher education enrollment in 19-24 age group	UNICEF (2005)
Institutional Legacies	Bureaucratic legacy	Bureaucratic-authoritarian = 1, national-accommodative = 2, patrimonial = 3, colonial periphery = 4.	Møller and Skaaning (2010) using Kitschelt (2001).
	History of statehood	2 = experience of independent statehood after WW1, 1 = part of decentralized states, 0 = new nation states	Author using CIA World Factbook
	Prior democracy	Years of interwar democratic experience	Author using Cheibub, Gandhi, and Vreeland (2010)
	Pre-war Soviet Republic	1 = yes, 0 = no	Author

---

[24] Albania, Bulgaria, Estonia, Hungary, Latvia, Lithuania, Mongolia, Poland, Romania.

[25] Bosnia and Herzegovina, Croatia, Czech Republic, Kazakhstan, Macedonia, Montenegro, Russia,

[26] Armenia, Azerbaijan, Belarus, Georgia, Kyrgyzstan, Moldova, Tajikistan, Turkmenistan, Ukraine, Uzbekistan.

Next, the *prior democracy* variable is based on much of the same mechanism as the statehood variable: democratic experience probably strengthens today's democracy and thus could have inhibiting effects on corruption. The data consist of number of democratic years in the interwar period and are derived from Cheibub, Gandhi, and Vreeland (2010).

Lastly, *prewar Soviet republic* is thought to capture the fact that communism probably left a deeper footprint in some post-communist countries thon others.

Table 6: Summary statistics of independent and control variables

Variable	Obs.	Mean	Std. dev.	Min	Max
Minorities	466	23.93	16.03	0	60
Protestant heritage	483	4.90	12.74	0	66
Muslim	473	.34	.47	0	1
Imperial legacy	473	.39	.67	0	2
Energy intensity	391	18.34	9.01	6.36	39.92
Resource endowments	408	.46	.70	0	2
Trade dependence	442	20.70	12.02	3.70	41
GDP/cap. 1989 (log)	442	8.40	.36	7.65	9.14
% Urban 1989	442	56.73	11.24	32.4	73.6
% Higher education 1989	449	17.76	7.20	6.9	36.1
Bureaucratic legacy	473	2.96	.948	1	4
History of statehood	473	.96	.82	0	2
Prior democracy	473	1.35	2.25	0	7
Pre-war Soviet Republic	483	.39	.49	0	1

4.3 Summary

We have now seen that the observations in the analysis are 29 post-communist countries in the time-period between 1996 and 2011. Since this study is concerned with post-communist corruption the selection of cases is given. Corruption data are gathered from three different sources: (1) Transparency International's Corruption Perception Index, (2) World Bank Control of Corruption Indicator and (3) Nations in Transit. By applying three measures of corruption that all uses different sources and methodologies (but still are strongly correlated), we are able to conduct a more robust test of the hypotheses than if we only used one or two measures. However, two problems are acute when using these data: (1) they measure *perceptions* of corruption and not actual corrupt acts, and (2), because of methodological inconsistency, they are not well suited for over-time comparisons. As seen in the chapter, data on the independent variable are drawn from a variety of sources. By explaining issues of case selection, data and measurement, this chapter has given us the empirical inputs needed to test the hypotheses identified in chapter two. This is where we now turn.

5. Results: Empirical Analysis and Discussion

In this chapter the results of the hypotheses tests are presented. First, by using average corruption scores on post-communist countries in relation to other countries and an OLS regression on a global set of countries, H1 are tested. The findings indicate that post-communist countries actually are more corrupt than other countries, thus giving support for H1. At first sight this could be seen as a direct consequence of the communist experience, but as will be shown, this may not be the case.

Next, the link between historical legacies and corruption are explored a bit further. Many legacy variables display significant correlations with corruption levels, and a simple OLS regression that includes only a few of these variables illustrate the explanatory power of historical legacies in relation to post-communist corruption.

Further, H2, H3 and H4 are tested using a Prais-Winsten regression model with panel-corrected standard errors. The findings are as follows. H2 is supported by the data across all three measures, even when excluding the case of Estonia, which is the only country with a protestant majority and thus could be suspected to drive the results. However, because the effect of a protestant heritage is so small across all models, H2 is only partially strengthened. H3 receives the strongest support of all hypotheses. It is consistently significant across measures and is the variable that displays the strongest effect. Transforming the bureaucratic legacy variable into a dummy for "unfavorable" bureaucratic legacy only strengthened the results. An interesting observation when testing H4 is its failure to obtain any significance when using the TI measure, while it achieves significant results when using both the WB and NiT measures. Because of its lack of significance with the TI measure, H4 is also only partially strengthened.

The last section tests the standard battery of legacy variables against a series of relevant proximate explanations. Here, a prospect of joining the EU is the variable with the strongest results. However, the overall picture is evident: historical legacies are remarkably stable predictors of post-communist corruption even when tested against relevant alternative explanations.

5.1 Hypotheses Tests

5.1.1 Testing Hypothesis One: Are Post-Communist Countries Particularly Corrupt?

Can the communist experience account for any of the cross-country variation in levels of corruption? Scholars argue, that because of their unique experience with Leninism, post-communist countries face an extraordinary problem with corruption compared to non-communist countries (Holmes 2006, Karklins 2005, Sandholtz and Taagepera 2005, Karklins 2002, Miller, Grødeland, and Koshechkina 2001). This "uniqueness hypothesis" is based on several related arguments (See Linde 2009).

First, the old communist regimes were characterized by political, social and economic monopolies that made it possible for corruption to flourish. In the words of Robert Klitgaard (1988:75), corruption constitutes "monopoly + discretion – accountability." Second, it has been argued that, over time, the corrupt practices of the communist era became embedded in culture, and thus its consequences lives on after the transition (Sandholtz and Taagepera 2005). Third, the vacuum followed by the collapse of communism and the subsequent privatization created vast opportunities for corruption. The rules of the economy and the state had to be rewritten, and those in power could write these rules to benefit themselves (Vachudova 2009:44).

Table 4 presents the average scores of perceived corruption for post-communist countries and other countries. The scores are calculated from the 1999 and 2008 reports from Transparency International and the 1998 and 2008 versions of the World Bank's "Control of Corruption" index.

Table 7: Average corruption scores in post-communist and non-post-communist countries

	TI 1999	TI 2008	WB 1998	WB 2008
Post-Communist	6.74	6.47	5.75	5.68
Other Countries	4.98	5.93	4.97	5.02
Difference of means	1.75***	0.54*	0.78**	0.65**
N (post-communist)	73 (25)	148 (29)	158 (27)	162 (29)

Note: Differences of means significant at *** p<.01 ** p<.05 * p<.10 (equal variances not assumed).

At first sight, the data indicates that post-communist countries do have more corrupt governments than other countries. The post-communist countries display significantly higher average levels of

corruption in all four columns, although the difference diminishes over time. Despite these significant results, however, it is important to ask whether the difference is caused by other factors than the post-communist status alone.

Table 5 presents three OLS regressions of the TI CPI index on a dummy for post-communist with one year lagged controls for economic and democratic development.

Table 8: Corruption (TI 2005) and communist legacy

	(1) TI 2005	(2) TI 2005	(3) TI 2005	(4) TI 2005	(5) TI 2005
Post-Communist	0.960** (.446)	1.21*** (.286)	1.258*** (.284)		
Log GDP per/cap (1-year lag)		-1.22*** (.080)	-1.150*** (.084)	-1.180*** (.089)	-1.151*** (.087)
Democracy (1-year lag)			-.517** (.233)	-.428* (.257)	-.535** (.245)
Non-Soviet Post-Communist				1.397*** (.440)	
Post-Soviet					1.179*** (.375)
Constant	5.768*** (.188)	16.219*** (.697)	15.914*** (.701)	16.126*** (.735)	15.938*** (.727)
N	157	155	155	140	144
R^2	.023	.61	.62	.61	.62

Note: Entries are unstandardized OLS regression coefficients with standard errors in parentheses. *** $p<.01$, ** $p<.05$, * $p<.10$.

Model 1 shows that, without any controls, post-communist countries were on average 0.96 points more corrupt than other countries on the 10-point scale in 2005. When economic development is introduced as a control in model 2 the post-communist effect actually becomes stronger. In model three a control for democratic development is included, and it further increases the explanatory power of the communist experience.

One reasonable objection to the results in the three first models is that the estimates for the post-communist dummy are driven by the post-*soviet* states. Such a view can be defended theoretically since communism probably left a deeper footprint in the countries incorporated into the Soviet Union.

According to model 4 and 5, however, there is no significant distinction between the countries that were and were not a part of the USSR: non-Soviet post-communism still has a significantly

negative effect on perceived corruption levels – and the same goes for the post-soviet countries. The coefficient for the *Non-Soviet* dummy is significant at the 99 percent level and display a similar effect as both the post-soviet dummy in model 5 and the post-communist dummy in model 2 and 3.

Thus, it seems plausible to argue that the significantly higher levels of corruption in post-communist countries are caused, at least in part, by its communist experience. The data seems to support the "uniqueness hypothesis", and suggests that corruption in post-communist countries cannot be explained away with reference either to lack of democratic performance nor economic under-development.[27] Hence, H1 seems to be strengthened.

Before testing the other hypotheses it is useful to explore the link between legacies and corruption a bit further. In the following, we will first look at correlations between different legacies indicators and secondly, a basic cross-sectional OLS regression will be presented with the purpose of illustrating the explanatory power of legacies.

5.1.2 Exploring the Legacy-Corruption Link

Although the post-communist countries shared a similar past as Leninist one-party states their development after the transition, as we have seen, took dramatically different courses. This indicates that post-communist development has been, and probably still is, deeply embedded in historically rooted differences (Pop-Eleches 2007). The high and statistically significant correlations between different legacies and corruption scores observed in Table 6 below seem to confirm this.

According to the data the legacy clusters of culture and institutions appear to be the strongest correlates of corruption. The two variables representing religion, *Protestant heritage* and *Muslim*, are significant predictors in the culture/religion cluster and both operate in the hypothesized direction. A protestant heritage seems to be associated with lower levels of corruption, while countries that are predominantly Muslim seems to be plagued by more corruption. *Imperial legacy* also displays significant and relatively strong correlates with corruption. Not surprisingly, countries that historically were under Russian or Ottoman lordship seem to have more corruption

---

[27] The regressions were also, as a basic robustness check, conducted with the WB and NiT measures as the dependent variable. In contrast to the results displayed above the post-communist dummy was not significant in model 1 using the WB data. However, the overall results were consistent with those in table 5.

today than those countries that were under Austrian or Prussian dominance. *Minorities* are the weakest predictor in the culture/religion cluster and fail to achieve significance on the NiT measure. However, it operates in the expected direction, which gives some indications that corruption could be more likely to occur in a country that struggles with ethnic fractionalization.

Table 9: Bivariate pairwise correlations between legacies and corruption scores

| | Culture/Religion | | | | Economy | | | Modernization | | | Institutions | | | |
	Minorities	Protestants heritage	Muslim	Imperial legacy	Energy Intensity	Resource endowments	Trade dependence	GDP/cap 1989	% Urban 1989	% Higher education 1989	Bureaucratic legacy	Statehood	Prior democracy	Pre-war Soviet Republic
TI 99	**.35**	**-.58**	**.52**	**-.52**	**.52**	**.47**	.18	**-.59**	-.35	-.36	**.76**	**-.56**	**-.53**	**.56**
TI 03	**.34**	**-.48**	**.56**	**-.45**	.41	**.46**	.08	**-.70**	**-.46**	**-.50**	**.81**	**-.56**	**-.55**	**.58**
TI 07	**.39**	**-.41**	**.56**	**-.56**	**.48**	**.46**	.33	**-.69**	**-.41**	-.30	**.85**	**-.61**	**-.71**	**.72**
TI 11	**.35**	**-.41**	**.46**	**-.46**	**.59**	**.33**	.34	**-.58**	-.39	-.35	**.78**	**-.61**	**-.57**	**.71**
WB 98	**.36**	**-.38**	**.51**	**-.61**	.40	**.43**	.26	**-.67**	-.32	-.25	**.81**	**-.52**	**-.58**	**.64**
WB 03	**.34**	**-.36**	**.63**	**-.60**	.41	**.43**	.33	**-.67**	**-.46**	-.30	**.87**	**-.67**	**-.67**	**.71**
WB 07	**.35**	**-.39**	**.57**	**-.56**	**.52**	**.44**	.37	**-.66**	**-.40**	-.31	**.86**	**-.60**	**-.66**	**.74**
WB 11	**.36**	**-.39**	**.55**	**-.52**	**.55**	**.46**	.37	**-.65**	**-.41**	-.31	**.82**	**-.61**	**-.62**	**.78**
NiT 99	.37	**-.43**	**.57**	**-.60**	**.51**	.34	.31	**-.65**	-.37	-.24	**.83**	**-.63**	**-.56**	**.64**
NiT 03	.37	**-.51**	**.55**	**-.60**	**.47**	.40	.34	**-.62**	-.38	-.24	**.86**	**-.73**	**-.63**	**.73**
NiT 07	.26	**-.51**	**.54**	**-.50**	**.49**	**.42**	**.41**	**-.59**	-.39	-.16	**.82**	**-.75**	**-.63**	**.78**
NiT 11	.24	**-.51**	**.54**	**-.50**	**.54**	**.49**	.39	**-.60**	**-.40**	-.24	**.82**	**-.73**	**-.64**	**.81**

Note: Bolded coefficients are significant at .05 (two-tailed)

Among the economic legacies natural *resource endowments* is the strongest predictor followed by *energy intensity*. The correlation of the former variable is theoretically expected and could confirm the notion of a "resource curse" when it comes to corruption. *Energy intensity* also has some significance, which could indicate that the uncompetitive and energy-intensive plan economies indeed had harmful effects that facilitated corrupt practices that prevail to this day.

The last variable, *trade dependence*, is non-significant which could mean that less dependence on intra-communist trade (and thus potentially more interaction with the west in terms of trade) has probably not affected corruption levels in any substantial way.

GDP per capita 1980 is by far the most powerful predictor among the modernization legacies. Higher economic development at the outset of the transition has indeed helped these countries achieve lower levels of corruption. *Urbanization 1989* is statistically significant most of the times but the correlations are not so strong making it a medium-to-weak indicator. *Higher education* is almost completely insignificant.

The last legacy cluster – institutions – displays several strong predictors of corruption. *Bureaucratic legacy* is the most powerful and points to the same conclusion as that of Møller and Skaaning (2010): national bureaucracies that historically have lacked 'Weberian' ideals of rationality and impartiality are associated with higher levels of corruption. A history of *statehood* and *prior democracy* also appears as consistently strong correlates of corruption, and both in the expected negative direction. *Pre-war Soviet republic*, a somewhat blunt measure of communist legacy, is almost as powerful a predictor as bureaucratic legacy and points to the seemingly "corruption-enhancive" nature of communism (Karklins 2002).

Moreover, the data shows some interesting over-time change in correlations between legacies and corruption; the strength of the relationship between corruption and several historical legacies actually increases over time. This is particularly clear in the legacy-clusters of institutions, and is observed in all three measures. Among all the indicators, only *imperial legacy* appears to have a clear diminishing trend.

Cross-Sectional Data and the Legacy-Corruption Link

Despite the strong correlations between different legacy-clusters and corruption they cannot tell us anything about causality. This is even more so when one considers the fact that several historical legacies are highly correlated with each other. In order to reveal causal links regression analysis is required.

Several scholars have used cross-sectional regressions when analyzing post-communist corruption (Møller and Skaaning 2010, Treisman 2007) The following section presents multiple cross-sectional regression results, and I will use these to discuss what cross-sectional regression

Table 10: Legacies and corruption: cross-sectional regression results

	(1) TI 1999	(2) WB 1998	(3) NiT 1999	(4) TI 2005	(5) WB 2005	(6) NiT 2005	(7) TI 2010	(8) WB 2010	(9) NiT 2010
Protestant 1980	-0.25** (.010)	-0.13 (.013)	-.013 (.021)	-.036*** (.009)	-0.21** (.008)	-.023 (.016)	-.023* (.012)	-.015 (.011)	-.018 (.017)
Bureaucratic Legacy	.808*** (.155)	1.031*** (.207)	1.564*** (.329)	.736*** (.165)	.923*** (.134)	1.426*** (.256)	.761*** (.186)	.759*** (.171)	1.210*** (.265)
Resource Endowments	.151 (.187)	.215 (.248)	.070 (.395)	.201 (.165)	.156 (.161)	.297 (.307)	.106 (.223)	.313 (.205)	.637* (.317)
Statehood	-.084 (.175)	-.088 (.237)	-.629 (.377)	-.122 (.157)	-.311* (.154)	-.923*** (.293)	-.403* (.213)	-.432** (.196)	-1.064*** (.303)
Constant	4.602*** (.526)	2.816*** (.720)	2.382** (1.143)	4.731*** (.478)	3.224*** (.467)	2.995*** (.890)	4.648*** (.647)	3.807*** (.595)	3.617*** (.919)
N	23	24	24	24	24	24	24	24	24
R^2	.77	.69	.70	.82	.86	.83	.72	.76	.82

Note: Standard errors in parentheses. *** p<.01, ** p<.05, * p<.10

can and cannot tell us about the relationship between historical legacies and post-communist corruption.

Table 7 above illustrates the effect of legacies on the three different corruption measures in 1998/1999, 2005 and 2010. By using multiple cross-sectional OLS regressions at different points in time may aim is to capture corruption patterns at the start, the midpoint and at the most recent time in the available data. The model does not claim to include all the potentially relevant variables (which is out of the question anyways because of sample size limitations), since the aim of these cross-sectional regressions are simply to *illustrate* the effect of legacies.

The four explanatory variables included in the model are all "initial conditions" that were present at the beginning of the transition. They are *Protestant heritage*, *Bureaucratic legacy*, *Resource endowments* and *Statehood,* which represent three of the five legacy clusters introduced earlier.[28]

The first noticeable finding is the strong joint explanatory power of the four legacy indicators. In eight of the nine models 70% or more of the cross-country variation is captured. Furthermore, the WB and NiT measures suggest that historical legacies were stronger predictors of post-communist corruption levels in 2010 than they were in the late 90's. Models 8 and 9 have adjusted R-squared statistics of .76 and .82 compared to .69 and .70 in 1990. That being said, the models that has the most explanatory power are the once that explain corruption levels in 2005, and this is true for all three measures.

The WB index is the only measure that shows diminishing explanatory power from 2005 to 2010, an adjusted R-squared statistic from .89 to .83. However, the scores in 2010 are larger than those in 1998 (.73 compared to .83), thus giving partial support for argument that the effect of historical legacies seems to grow. In addition, the two other measures consistently increase over time. Interestingly, all of these results are obtained by only including what Kitschelt (2003) calls remote and "deep" variables, making it even more plausible to argue that post-communist corruption cannot be explained by causes that are too "shallow" and temporally too close to the phenomenon being studied.

When it comes to estimating the effect of individual variables the results in Table 7.1 are less conclusive. *Bureaucratic legacy* is the only variable that is consistently statistically significant

---

[28] The legacy cluster of modernization is excluded because of lack of significance and/or high multicollinearity.

over the different models. For the other variables it is difficult to claim robust links, which makes it impossible to establish any credible sense of causality between individual legacies and corruption levels. What is striking, however, is the consistent and statistically significant effect of bureaucratic legacy on all measures. A history of *statehood* has a quite significant negative effect on corruption levels after the turn of the millennia, while the percentage of Protestants has a marginal and sometimes significant effect.

The lack of consistent significance on all the other variables except *bureaucratic legacy* could be because they are weak predictors of post-communist corruption. However, it is more likely that these observations are the result of the analytical shortcomings of cross-sectional OLS regressions.

First, OLS regressions cannot deal with small sample sizes[29] and second, it is unsuitable for handling over-time change.[30] These challenges can be addressed, at least in part, by using times-series cross-section (TSCS) data. In the following section, hypotheses two, three and four will be tested using Prais-Winsten regressions with panel-corrected standard errors. It is applied on the longest available time-span for each of the three corruption measures.

5.1.3 Testing Hypothesis Two, Three and Four: Protestantism, Bureaucratic Legacy and Imperial Legacy

As is seen on the page below, the model specification in Table 8 is broader and includes more legacy-indicators than the cross-sectional model. The additional indicators are *Imperial legacy, Minorities*, *Muslim* and a measure of the logged duration of democratic years after the transition. The purpose of the latter variable is to capture the temporal effect of post-communist democracy on corruption levels. In addition, *democracy year* is used to construct interaction terms with key historical legacies. By these interaction terms I hope to capture how the effect of historical legacies interacts with post-communist democratic development, and how this in turn affects corruption levels.

---

[29] One standard solution to this problem is to expand the sample size. However, this is of no use for the current study since the post-communist countries comprise only a limited set of countries.

[30] By extending the approach in Table 7 one could have run cross-sectional regressions over many years but interpreting coefficients over many models is inconvenient. In addition, such an approach would ignore serial correlation.

Testing Hypothesis 2

H2 states that *a protestant heritage should decrease post-communist corruption levels.* Table 8 below displays the results when H2 are tested on the full sample. The coefficient for *protestant heritage* is significant on the 99 percent level across all three measures. This high level of significance across measures is quite striking and strengthens the robustness of the finding. Further, Protestantism effects corruption in the hypothesized direction, but the effect is minimal. It varies from -.021 to -.036, which means that a 1% increase in protestant adherents in 1980 will result in a .021 to .036 points decrease of post-communist corruption on a 10-point scale. In other words, the models tell us that a protestant heritage (marginally) decreases post-communist corruption.

Models 2, 7 and 12 were also run without the case of Estonia, but the results did not change.[31] This is reassuring since Estonia could be expected to drive the results.[32] Models 3, 8 and 13 include an interaction term between *protestant heritage* and the consecutive number of years a country has been democratic after the transition. According to the results, the effect of protestant heritage is basically the same if one controls for post-communist democratic development, even though it diminishes somewhat.

Model specification and diagnostics looks fine. First, all models containing the "standard battery" of variables (models 2, 7 and 12) stayed within the limits of multicollinearity. They all had mean VIF values under 3.7 and the condition number of the models did not exceed 24. Second, several of the controls are statistically significant and their effect goes in the hypothesized direction. Even though controls are not of main theoretical interest here, it is important to understand them and their relative effect on the dependent variable, since they touch directly on issues of model specification. If the controls are not meaningful we cannot be confident in findings.

---

[31] The effect even in some instances got stronger.

[32] When it comes to protestant adherents in 1980 Estonia is an outlier. Approximately 60 % of Estonians were Protestants in 1980, while the number varied from 0 to 20 % in the other countries.

Table 11: Testing hypotheses two, three and four: PW-regression results

	(1) TI	(2) TI	(3) TI	(4) TI	(5) TI	(6) WB	(7) WB	(8) WB	(9) WB	(10) WB	(11) WB	(12) NiT	(13) NiT	(14) NiT	(15) NiT	(16) NiT
Protestant heritage	-.028*** (.004)	-.031*** (.003)	-.020** (.008)	-.031** (.003)	-.030*** (.003)	-.021*** (.001)	-.024*** (.001)	-.011** (.004)	-.024*** (.001)	-.023*** (.001)	-.029*** (.001)	-.031*** (.007)	-.036*** (.007)	-.029*** (.010)	-.036*** (.007)	-.035** (.007)
Bureaucratic legacy	.657*** (.111)	.724*** (.096)	.715*** (.096)	.726*** (.098)	.488*** (.161)	.562*** (.048)	.578*** (.044)	.571*** (.045)	.575*** (.043)	.399*** (.109)		.752** (.293)	.794*** (.289)	.788*** (.288)	.798*** (.291)	.636* (.378)
Statehood	-.158* (.090)	.060 (.090)	.041 (.088)	.062 (.089)	.015 (.090)	-.254*** (.059)	-.103 (.069)	-.124* (.070)	-.091 (.069)	-.137* (.073)	-.318*** (.061)	-.995*** (.156)	-.721*** (.178)	-.735*** (.178)	-.689*** (.181)	-.750*** (.187)
Resource endowments	.158** (.068)	.063 (.067)	.078 (.066)	.064 (.066)	.118** (.059)	.238*** (.028)	.233*** (.040)	.251*** (.039)	.219*** (.042)	.275*** (.044)	.310*** (.039)	.419*** (.141)	.381*** (.121)	.392*** (.119)	.347*** (.122)	.417*** (.118)
Imperial legacy	-.088 (.148)	.032 (.141)	.017 (.140)	.058 (.231)	.067 (.138)	-.409*** (.057)	-.339*** (.059)	-.352*** (.058)	-.474*** (.127)	-.306*** (.065)	-.434*** (.048)	-.730** (.298)	-.593* (.310)	-.603* (.309)	-.898** (.372)	-.570** (.310)
Minorities	.008** (.003)	.006* (.003)	.005* (.003)	.006* (.003)	.008** (.003)	.009*** (.002)	.006** (.002)	.005** (.002)	.005** (.002)	.008** (.002)	.002 (.002)	.010 (.006)	.005 (.005)	.005 (.005)	.005 (.005)	.006 (.006)
Muslim	.152 (.187)	-.040 (.135)	-.021 (.135)	-.036 (.136)	.057 (.137)	.085 (.112)	-.000 (.112)	.019 (.111)	-.011 (.106)	.079 (.124)	.472*** (.079)	.203 (.243)	.017 (.242)	.031 (.243)	-.017 (.248)	.093 (.279)
Democracy year		-.037*** (.011)	-.033*** (.010)	-.037*** (.008)	-.092*** (.033)		-.025*** (.009)	-.017** (.009)	-.030*** (.010)	-.080*** (.031)	-.026*** (.009)		-.037*** (.012)	-.034** (.013)	-.046*** (.016)	-.072 (.045)
Protestant *Demo. year			-.000 (.000)					-.001*** (.000)						-.000 (.000)		
Imp. legacy *Demo. year				-.001 (.011)					.012 (.010)						.021 (.019)	
Bur. legacy *Demo. year					.019** (.009)					.020* (.010)						.012 (.016)
Unfavorable bur. legacy											1.395*** (.166)					
Constant	4.614*** (.445)	4.735*** (416)	4.730*** (420)	4.720*** (428)	5.387*** (603)	4.320*** (.150)	4.443*** (.136)	4.422*** (.139)	4.492*** (.142)	4.931*** (.305)	5.135*** (.166)	4.987*** (1.054)	5.213*** (1.016)	5.210*** (1.005)	5.293*** (1.015)	5.650*** (1.223)
N	340	322	322	322	322	312	299	299	299	299	299	336	321	321	321	321
R^2	.87	.88	.88	.88	.88	.94	.94	.94	.94	.95	.94	.82	.85	.85	.85	.84
rho	.755	.736	.739	.744	.731	.775	.761	.774	.751	.777	.733	.883	.873	.872	.874	.877

Note: All estimates are unstandardized regression coefficients with panel corrected standard errors in parentheses. *** $p<.01$, ** $p<.05$, * $p<.10$

Bureaucratic legacy is significant at the 99 percent level in all but one model and effects corruption in the expected direction. However, since this variable will be analyzed more thoroughly in the next section I will not elaborate more extensively on it here. It suffices to say that its effect is both relatively strong and significant.

Coefficients reflecting *statehood* are significant (at the 90 and 99 percent level) in the TI and WB measures when *democracy year* is not included (models 1 and 3). When *democracy year* is included, however, its effect is insignificant. The models using the NiT measure differs from the two other measures in this regard; models 11 and 12 display *statehood* as significant both with and without the *democracy year* variable. In addition, the effect of *statehood* is considerably stronger in the NiT models than in the TI and WB models.

Models 1-4 predicts that the effect of *statehood* disappears once post-communist democratic years are controlled for, but the results in models 9-10 (NiT) contradicts this, showing a significant negative effect on post-communist levels of corruption even though the effect of *democracy year* is taken into account. Hence, the results suggest that a country is able to draw from a historical experience of statehood, which has positive effects when it comes to reducing corruption.

The *resource endowments* coefficients are significant in all WB and NiT models (only significant in model 1 and 5 with the TI measure) and indicates that the theorized "resource curse" could be present. The effect can be characterized as medium, ranging from .158 in model 1 to .419 in model 11, and the results show a consistently positive effect on post-communist corruption levels.

An interesting finding when it comes to the *Imperial legacy* coefficients is its total lack of significance in the TI models, while the coefficients are significant in all the WB and NiT models. It is not easy to say why the coefficients fail to display significant results using the TI measure, but the consistently medium-to-strong negative effect in the two latter measures indicates that *imperial legacy* is an important variable. However, this variable will be treated more thoroughly when hypothesis 4 is tested.

Minorities display a marginal effect on corruption, but are statically significant in many of the TI and WB models. The effect goes in the hypothesized direction but because the effect is so small it is difficult to make a meaningful interpretation of the results.

The coefficients reflecting predominantly *Muslim* countries fail to achieve significance in any of the models. Hence, the argument used in the democracy literature about the negative effects of Islam cannot be confirmed when it comes to corruption. Other variables seem more important.

A few considerations must also be made about the *democracy year* variable. It is significant in all but one model (model 15) and consistently shows a small negative effect on corruption levels. This indicates that democratic development after the transition has contributed to a small decrease in corruption levels. Interestingly, both in the TI and WB measure the significant negative effect of *statehood* is relegated to insignificance once *democracy year* is introduced. In addition, *democracy year* produces an increased R-statistic in both model 2 and model 12.

Testing Hypothesis 3

H3 states that *variations in levels of post-communist corruption can be largely be explained by variations in pre-communist bureaucratic legacies.* The coefficients reflecting *bureaucratic legacy* are significant in all models and significant at the 99 percent level in all but two models (11 and 15). All the models display the effect as going in the hypothesized direction – the more unfavorable the bureaucratic legacy of a country the more it will experience increased levels of post-communist corruption. The coefficients for *bureaucratic legacy* clearly display the strongest results of all the legacy indicators. It is robust across all measures, it is consistently significant and it displays the strongest effect (between .58 and .79 in the base models).

When the interaction term between *bureaucratic legacy* and *democracy years* is included (models 5, 10 and 15), the coefficients for *bureaucratic legacy* drop somewhat, but are still significant. The interaction term display significant results at the 10% level in the TI and WB models and shows an effect of around .020. This is, of course, a small effect, but the interesting fact about this coefficient is its positive direction. Hence, the data could suggest that an unfavorable *bureaucratic legacy* still has a small but significant positive effect on post-communist corruption levels even when a country develops democratically. Put differently, the effect of the legacy seems to marginally increase over time even when those years are "democratic." However,

because the coefficients are so small and not significant in the NiT model (model 16), this finding must be interpreted with absolute caution. Another observation is that the interaction term increased the r-statistic from .94 to .95 in the WB model. This is of course minimal, but could point in the direction of increased explanatory power.

Lastly, to further verify the findings, a dummy-variable for *unfavorable bureaucratic legacy* is introduced in model 11. This indicator is constructed by placing value 2, 3 and 4 of the *bureaucratic legacy* indicator (national-accommodative legacy, patrimonial legacy and colonial peripheral legacy) into the category of "unfavorable" bureaucratic legacy, thus implicitly treating value 1 and 2 (bureaucratic-authoritarian and national accommodative) as a "favorable" legacy.

To split *bureaucratic legacy* between value 1 and 2 on the one side, and value 3 and 4 on the other side made most sense theoretically: it is only a bureaucratic-authoritarian/national accommodative legacy that favors democracy and thus could be expected to have a diminishing effect on corruption (Moller 2009:97). Coefficients for the *unfavorable bureaucratic legacy* variable indicate that not having a bureaucratic-authoritarian legacy will increase post-communist corruption by around 1.3 on the 10-point scale.[33] In other words, the costs of not having the "right" bureaucratic legacy are severe when it comes to post-communist levels of corruption.

In addition, an interesting observation is that the coefficients representing *Muslim* becomes significant for the first time when the dummy is introduced. It is hard to say exactly what this means, but the *Muslim* coefficient probably captures the fact that almost all Muslim countries are coded with the "most" unfavorable legacy (colonial peripheral).

Testing Hypothesis 4

H4 states that *a Western imperial legacy should decrease post-communist corruption levels.* As mentioned earlier, *imperial legacy* is significant in all the WB and NiT models but fails to reach significance in any of the TI models. Such a clear pattern in the results is interesting since it indicates that the TI measure, in some regard, differentiates from the two other measures. It is unclear why it fails to capture any significant effect of *imperial legacy*, but it could mean that the TI index measures a slightly different phenomenon than the two other indexes. Even though the *imperial legacy* coefficients fails to achieve the same kind of robustness as *protestant heritage*

---

[33] The results were similar when tested against the TI and NiT measure.

and *bureaucratic legacy* (significant across all three measures), the significant results from model 6 to 16 makes it a credible finding.

In addition, all the coefficients point in the hypothesized direction. On average, a favorable *imperial legacy* seems to reduce post-communist corruption by around .45 points on the 10-point scale. That is the second strongest effect displayed in the models, slightly behind *bureaucratic legacy*. The interaction term between *imperial legacy* and *democracy years* (models 4, 9 and 15) fails to capture any significant effect.

As laid out in chapter four, the *imperial legacy* indicator is made up of three values: (2) Western, (1) mixed and (0) Ottoman/Russian. An alternative approach would be to categorize the variable as a dummy between Western and non-western. However, by also including the mixed category I hope to capture a more nuanced picture of the effect of *imperial legacy*. When a dummy for mixed imperial legacy was ran against the base model it showed a significant increase (around .40 significant at the 99 percent level) in corruption levels.[34] In other words, only a more or less clear western imperial legacy seems to reduce post-communist corruption.

Before testing alternative explanations it is important to address some methodological challenges that could delude our interpretations of the results. In the following, we will look at the intertwined nature of legacies and how this affects our ability to interpret individual legacy-effects.

5.1.4 Methodological Challenges and Potential Solutions

Intertwined Legacies

The fact that correlations are strong between legacy-indicators within the same legacy cluster (i.e. between Bureaucratic legacy and Prewar Soviet Republic that was correlated at .71) is a good sign; it strengthens the reliability of measure. However, there are also strong correlations between indicators of different legacy types (such as Imperial legacy and Bureaucratic legacy which is correlated at -.70)[35] and this creates substantial difficulties for interpreting the role of individual legacies.[36]

---

[34] This was not included in Table 8.
[35] However, none of these highly correlated variables exceeded the critical VIF value of 10.
[36] For an overview of all correlations see Appendix B.

One significant problem with strong correlations between different legacy indicators is that it can lead to high multicollinearity. While it is only *perfect* multicollinearity that violates regression assumptions (Berry 1993:27), high multicollinearity makes it difficult to interpret the size of the individual coefficients and it often produces inflated standard errors accompanied by a too optimistic R^2 statistic. This weakens the feasibility of the regression analysis when trying to assess the explanatory power of competing legacy-explanations. Therefore, in such an environment, regression analysis could be somewhat ill equipped for identifying individual effects, even though it can tell us that variables matter jointly. That being said, Wooldridge (2009:97) claims that the problem with high multicollinearity probably have been exaggerated. After all, the aim of multiple regression analysis is to study effects after the correlations between the explanatory variables has been controlled for (Midtbø 2012:129).

In the current study, a statistical model consisting of all the legacy variables introduced in the first section of this chapter would be plagued by rather severe multicollinearity problems.[37] The basic models in table 8 (models 2, 7 and 13), however, all had acceptable levels of multicollinearity[38], but this was achieved at the cost of excluding several potentially relevant explanatory variables. Especially, this was done so that *bureaucratic legacy*, a theoretically strong variable, could be included in the models.[39] Hence, the models could be incorrectly specified, risking biased estimates.

Alternative methods

There are of course other methods available instead of regression analysis. Some scholars have used factor analysis in an attempt to cut through the complexity if intertwined legacies. In the post-communist literature De Melo et al. (2001) used factor analysis to reduce several initial conditions into two measures, which they interpreted at "macroeconomic distortions" and "over-industrialization." While such an approach is useful when considering the limited degrees of freedom in cross-sectional regressions, it has some analytical shortcomings because of the

---

[37] Therefore several indicators had to be excluded. Amongst them was *Prewar Soviet Republic, GDP/cap 1989, Energy intensity*, and they all had variance inflation factors (VIF) above the critical value of 10. In addition, the condition number of the model was at times extremely high.

[38] All of the independent variables had VIF values below 7 and the condition number was around 31.

[39] Had not *bureaucratic legacy* been included several other variables would have been part of the analysis. However, it was a trade-off, and *bureaucratic legacy* was seen as too important to exclude.

potential difficulty of interpreting the meaning of the results, which in turn restrain a substantive understanding of legacies.

An alternative approach would be to focus on case studies and leave regression analysis behind altogether. The positive effect of this approach would be the ability to trace the causal mechanisms at play in much more detail but, nevertheless, one would probably still have to face the challenges of intertwined legacies.

One assumption of structured case comparisons is that the cases differ on one indicator while all others are being equal. This is seldom or never the case when it comes to historical legacies. Among the post-communist countries for instance, even the countries that are the most "similar" (say the Baltic countries) differ on several indicators (i.e. religion). That being said, case studies are an indispensable supplement to statistical methods, and when such cases are selected by a most-similar cases design, they will produce important in-depth knowledge about the complex effects of intertwined historical legacies. Furthermore, such case-study results could provide the basis for Bayesian statistical methods as a viable alternative to regression analysis, especially when dealing with small sample sizes and strongly correlated explanatory variables (see Western and Jackman 1994).

Lastly, another alternative approach, when trying to analyze complex historical legacies, is to look at subnational variation. This has successfully been done by Møller and Skaaning (2010) when they used subnational corruption scores to assess the impact of bureaucratic legacies in "cleft countries" (countries historically divided between different empires). However, such an approach suffers somewhat by the potential small variation in subnational corruption scores, and the limited existence of broad subnational corruption indicators.

5.1.5 Alternative Explanations

Having confirmed the strong and enduring effect of historical legacies on post-communist levels of corruption, it is time to test the robustness of these findings when compared to proximate explanations of post-communist corruption. I find that historical legacies remain powerful predictors of post-communist levels of corruption even when controlling for several prominent alternative explanations such as democracy, GDP, initial power balance, presidential powers, EU conditionality and geographic diffusion.

Democracy is the first alternative explanation that is tested in table 10 (model 1). To measure democracy I use the index developed by Cheibub, Gandhi, and Vreeland (2010),[40] where countries are coded as either democracy or dictatorship for every year between 1946 and 2008. As laid out in the theory chapter, corruption is directly opposed to democratic ideals of equality and openness (since corruption requires special access and hidden influence), and therefore it is expected that democracy should lead to lower levels of corruption (Della Porta and Pizzorno 1996:74).

The second proximate explanation focuses on the *initial power balance* between the "old" communists and the "new" democratic challengers. McFaul (2002) has developed a typology of post-communist regimes based on whether their balance of power were in favor of the old regime, whether it were even or uncertain or whether it was in favor of the challengers. The argument is that the power balance between democrats and authoritarians at the outset of the transition decides the future prospects for democracy, since the political winners impose their will on the losers.[41]

The third explanation focuses on the potential negative consequences of a powerful president when it comes to corruption. To measure presidential powers I apply the index developed by Frye (1997) for presidential powers in post-communist presidencies.[42] Several scholars have argued that presidentialism can cause higher levels of corruption. Panizza (2001) have found that countries with presidentialism have significantly higher levels of perceived corruption than other countries.[43] Most of the post-communist countries chose a kind of semi-presidentialism at the outset of the transition, with a prime minister and a powerful president.

EU conditionality is another proximate explanation. According to Kurtz and Barnes (2002) prospects of EU accession are an important predictor of post-communist regime change, even when other potentially strong legacies are controlled for. The *potential EU member* indicator is based on their work, and they argue that the governments that had a reasonable hope of joining

---

[40] A regime is considered a democracy if the executive and the legislature is directly or indirectly elected by popular vote, multiple parties are allowed, there is de facto existence of multiple parties not controlled by the regime, there are multiple parties within the legislature, and there has been no consolidation of incumbent's advantage (i.e. unconstitutional closing of the lower house).

[41] Even though this argument is aimed at democratization it is reasonable to suspect similar consequences when it comes to corruption

[42] The cross-country scorings are provided for in Appendix B

[43] This finding is also confirmed by Kunicová and Rose-Ackerman (2005).

the EU after the transition were Bulgaria, the Czech Republic, Estonia, Latvia, Lithuania, Hungary, Poland, Romania, Slovakia, and Slovenia. Only these countries began negotiations with the EU before or immediately after the breakdown of the Communist Party regimes (Kurtz and Barnes 2002:529).[44]

Other studies have also found that prospects of EU accession has forced countries to reform both the state and the economy, and improving transparency in institutions (Vachudova 2009).[45] In this regard, it is natural to think that the possibility of EU accession has acted as an incentive to reduce corruption in these particular post-communist countries.

Finally, the international openness index constructed by Kopstein and Reilly (2000) represent a proximate explanation based on the argument of geographic diffusion.[46] The authors use distance from the West and the lagged degree of democracy in neighboring countries as a proxy for geographic diffusion.[47] Basically, their argument is that post-communist regimes were not only affected by domestic factors but also by international influences.

Despite the fact that the alternative explanations discussed above are theoretically plausible and are strongly correlated with the different corruption indicators, they do not perform very well when pitted against the temporally and theoretically prior historical legacies. This can be seen in Table 10 below, where the different alternative theories are tested against the "standard battery" of legacy indicators used in the earlier sections. As a last observation before turning to the individual effect of the different explanations, it is worth noticing that most legacy indicators are remarkably stable despite the fact that other variables are introduced.

---

[44] Many would argue that Croatia also belongs in this group, but that its accession was delayed by the civil war. However, the results were the same when Croatia was included.

[45] In addition, scholars claim that it is the *prospect* of joining the EU and not the accession per se that produces viable reforms. Apparently, some countries lost their zeal for reforms once they became member states.

[46] I want to thank the authors for generously providing me with the data.

[47] The complete index can be found in Appendix A

Table 12: Legacies and alternative explanations: PW-regression results

	(1) TI	(2) TI	(3) TI	(4) TI	(5) TI	(6) TI	(7) WB	(8) WB	(9) WB	(10) WB	(11) WB	(12) NiT	(13) NiT	(14) NiT	(15) NiT	(16) NiT
Protestant heritage	-.032***	-.031***	-.030***	-.032***	-.030***	-.030***	-.024***	-.024***	-.024***	-.023***	-.021***	-.037***	-.030***	-.030***	-.031***	-.043***
	(.004)	(.003)	(.003)	(.003)	(.003)	(.004)	(.001)	(.001)	(.002)	(.001)	(.002)	(.006)	(.008)	(.009)	(.007)	(.008)
Bureaucratic legacy	.710***	.448***	.720***	.744***	.652***	.718***	.483***	.575***	.561***	.427***	.562***	.775***	.774***	.529**	.308	.827***
	(.111)	(.080)	(.091)	(.120)	(.105)	(.094)	(.066)	(.044)	(.061)	(.063)	(.041)	(.289)	(.290)	(.314)	(.274)	(.291)
Statehood	-.006	.091	.051	.066	.114	.082	-.053	-.095*	-.140	.033	.037	-.723***	-.730***	-.761***	-.274	-.849***
	(.093)	(.090)	(.089)	(.093)	(.089)	(.093)	(.073)	(.056)	(.088)	(.078)	(.075)	(.182)	(.180)	(.187)	(.209)	(.128)
Resource endowments	.152*	.298***	.056	.056	.053	.056	.298***	.225***	.277***	.201***	.214***	.395***	.308***	.441***	.281**	.417***
	(.082)	(.087)	(.067)	(.081)	(.066)	(.068)	(.051)	(.040)	(.064)	(.040)	(.038)	(.148)	(.118)	(.143)	(.133)	(.120)
Imperial legacy	-.056	.014***	.050	.037	.025	.069	-.311***	-.331***	-.377***	-.344***	-.234***	-.608**	-.479	-.644**	-.614**	-.800**
	(.155)	(.136)	(.118)	(.139)	(.137)	(.152)	(.067)	(.058)	(.059)	(.059)	(.072)	(.292)	(.323)	(.327)	(.287)	(.321)
Minorities	.007	.005	.005	.007	.006	.006*	.005**	.005**	.005	.005**	.006***	.006	.002	.002	.003	.004
	(.004)	(.003)	(.003)	(.005)	(.003)	(.003)	(.002)	(.002)	(.003)	(.002)	(.002)	(.005)	(.006)	(.008)	(.005)	(.005)
Muslim	-012	-.073	-.078	-.084	-.008	-.037	-.011	-.016	.020	.082	.004	.014	-.171	.376	.275	.005
	(.135)	(.125)	(.132)	(.179)	(.131)	(.133)	(.108)	(.080)	(.175)	(.116)	(.108)	(.230)	(.241)	(.369)	(.238)	(.245)
Democracy year	-.042***	-.012	-.035***	-.038***	-.035***	-.037***	-.020**	-.024***	-.024**	-.022**	-.024***	-.032***	-.035***	-.034***	-.030**	-.038***
	(.012)	(.011)	(.010)	(.011)	(.010)	(.011)	(.008)	(.008)	(.009)	(.009)	(.015)	(.013)	(.012)	(.012)	(.012)	(.012)
Democracy (1-year lag)	.312															
	(.203)															
Log GDP /cap (1-year lag)		-.482***					-.185*					-.027				
		(.115)					(.108)					(.153)				
Initial power balance			-.078					-.060					-.435***			
			(.111)					(.084)					(.116)			
Presidential powers				-.005					-.008					.040		
				(.020)					(.021)					(.034)		
Potential EU candidate					-.256***					-.564***					-1.829***	
					(.148)					(.131)					(.487)	
Openness						-.017					-.046***					-.093***
						(.018)					(.015)					(.025)
Constant	4.660***	9.530***	4.850***	4.728***	4.989***	4.944***	6.211***	4.553***	4.642***	4.975***	5.013***	5.447***	5.858***	5.309***	6.930***	4.065***
	(.514)	(.932)	(.497)	(.270)	(.443)	(.444)	(1.061)	(.224)	(.270)	(.194)	(.144)	(1.766)	(1.034)	(1.070)	(.989)	(1.094)
N	254	300	322	308	322	322	299	299	286	299	299	299	321	307	321	321
R²	.90	.90	.88	.88	.88	.88	.94	.94	.94	.94	.94	.86	.85	.84	.86	.85
rho	.726	.710	.720	.737	.721	.732	.761	.718	.764	.749	.765	.859	.874	.871	.860	.874

Note: All estimates are unstandardized regression coefficients with panel corrected standard errors in parentheses. *** p<.01, ** p<.05, * p<.10

Looking at the individual explanations, the *democracy* coefficients are not significant.[48] However, this does not have to mean that democracy is irrelevant. What it could mean is that the theoretical expectation about the *longevity* of democracy (and not current levels of democracy) being the decisive factor, are at play.

Coefficients representing *initial power balance* fare somewhat better. Even though the results in model 2 (TI) and 7 (WB) are insignificant, the results in model 12 (NiT) are significant at the 99 percent level and display a relatively strong effect (-.435). The effect points in the expected direction, indicating that a power balance dominated by the "challengers" could cause corruption levels to diminish. In addition, *imperial legacy* loses significance once *initial power balance* is introduced. Thus, we cannot write off the possible effect of initial power balance when it comes to post-communist corruption.

Despite theoretical expectations, none of the *presidential powers* coefficients are significant. Even though some post-communist countries had unusually strong presidents (i.e. Russia, and the central Asian countries) historical factors seem to be more important when explaining post-communist corruption.

The *potential EU candidate* indicator displays the strongest explanatory power of all the alternative explanations. Here, coefficients are significant at the 99 percent level across all the three measures, and the effect ranges from -.256 in model 4 to -1.829 in model 15. It is hard to say why the NiT model display such a strong affect compared to the two other models, but it could seem like it takes on the explanatory power previously attributed to bureaucratic legacy. When the *potential EU candidate* predictor is introduced, coefficients representing bureaucratic legacy are for the first time displayed as insignificant.[49]

Nevertheless, what models 4, 9 and 15 suggest is that a prospect for joining the EU has contributed to diminishing levels of post-communist corruption. That being said, these results could be biased by measurement problems. As mentioned earlier, the *potential EU candidate* measure is a dummy and thus a quite blunt measure. It fails to capture any substantial differences

---

[48] The results were similar when using the WB and NiT measure. Therefore, only the TI model is displayed in table 12.

[49] This is probably not due to multicollinearity. The variable(s) stayed below the critical value of 10.

when assessing each country's individual prospects for joining the union. However, the fact that the results were similar even when Croatia was included makes the finding more robust.

Lastly, coefficients representing international *openness* are significant (at the 99 percent level) in the WB and NiT models (10 and 16). The effect is relatively small (-.046 and -.093) but, nevertheless, it indicates that post-communist countries with more democratic neighbors display somewhat lower levels of corruption.

5.2 Summary of Findings

We have now tested the hypotheses in various models with different corruption data. H1, which expected that post-communist countries were more corrupt than other countries, received support. This finding was robust even when controlling for the former Soviet republics, which could be expected to drive up the corruption levels. H2, which predicted that a protestant heritage causes lower levels of corruption, only received partial support. On the one hand the results were consistently significant across the three measures, and this was so even when Estonia was excluded. However, on the other hand the effect was quite small, which means that the support for the hypothesis cannot be more than partial. The hypothesis with the most support was H3, which expected that pre-communist bureaucratic legacies could explain the variation in levels of post-communist corruption. This variable showed the strongest effect and was remarkably stable across different measures and model specifications. H4, which expected lower levels of corruption, also received partial support. While it showed both significant and strong effects when using WB and NiT data, it was relegated to insignificance in all models using the TI data. Now as the empirical analysis is finished we can finally move on to interpret these results and see what conclusions can be drawn.

6. Conclusions and Implications

This final chapter is divided up into three sections. First, it will be discussed how these results should be interpreted in relation to previous research and what they might contribute to the literature on post-communist corruption. Then, the internal and external validity of the findings are assessed. Finally, some suggestions for further research are presented.

6.1 Results in Light of Previous Research

Can levels of post-communist corruption be explained by historical legacies? This thesis has tried to provide some answers. First, findings of H1 seem to support the "uniqueness hypothesis": post-communist countries seems to be more corrupt than other countries. This is more or less in line with conclusions reached by scholars such as Karklins (2005), Sandholtz and Taagepera (2005) and Holmes (2006). Interpreting this finding in light of the abovementioned scholar's framework indicates that structural and cultural aspects of communism, and the chaos marking the transition from communism, are to blame for the current problems of corruption.

However, the findings of H1 could be interpreted in the framework provided by Kitschelt. As highlighted several times in this thesis, Kitschelt argue that the pre-communist bureaucratic legacies actually got *reproduced* during communism. In other words, pre-communist factors could be causing the variation in communist-factors. Of course, a scholar like Ekiert (2003) would probably argue that the variation originated in the communist past , but in the words of Møller and Skaaning, "such a postulate simply begs the question of which 'deeper' factors the geographically fixed variation [..] should be traced back to" (2010:399). Thus, one could argue that the legacies explored in H3 and H4 are the actual causes of the variation in communist and post-communist levels of corruption. With this line of argument "communist" variables could actually be viewed as spurious, because the variation is caused by temporally preceding factors. If this is true, the higher levels of corruption in post-communist countries are not a "communist" phenomenon but rather the result of deeper structural factors.

Second, findings support a partial strengthening of H2: a protestant heritage decreases post-communist corruption. The idea that Protestantism has a particular inhibiting effect on levels of corruption is drawn from the global corruption literature, where it has been identified as one of

the most significant predictors of lower levels of corruption. Thus, it is not surprising that a protestant heritage also is significant when testing it against post-communist countries.

What is a bit surprising, however, is its significance even though Estonia is excluded from the regression. Estonia has in several years been the post-communist country displaying lowest levels of perceived corruption, and it is at the same time the only post-communist country with a protestant majority. This finding could thus indicate that a protestant heritage, measured as percent of protestant adherents in 1980, has long-term positive effects. Hence, it could be argued that a mere presence of protestant adherents, and not only a protestant majority, contributes to lower levels of corruption. That being said, the effect of *protestant heritage* is so small that it is hard to make any valid inference.

Third, by using three different and updated measures on corruption data, and applying them in a TSCS analysis, this thesis has arrived at the same conclusion as Møller and Skaaning (2010): levels of post-communist corruption can to a large degree be explained by pre-bureaucratic legacies. That two studies using different statistical methods, different model specifications, and slightly different data, still arrive at the same conclusion gives us more confidence when claiming an empirical and real world relationship between pre-communist bureaucratic legacies and levels of post-communist corruption. This result is the strongest finding of the current thesis.

The fourth hypothesis, that a Western imperial legacy should decrease levels of post-communist corruption, received partial support. It is not easy to say why the variable was insignificant using the TI measure. One possible explanation could be that that the TI index measures a slightly different phenomenon than the two other measures. The fact that both the imperial legacy variable and the variable on bureaucratic legacies displayed significant results indicates that deep structural variables are important when assessing levels of post-communist corruption.

Causal mechanisms and the combined effect of historical legacies
However, the aim of this thesis is not to identify the *one* variable that is able to explain post-communist corruption. That would be a near impossible task due to the intertwined nature of legacies (and, in technical terms, the resulting multicollinearity). Rather, the aim has been to see if levels of post-communist corruption can be explained by the combined effect of historical legacies. Findings seem to support such an argument. The results of the legacy variables did not

change substantially even though several relevant proximate explanations were included. Thus, we can be more confident when pointing to the combined effect of historical legacies.

However, as mentioned in the introduction to this thesis, it is not enough just to claim causality: such a claim must be supported by a causal mechanism that traces the effect of these historical legacies through time. By applying path dependent logic we can start to identify such a mechanism.[50]

It is now over a decade since most of the post-communist countries broke out/were released from Austrian/Prussian, Russian or Ottoman rule. Still, it seems that the repercussions from imperial rule remain. Interpreting this with a path dependent logic means that imperial rule probably pushed these countries in a specific direction that persisted despite centuries of communist rule. Thus, variation in proximate variables such as economic development during communism, the vitality of civil society, degree of political opposition etc. could actually be a reflection of deeper factors. Or to put it slightly different, the deep historical factors could work "through" the proximate factors in producing certain outcomes.

This does not mean, however, that proximate factors are not important or that they do not have explanatory power. The truth is probably that deep and structural factors work together in a complicated fashion, were the one influences the other and vice versa. This means that a purely deep and structural explanation probably becomes to fatalistic, while a purely proximate and actor-oriented approach probably fails to capture any causal depth. Still though, this thesis claims that of these factors the deeper structural are the essentials.

6.2 Internal Validity

Are inferences drawn from this study based upon a research design that enables us to say that levels of post-communist corruption are largely explained by historical legacies? We cannot be certain, but we are allowed to say that it seems to be so when approaching the research question in the way it was approach in this study. When using the definitions, data, measurements, controls and statistical models as done here, results indicates that there exist a strong empirical relationship between historical legacies and levels of post-communist corruption.

---

[50] Actually tracing causal mechanisms requires much more in-depth analysis than what I provide here. The purpose is to show that a causal mechanism *potentially* can be identified.

One possible danger to the internal validity of this analysis would be if the data were bad and/or the research design inappropriate. The research design of this thesis seems to be appropriate. It is based on recognized theoretical definitions, and the particular statistical method (Prais-Winsten) applied here seems as a good fit to handling TSCS corruption data. However, the mismatch between data and theoretical definition on corruption could be a source for weakened internal validity. After all, the data only measure perceived levels of corruption and not corruption per se, even though our aim was to measure corruption. That being said, these data are, at least for now, the best ones available – and the use of these data are common among scholars.

When it comes to relevant controls I have tried to include those variables that the literature identifies as central factors affecting post-communist corruption. Data on these variables have mostly been used by other scholars, but it is likely that this thesis have failed to include all relevant factors. One example could be the proximate control of press freedom, which several scholars have shown is relevant for corruption (Linde 2009, Charron 2009). In addition, there probably also exist factors that are affecting the results that we still are not aware of.

6.3 External Validity

Can the theoretical expectations and statistical inferences from this study be extended to countries outside of the post-communist "region"? On the one hand it is difficult to extend the particular models and variables used here to other countries or regions. This has to do with the particular "post-communist" nature of several of the variables. On the other hand, however, the mechanism between historical legacies and current political outcomes can probably be extended. After all, it is plausible to expect that all countries and regions are affected by their past. The fact that the post-communist countries are so diverse (and not a region in the strict sense of the word) strengthens the assumption that these mechanisms can be extended. However, particular variables and their relative effect might be completely different in other settings. Thus, we cannot generalize our finding of the significant effect of bureaucratic legacies to countries outside of the post-communist universe. This must be empirically tested on its own terms.

Based on the current analysis a more confident generalization is that historical legacies can explain current levels of corruption. But in terms of generalization we are only allowed to say this about the post-communist countries. Further research is thus needed in order to extend our findings.

6.4 Suggestions for Further Research

This thesis has provided further evidence for the claim that levels of post-communist corruption can be explained by historical legacies. However, as mentioned earlier, this is not enough in order to reach certainty. For this we need further research, and I suggest three promising approaches: (1) replication of studies, presumably from new angles; (2) incorporating both proximate and structural variables in one approach, and (3) qualitatively tracing causal mechanisms.

First, replication of earlier studies is important because it will increase our confidence in findings. In order to do so, the research question should be approached open-mindedly, with new data and new controls.

Second, as highlighted by Møller (2009:109), a promising approach for further research is to try to incorporate deep and proximate explanations into a common explanatory framework. Thus, we could gain more understanding as to how these variables function together, and what kind of outcomes they produce.

Lastly, qualitative studies are needed in order make a proper tracing of the causal mechanisms identified by quantitative studies. These insightful explanations would enrich our knowledge in the field, and probably encourage further quantitative studies like this one. However, these topics must be left for future researchers. I hope this will contribute to an increased understanding about the relationship between corruption and historical legacies.

References

Acemoglu, Daron, Simon Johnson, and James A Robinson. 2002. "Reversal of fortune: Geography and institutions in the making of the modern world income distribution." *The Quarterly Journal of Economics* 117 (4):1231-1294.

Adcock, Robert, and David Collier. 2001. "Measurement Validity: A Shared Standard for Qualitative and Quantitative Research." *American Political Science Review*:529-546.

Ades, Alberto, and Rafael Di Tella. 1999. "Rents, competition, and corruption." *The american economic review* 89 (4):982-993.

Ades, Alberto, and Rafael Di Tella. 1996. "The causes and consequences of corruption: a review of recent empirical contributions." *IDs bulletin* 27 (2):6-11.

Adolph, Christopher, Daniel M Butler, and Sven E Wilson. 2005. "Which time-series cross-section estimator should I use now? Guidance from Monte Carlo experiments." annual meeting of the American Political Science Association, Washington, DC.

Banfield, Edward C. 1975. "Corruption as a Feature of Governmental Organization." *Journal of Law and Economics*:587-605.

Beck, Nathaniel. 2001. "Time-series-cross-section data: what have we learned in the past few years?" *Annual review of political science* 4 (1):271-293.

Beck, Nathaniel L, and Jonathan N Katz. 1995. "What to do (and not to do) with time-series cross-section data." *American political science review* 89 (3):634-647.

Berry, William D. 1993. *Understanding regression assumptions*. Vol. 92: Sage.

Bunce, Valerie. 1999. "The political economy of postsocialism." *Slavic Review* 58 (4):756-793.

Bunce, Valerie. 2005. "The national idea: imperial legacies and post-communist pathways in Eastern Europe." *East European Politics & Societies* 19 (3):406-442.

Carvajal, Raul. 1999. "Large-scale corruption: definition, causes, and cures." *Systemic Practice and Action Research* 12 (4):335-353.

Charron, Nicholas. 2009. "The impact of socio-political integration and press freedom on corruption." *The Journal of Development Studies* 45 (9):1472-1493.

Chatterjee, Samprit, and Jeffrey S Simonoff. 2013. *Handbook of Regression Analysis*. Vol. 5: John Wiley & Sons.

Cheibub, José Antonio, Jennifer Gandhi, and James Raymond Vreeland. 2010. "Democracy and dictatorship revisited." *Public Choice* 143 (1-2):67-101.

Collier, Ruth Berins, and David Collier. 1991. *Shaping the political arena*: Princeton University Press Princeton.

Darden, Keith, and Anna Grzymala-Busse. 2006. "THE GREAT DIVIDE." *World Politics* 59 (1):83-115.

David, Paul A. 2001. "Path dependence, its critics and the quest for 'historical economics'." *Evolution and path dependence in economic ideas: Past and present* 15:40.

De Melo, Martha, Cevdet Denizer, Alan Gelb, and Stoyan Tenev. 2001. "Circumstance and choice: The role of initial conditions and policies in transition economies." *The World Bank Economic Review* 15 (1):1-31.

Della Porta, Donatella, and Alessandro Pizzorno. 1996. "Business Politicians: Reflections from a Study of Political Corruption, The." *JL & Soc'y* 23:73.

Di Palma, Giuseppe. 1990. *To craft democracies: An essay on democratic transitions*: Univ of California Press.

Diamond, Larry Jay, and Marc F Plattner. 1996. *The global resurgence of democracy*: Johns Hopkins Univ Pr.

Dimitrova-Grajzl, Valentina. 2007. "The great divide revisited: Ottoman and Habsburg legacies on transition." *Kyklos* 60 (4):539-558.

Eckstein, Harry. 1988. "A culturalist theory of political change." *The American Political Science Review*:789-804.

Ekiert, Grzegorz. 2003. "Patterns of postcommunist transformation in Central and Eastern Europe." *Capitalism and Democracy in Central and Eastern Europe*:89-119.

Fish, M Steven. 1997. "The determinants of economic reform in the post-communist world." *East European Politics & Societies* 12 (1):31-78.

Fish, M Steven. 1998. "Democratization's requisites: the postcommunist experience." *Post-Soviet Affairs* 14 (3):212-247.

Fish, M Steven. 2002. "Islam and authoritarianism." *World politics* 55 (1):4-37.

Frye, Timothy. 1997. "A Politics of Institutional Choice Post-Communist Presidencies." *Comparative Political Studies* 30 (5):523-552.

Gerring, John, and Strom C Thacker. 2004. "Political institutions and corruption: The role of unitarism and parliamentarism." *British Journal of Political Science* 34 (2):295-330.

Gerring, John, and Strom C Thacker. 2005. "Do neoliberal policies deter political corruption?" *International Organization*:233-254.

Golden, Miriam A, and Lucio Picci. 2005. "Proposal for a new measure of corruption, illustrated with Italian data." *Economics & Politics* 17 (1):37-75.

Grzymala-Busse, Anna M. 2002. *Redeeming the communist past: The regeneration of communist parties in East Central Europe*: Cambridge University Press.

Hall, Peter A, and Rosemary CR Taylor. 1996. "Political Science and the Three New Institutionalisms*." *Political studies* 44 (5):936-957.

Hargens, Lowell L. 2004. *Time-Series Cross-Section (Tscs) Models. The SAGE Encyclopedia of Social Science Research Methods. Sage Publications, Inc*. Thousand Oaks, CA: Sage Publications, Inc.

Holmes, Leslie. 2006. *Rotten States?: Corruption, Post-communism, and Neoliberalism*: Duke University Press.

Horowitz, Shale. 2003. "Sources of post-communist democratization: Economic structure, political culture, war, and political institutions." *Nationalities Papers* 31 (2):119-137.

Huntington, Samuel P. 1993. *The third wave: Democratization in the late twentieth century*. Vol. 4: University of Oklahoma press.

Huntington, Samuel P. 1996. *The clash of civilizations and the remaking of world order*: Penguin Books India.

Ishiyama, John T. 1997. "The sickle or the rose? Previous regime types and the evolution of the ex-communist parties in post-communist politics." *Comparative Political Studies* 30 (3):299-330.

Ishiyama, John T, and Matthew Velten. 1998. "Presidential power and democratic development in post-communist politics." *Communist and Post-Communist Studies* 31 (3):217-233.

Jackman, Robert W. 1985. "Cross-national statistical research and the study of comparative politics." *American Journal of Political Science*:161-182.

Janos, Andrew C. 1989. "The politics of backwardness in continental Europe, 1780–1945." *World Politics* 41 (03):325-358.

Janos, Andrew C. 1993. "Continuity and change in Eastern Europe: Strategies of post-Communist politics." *East European Politics & Societies* 8 (1):1-31.

Janos, Andrew C. 2000. *East Central Europe in the modern world: the politics of the borderlands from pre-to postcommunism*: Stanford University Press.

Johnston, M. 1996. "The search for definitions: The vitality of politics and the issue of corruption." *International Social Science Journal* 48 (3):321-&.

Jowitt, Kenneth. 1993. *New world disorder: The leninist extinction*: Univ of California Press.

Karklins, Rasma. 2002. "Typology of post-communist corruption." *Problems of Post Communism* 49 (4):22-32.

Karklins, Rasma. 2005. *The system made me do it: corruption in post-communist societies*: ME Sharpe.

Katchanovski, Ivan. 2000. "Divergence in growth in post-communist countries." *Journal of Public Policy* 20 (1):55-81.

Katznelson, Ira. 2003. "Periodization and preferences: reflections on purposive action in comparative historical social science." *Comparative historical analysis in the social sciences*:270-301.

Kaufmann, Daniel, and Aart Kraay. 2002. "Growth without governance." *World Bank Policy Research Working Paper* (2928).

Kaufmann, Daniel, Aart Kraay, and Massimo Mastruzzi. 2006. "Measuring governance using cross-country perceptions data." *International handbook on the economics of corruption* 52.

King, Gary, Robert O Keohane, and Sidney Verba. 1994. *Designing social inquiry: Scientific inference in qualitative research*: Princeton University Press.

Kitschelt, Herbert. 1999. *Post-communist party systems: competition, representation, and inter-party cooperation*: Cambridge University Press.

Kitschelt, Herbert. 2001. "Post-Communist Economic Reforms: Causal Mechanisms and Concomitant Properties. Paper presented at the Annual Meeting of the American Political Science Association, San Francisco."

Kitschelt, Herbert. 2003. "Accounting for Postcommunist Regime Diversity: What Counts as a Good Cause?" In *Capitalism and Democracy in Central and Eastern Europe*, edited by Grzegorz Ekiert and Stephen E. Hanson. Cambridge, United Kingdom: Cambridge University Press.

Klitgaard, Robert. 1988. *Controlling corruption*: Univ of California Press.

Knack, Stephen F. 2006. *Measuring corruption in Eastern Europe and Central Asia: a critique of the cross-country indicators*. Vol. 3968: World Bank Publications.

Kopecký, Petr, and Gerardo Scherlis. 2008. "Party patronage in contemporary Europe." *EUROPEAN REVIEW-CHICHESTER-* 16 (3):355.

Kopstein, Jeffrey. 2003. "Postcommunist democracy: legacies and outcomes." *Comparative Politics*:231-250.

Kopstein, Jeffrey S, and David A Reilly. 2000. "Geographic diffusion and the transformation of the postcommunist world." *World politics* 53 (01):1-37.

Kunicová, Jana, and Susan Rose-Ackerman. 2005. "Electoral rules and constitutional structures as constraints on corruption." *British Journal of Political Science* 35 (04):573-606.

Kurer, Oskar. 2005. "Corruption: An Alternative Approach to Its Definition and Measurement." *Political Studies* 53 (1):222-239. doi: 10.1111/j.1467-9248.2005.00525.x.

Kurtz, Marcus J, and Andrew Barnes. 2002. "The Political Foundations of Post-communist Regimes Marketization, Agrarian Legacies, or International Influences." *Comparative Political Studies* 35 (5):524-553.

La Porta, Rafael, Florencio Lopez-De-Silane, Andrei Shleifer, and Robert W Vishny. 1996. Trust in large organizations. National Bureau of Economic Research.

La Porta, Rafael, Florencio Lopez-de-Silanes, Andrei Shleifer, and Robert Vishny. 1999. "The quality of government." *Journal of Law, Economics, and organization* 15 (1):222-279.

Lambsdorff, Johann Graf. 2005. Consequences and causes of corruption: What do we know from a cross-section of countries? : Passauer Diskussionspapiere: Volkswirtschaftliche Reihe.

Lancaster, Thomas D, and Gabriella R Montinola. 1997. "Toward a methodology for the comparative study of political corruption." *Crime, Law and Social Change* 27 (3-4):185-206.

Lancaster, Thomas D, and Gabriella R Montinola. 2001. "Comparative political corruption: Issues of operationalization and measurement." *Studies in Comparative International Development* 36 (3):3-28.

LaPorte, Jody, and Danielle N Lussier. 2011. "What Is the Leninist Legacy? Assessing Twenty Years of Scholarship." *Slavic Review* 70 (3):637-654.

Leite, Carlos A, and Jens Weidmann. 1999. "Does mother nature corrupt? Natural resources, corruption, and economic growth." *Natural Resources, Corruption, and Economic Growth (June 1999). IMF Working Paper* (99/85).

Lijphart, Arend. 1971. "Comparative politics and the comparative method." *The american political science review*:682-693.

Lijphart, Arend. 1975. "II. The comparable-cases strategy in comparative research." *Comparative political studies* 8 (2):158-177.

Linde, Jonas. 2009. "Determinants of Post-Communist Corruption." Paper presented at the annual meeting of the Swedish Political Science Association, Örebro, October 8-9.

Linz, Juan J, and Arturo Valenzuela. 1994. *The failure of presidential democracy*. Vol. 1: JHU Press.

Lipset, Seymour M. 1960. "Political man: The social basis of modern politics." *NY: Doubleday*.

Lipset, Seymour Martin, and Gabriel Salman Lenz. 2000. "Corruption, culture, and markets." *Culture matters: How values shape human progress* 112:112.

Mauro, Paolo. 1995. "Corruption and growth." *The quarterly journal of economics* 110 (3):681-712.

McFaul, Michael. 2002. "The Fourth Wave of Democracyand Dictatorship." *World politics* 54 (2):212-44.

Midtbø, Tor. 2012. Stata, en entusiastisk innføring. Oslo, Universitetsforlaget.

Mikkelsen, KimSass. 2013. "In murky waters: a disentangling of corruption and related concepts." *Crime, Law and Social Change*:1-18. doi: 10.1007/s10611-013-9474-6.

Miller, William Lockley, Åse B Grødeland, and Tatyana Y Koshechkina. 2001. *A culture of corruption?: coping with government in post-communist Europe*: Central European University Press.

Moller, Jorgen. 2009. *Post-communist Regime Change: A comparative study*: Routledge.

Morris, Stephen D. 1991. *Corruption and politics in contemporary Mexico*. Vol. 45879: University of Alabama Press.

Møller, Jørgen, and Svend Erik Skaaning. 2010. "From Each According to His Need, To Each According to His Ability: A Comparative Analysis of Post-Communist Corruption." *Acta Politica* 45 (3):320-345.

Nye, Joseph S. 1967. "Corruption and political development: a cost-benefit analysis." *The American Political Science Review*:417-427.

Panizza, Ugo. 2001. "Electoral rules, political systems, and institutional quality." *Economics and Politics* 13 (3):311-342.

Peters, John G, and Susan Welch. 1978. "Political corruption in America: a search for definitions and a theory, or if political corruption is in the mainstream of American politics why is it not in the mainstream of American politics research?" *The American political science review*:974-984.

Plümper, Thomas, and Vera E Troeger. 2007. "Efficient estimation of time-invariant and rarely changing variables in finite sample panel analyses with unit fixed effects." *Political Analysis* 15 (2):124-139.

Plümper, Thomas, and Vera E Troeger. 2011. "Fixed-effects vector decomposition: Properties, reliability, and instruments." *Political Analysis* 19 (2):147-164.

Plümper, Thomas, Vera E Troeger, and Philip Manow. 2005. "Panel data analysis in comparative politics: Linking method to theory." *European Journal of Political Research* 44 (2):327-354.

Pop-Eleches, Grigore. 2007. "Historical legacies and post-communist regime change." *Journal of Politics* 69 (4):908-926.

Pridham, Geoffrey, and Attila Ágh. 2001. *Prospects for democratic consolidation in East-Central Europe*: Manchester University Press.

Ragin, Charles C. 1989. *The comparative method: Moving beyond qualitative and quantitative strategies*: Univ of California Press.

Razafindrakoto, Mireille, and François Roubaud. 2005. "How far can we trust the experts' opinion on corruption? An experiment based on surveys in francophone Africa." *Global Corruption Report 2005*:292-95.

Roeder, Philip G. 1994. "Varieties of post-Soviet authoritarian regimes." *Post-Soviet Affairs* 10 (1):61-101.

Roeder, Philip G. 1999. "Peoples and states after 1989: the political costs of incomplete national revolutions." *Slavic Review*:854-882.

Rogow, Arnold A, and Harold D Laswell. 1970. "The definition of corruption." *Political Corruption: Readings in Comparative Analysis*:54.

Rose-Ackerman, Susan. 1978. *Corruption: a study in political economy*. New York [etc.]: Academic Press.

Rose-Ackerman, Susan. 1999. *Corruption and government: Causes, consequences, and reform*: Cambridge University Press.

Rose, Richard. 2001. "A diverging Europe." *Journal of Democracy* 12 (1):93-106.

Rothstein, B. O., and J. A. N. Teorell. 2008. "What Is Quality of Government? A Theory of Impartial Government Institutions." *Governance* 21 (2):165-190. doi: 10.1111/j.1468-0491.2008.00391.x.

Sampford, C. J. G. 2006. *Measuring corruption*. Aldershot, England: Ashgate.

Sandholtz, Wayne, and Mark M Gray. 2003. "International integration and national corruption." *International Organization* 57 (4):761-800.

Sandholtz, Wayne, and William Koetzle. 2000. "Accounting for corruption: economic structure, democracy, and trade." *International Studies Quarterly* 44 (1):31-50.

Sandholtz, Wayne, and Rein Taagepera. 2005. "Corruption, culture, and communism." *International Review of Sociology* 15 (1):109-131.

Scott, James C. 1972. *Comparative political corruption*: Prentice-Hall Englewood Cliffs, NJ.

Seton-Watson, Hugh. 1945. *Eastern Europe between the wars, 1918-1941*: CUP Archive.

Soares, Rodrigo R. 2004. "Crime Reporting as a Measure of Institutional Development*." *Economic Development and cultural change* 52 (4):851-871.

Stepan, Alfred C, and Graeme B Robertson. 2003. "An" Arab" More Than a" Muslim" Democracy Gap." *Journal of Democracy* 14 (3):30-44.

Stock, James H, and Mark W Watson. 2012. *Introduction to Econometrics Global Edition*: Pearson Education.

Teorell, Jan, Nicholas Charron, Stefan Dahlberg, Sören Holmberg, Bo Rothstein, Petrus Sundin, and Richard Svensson. 2013. The Quality of Government Dataset. edited by The Quality of Government Institute. University of Gothenburg.

Thelen, Kathleen Ann. 2004. *How institutions evolve*: Cambridge University Press Cambridge.

Theobald, Robin. 1990. *Corruption, development and underdevelopment*: Duke University Press Durham.

Treisman, D. 2007. "What have we learned about the causes of corruption from ten years of cross-national empirical research?" *Annual Review of Political Science* 10:211-244. doi: DOI 10.1146/annurev.polisci.10.081205.095418.

Treisman, Daniel. 2000. "The causes of corruption: a cross-national study." *Journal of public economics* 76 (3):399-457.

Treisman, Daniel. 2003. "Postcommunist corruption." *Political Economy of transition and development: Institutions, Politics, and Policies* 5:201.

UNICEF. 2005. "TransMONEE 2005 Database, http://www.unicef-icdc.org/publications/pdf/tmd_2005_tables_web.pdf. ." *Florence: UNICEF Innocenti Research Centre*.

Vachudova, Milada Anna. 2009. "Corruption and Compliance in the EU's Post-Communist Members and Candidates." *JCMS: Journal of Common Market Studies* 47 (s1):43-62.

Western, Bruce, and Simon Jackman. 1994. "Bayesian Inference for Comparative Research." *American Political Science Review* 88 (02):412-423.

Wilson, Sven E, and Daniel M Butler. 2004. "A lot more to do: the promise and peril of panel data in political science." *Unpublished manuscript*.

Wilson, Sven E, and Daniel M Butler. 2007. "A lot more to do: The sensitivity of time-series cross-section analyses to simple alternative specifications." *Political Analysis* 15 (2):101-123.

Wittenberg, Jason. 2006. *Crucibles of Political Loyalty: Church institutions and electoral continuity in Hungary*: Cambridge University Press.

Wittenberg, Jason. 2010. "What is a Historical Legacy?" annual meeting for the American Political Science Association, Washington, DC.

Wooldridge, JM. 2009. "Introductory econometrics: a modern approach.[Mason, Ohio], South Western cengage learning." *Authors' affiliations Olaf Giebel, Barbara Breitschopf Fraunhofer Institute for Systems and Innovation Research (Fraunhofer ISI) Competence Center Energy Policy and Energy Systems*.

Appendix A: Alternative Explanations

	Democracy 1992-2008 (Cheibub, Gandhi, and Vreeland 2010)	Initial power balance (McFaul 2002)	Presidential powers (Frye 1997)	Potential EU-candidate (Kurtz and Barnes 2002)	Openness (mean value 1991-1996) (Kopstein and Reilly 2000)
Albania	Democracy	Even/uncertain	5.25	0	14.6
Armenia	Democracy	For challengers	13.5	0	12.3
Azerbaijan	Dictatorship	Even/uncertain	-	0	11
Belarus	Dictatorship	For old regime	15	0	10.5
Bosnia and Herzegovina	Dictatorship	For challengers	-	0	6.5
Bulgaria	Democracy	Even/uncertain	10	1	14.6
Croatia	Democracy	For challengers	14.5	0	17.6
Czech Republic	Democracy	For challengers	4.75	1	20.3
Estonia	Democracy	For challengers	4.5	1	19.3
Georgia	1992-2003:Dictatorship 2004-2008:Democracy	For challengers	16	0	11.1
Hungary	Democracy	For challengers	7.25	1	20.3
Kazakhstan	Dictatorship	For old regime	15.5	0	13.5
Kyrgyz Republic	1992-2004:Dictatorship 2005-2008:Democracy	For old regime	15.5	0	12.6
Latvia	Democracy	For challengers	4.75	1	15.1
Lithuania	Democracy	For challengers	12	1	13.3
Macedonia	Democracy	Even/uncertain	6.5	0	13
Moldova	Democracy	Even/uncertain	11.5	0	13.1
Mongolia	Democracy	Even/uncertain	-	0	12.3
Montenegro	1992-1999:Dictatorship 2000-2005:Democracy 2006-2008:Dictatorship	For old regime	-	0	11.6
Poland	Democracy	For challengers	13	1	13
Romania	Democracy	For old regime	14	1	11.8
Russia	Dictatorship	Even/uncertain	15	0	12.5
Serbia	1992-1999:Dictatorship 2000-2008:Democracy	For old regime	-	0	11.6
Slovak Republic	Democracy	For challengers	5	1	15.8
Slovenia	Democracy	For challengers	5.5	1	17
Tajikistan	Dictatorship	Even/uncertain	13	0	8.6
Turkmenistan	Dictatorship	For old regime	18.5	0	9.5
Ukraine	Democracy	Even/uncertain	15	0	11.3
Uzbekistan	Dictatorship	For old regime	17	0	9.1

Appendix B: Correlations between Independent Variables

	Protestant heritage	Bureaucratic legacy	Statehood	Resource endowments	Imperial legacy	Minorities	Muslim	Democracy year
Protestant heritage	1.00	-0.40	0.31	-.023	0.07	0.14	-.023	0.20
	(0.00)	(0.00)	(0.00)	(0.03)	(0.00)	(0.00)	(0.00)	(0.00)
Bureaucratic legacy	-0.40	1.00	-0.46	0.39	-0.70	0.26	0.57	-0.49
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Statehood	0.31	-0.46	1.00	-0.18	0.09	-0.27	-0.33	0.51
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Resource endowments	-0.23	0.39	-0.18	1.00	-0.22	0.12	0.23	-0.42
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Imperial legacy	0.07	-0.70	0.09	-0.22	1.00	-0.46	-0.34	0.34
	(0.03)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Minorities	0.14	0.26	-0.27	0.12	-0.46	1.00	0.49	-0.38
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Muslim	-0.23	0.57	-0.33	0.23	-0.34	0.49	1.00	-0.46
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Democracy year	0.20	-0.49	0.51	-0.42	0.34	0.38	-0.46	1.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)

Note: p-values in parentheses.